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| ONR Technical Inspection Guide (TIG)  LC 30 – Periodic shutdown |



ONR Technical Inspection Guide (TIG)

LC 30 – Periodic shutdown

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Revision commentary

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| Issue | Description of update(s) |
| 6.1 | Minor update - Updated onto new template with minor changes to guidance. |

# Introduction

1. Many of the licence conditions attached to the standard nuclear site licence require, or imply, that licensees should make arrangements to comply with regulatory obligations under the conditions. ONR inspects compliance with licence conditions, and also with the arrangements made under them, to judge the suitability of the arrangements made and the adequacy of their implementation. Most of the standard licence conditions are goal setting, and do not prescribe in detail what the licensees' arrangements should contain; this is the responsibility of the dutyholder who remains responsible for safety.

## Purpose

1. To support inspectors undertaking compliance inspection, ONR produces a suite of guides to assist inspectors to make regulatory judgements and decisions in relation to the adequacy of compliance, and the safety of activities on the site. This Technical Inspection Guide (TIG) has been prepared as a guide to inspections performed by ONR inspectors during which they judge the adequacy of licence condition compliance arrangements and their implementation.
2. The purpose of this guidance is to facilitate a consistent approach to Licence Condition (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.
3. The guidance provided is split into three main elements:
4. purpose of the licence condition;
5. guidance on arrangements for LC 30; and
6. guidance on inspection of arrangements and their implementation.

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# 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 ONR may agree to an extension of a plant’s operating period.

(3) The licensee shall, if so specified by ONR, 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 ONR.

# Purpose of the Licence Condition

1. The purpose of LC 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.
2. LC 30 (2) allows ONR to agree to an extension of the period between such regular shutdowns.
3. Where a specification under LC 30 (3) has been issued and ONR has to formally consent to the restart, this consent will only be given when the licensee has satisfied both itself and ONR that the plant may be safely started up and safely operated until the next periodic shutdown.

# Guidance on arrangements for Licence Condition 30

1. This LC 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.
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.
3. Should the licensee wish to extend its operating interval, as defined within the plant maintenance schedule, its arrangements should reflect the requirement for agreement to be sought from ONR in accordance with   
   LC 30 (2). Those arrangements should define the process for seeking agreement from ONR for extending the operating period between shutdowns. These should include a requirement to provide an adequate safety justification.

# Guidance on inspection of arrangements and their implementation

1. In relation to the licensee’s preparedness ahead of a periodic shutdown, check that the arrangements ensure that:
2. 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 Suitably Qualified and Experienced (SQEP) for their duties;
3. in instances where ONR has issued a specification under LC 30 (3) that a plant or process shall not be started up again thereafter without the consent of ONR;
4. an outage plan or similar document should be produced. This should identify the maintenance schedule work and any other safety-related work to be carried out during the periodic shutdown and should be submitted to ONR in a timely fashion ahead of the shutdown in order that ONR can accurately plan its inspection programme;
5. any proposal to permanently amend an operating interval, as defined within the plant maintenance schedule, is notified to ONR with sufficient time for consideration, assessment and agreement; any change to an interval declared within the maintenance schedule preface will require approval by ONR in accordance with LC 28 (5) as set out within the associated TIG (NS-INSP-GD-028) [1]; and
6. any proposed derogation to a plant maintenance schedule requirement during the periodic shutdown is notified to ONR with sufficient time for consideration, assessment and agreement.
7. In relation to activities undertaken during a periodic shutdown, check that the arrangements ensure that:
8. minimum levels of diversity and redundancy are maintained when plant is isolated and that those plant are protected through appropriate delineation;
9. appropriate quality plans are developed for all safety related activities and subject to appropriate audit arrangements;
10. periodic shutdown activities are subject to effective control and supervision with rigorous arrangements governing the release of operational plant to maintenance teams;
11. contractor personnel undertaking invasive plant activities are subject to commensurate rigour of control and supervision to licensee personnel;
12. ALARP radiation dose assessments are carried out covering periodic shutdown activities; and
13. an effective process is in place for screening, classifying and prioritising incidents occurring during the periodic shutdown to ensure early shortfalls in standards are corrected.
14. Ahead of submitting a request for consent to return the process or plant to service, check that the arrangements ensure that:
15. there is an agreed schedule of interactions with the ONR site or project inspector such as periodic shutdown review meetings and the formal start-up meeting;
16. there is appropriate 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 ONR where required;
17. ONR is provided with appropriate evidence 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; and
18. an adequate safety case is produced for operation in the period up to the next scheduled shutdown or, in the event that the full period cannot be justified, proposals are made for the timely delivery of an adequate safety case, or the shutdown of the plant, or other committed action, in support of the request for start-up consent;
19. a periodic shutdown report is submitted to ONR within 28 days, or other agreed period, of consent to start up. This should 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.
20. Review the procedures to confirm they are ‘in ticket’, and that they reflect accurately current practice (where known).
21. Check that the procedures require the consent of ONR prior to plant being started up, if this has been specified by ONR.
22. Confirm that the operational period between declared periodic shutdowns cannot be exceeded without the agreement of ONR and that any request for such agreement is treated as an amendment to the maintenance schedule.
23. In practice, the implementation of arrangements under LC 30 is an implicit focus during routine inspection activities during the course of a periodic shutdown. It is appropriate to undertake an explicit evaluation of compliance against the requirements of LC 30 either ahead of or during a periodic shutdown as part of planned regulatory activities. The following advice should help guide inspectors towards such a judgement:
24. 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 ONR as necessary and check that changes required by ONR have been incorporated.
25. Inspect a sample of the safety documentation used to control access to 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, Duly Authorised Persons (DAPs).
26. Establish by inspection and discussions with plant personnel that the requirements of LC 22 (modifications), LC 28 (examination, inspection, maintenance and testing) and LC 21 (commissioning) have been satisfied prior to plant, equipment or systems being declared available for service.
27. 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.
28. 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 start-up request, together with the necessary commitments for completion.
29. 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 LC 30 shutdown.
30. 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.
31. 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 start up.
32. 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.

# References

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| [1] | ONR, “NS-INSP-GD-028 - LC28 Examination, Inspection Maintenance and Testing (EMIT),” [Online]. Available: https://www.onr.org.uk/publications/regulatory-guidance/regulatory-inspection/technical-inspection-guides-tigs/nuclear-safety-tigs/technical-inspection-guides-tigs-nuclear-safety-full-list/. |

# Glossary

| Term/Acronym | Description |
| --- | --- |
| ALARP | As low as reasonably practicable |
| DAP | Duly Authorised Person(s) |
| LC | Licence Condition |
| ONR | Office for Nuclear Regulation |
| SQEP | Suitably Qualified and Experienced Person(s) |
| TIG | Technical Inspection Guide |