



ONR GUIDE			
<b>LC25 OPERATIONAL RECORDS</b>			
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## 1 INTRODUCTION

- 1.1 Many of the licence conditions (LCs) 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 duty-holder who remains responsible for safety. 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 inspection guide is one of a suite of documents provided by ONR for this purpose.

## 2 PURPOSE AND SCOPE

- 2.1 The purpose of this guidance is to facilitate a consistent approach to LC 25 compliance inspection and to provide assistance to inspectors carrying out their duties in this area. The guidance provides a framework for these inspection activities and should not be regarded as either exhaustive or mandatory. Further information on management of records can be found in assessment guide NS-TAG-GD-033 "Duty holder management of records" and the inspection guide for LC6, NS-INSP-GD-006 "LC6 Documents, Records, Authorities and Certificates".
- 2.2 The guidance is for use by all Nuclear Inspectors in ONR. It does not indicate when or to what extent LC 25 inspections should be carried out as these matters are covered in individual inspection plans.
- 2.3 Inspectors may also take account of relevant requirements in The Nuclear Safeguards (EU Exit) Regulations 2019 (NSR19) and the associated ONR Guidance for Nuclear Material Accountancy, Control and Safeguards (ONMACS). There are links between regulations 6, 10 & 11 of NSR19 and this licence condition. The main caveat for application to safeguards is that safeguards only apply to qualifying nuclear material (QNM) (as defined in the Nuclear Safeguards Act 2018), rather than nuclear matter. Guidance on the safeguards-relevant aspects of LC 25 is provided in the Safeguards appendix of this document. The appendix is aimed at ONR Safeguards inspectors conducting an integrated inspection on LC 25 with an ONR Safety inspector, but it provides a useful insight to an ONR Safety inspector as to which aspects of an LC 25 inspection may have safeguards relevance.
- 2.4 The guidance provided is split into four main elements:
- 1) Purpose of the Licence Condition
  - 2) Guidance on procedures for LC 25
  - 3) Guidance on inspection of procedures for LC 25
  - 4) Guidance on inspection of implementation of procedures for LC 25

## 3 LICENCE CONDITION 25: OPERATIONAL RECORDS

25 (1) The licensee shall ensure that adequate records are made of the operation, inspection and maintenance of any plant which may affect safety.

25 (2) The aforesaid records shall include records of the amount and location of all radioactive material, including nuclear fuel and radioactive waste, used, processed, stored or accumulated upon the site at any time.

25 (3) The licensee shall record such additional particulars as ONR may specify.

25 (4) The licensee shall furnish to ONR such copies of extracts from such records at such times as ONR may specify.

#### **4 PURPOSE OF LICENCE CONDITION 25**

4.1 Compliance with LC 25 ensures that the licensee makes records of what has happened on the plant, checks on safety related parameters and plant configuration, what was found as a result of inspection and what work was done to repair, service or refurbish equipment. The breadth of the requirement comes from the LC 1 definition of operations. These records, which are required to be retained (preserved) by LC 6, can be used by the licensee to demonstrate, and by ONR to check, compliance with licence conditions or other legal requirements. The records are also important sources of information in any investigation and could be used in evidence to support (or defend) a prosecution.

4.2 The requirement to keep records of the amount and location of any radioactive material (including fuel and waste) is needed to track and account for such material, so that the nature and location of radioactive material is at all times known. The information may also be required in connection with LC 5 (Consignment of Nuclear Matter). See also the Safeguards appendix of this document.

4.3 LC25 (3) & (4) empower ONR to specify that additional records be kept by the licensee and for the licensee to provide copies of extracts from such records that ONR may require.

#### **5 GUIDANCE ON ARRANGEMENTS FOR LC25**

5.1 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 procedures that identify the records to be kept, the period of retention and the persons responsible for its implementation. Such arrangements or procedures, which will help demonstrate compliance with the licence condition, should address all the condition requirements.

5.2 The procedures should ensure that records cover all 'operations' as defined in LC1. The records should include the quantity and location of any radioactive material, including nuclear fuel and radioactive waste used, processed, stored or accumulated on site.

5.3 The procedures should clearly identify which records are being kept to comply with or demonstrate compliance with this or other licence conditions. This may conveniently be achieved by producing a schedule of records which should define, amongst other things retention periods. For record retention periods refer to LCs 5&6 and guidance provided in NS-TAG-GD-033 "Duty holder management of records".

5.4 The procedures should specify the permissible form in which the records may be kept e.g. hard copy, microfiche, electronic, physical items, film media, etc., together with methods to ensure their integrity and future accessibility for the period the records are to be retained.

5.5 The procedures should require that the persons responsible for compliance with this condition are identified, and that those controlling and supervising the making, reviewing and retention of these records are suitably qualified and experienced.

5.6 The procedures should recognise the need for the licensee to respond to any LC25 (3) or (4) Specification from ONR and identify the person responsible for making any necessary changes to the arrangements.

## **6 GUIDANCE ON INSPECTION OF ARRANGEMENTS FOR LC25**

6.1 Confirm that the procedures are approved and current within the Quality Management System (QMS), adequately reflect the current organisation and define responsibilities for complying with the licence condition.

6.2 Check that the scope of the procedures covers all 'operations' as defined in LC1 and the quantity and location of any radioactive material, including nuclear fuel and radioactive waste used, processed, stored or accumulated on site, and that responsibilities for making, managing and retaining records are defined.

6.3 Confirm that there is a schedule or list of records, that it is consistent with LC 5 & 6 arrangements with respect to retention periods, and that the form in which records are kept (e.g., hard copy, microfiche, electronic, physical items, film media, etc. together with methods to ensure legibility and future access) are defined. Confirm that the retention period begins when the record ceases to be "current" or "live", and that any periods shorter than those specified in LC 5 & 6 have been approved by ONR. Check that the procedures clearly identify the person responsible for creating the records defined in the schedule or list.

6.4 Confirm that procedures exist to respond to extant LC 25 (3) or (4) specifications or to establish arrangements if required.

## **7 GUIDANCE ON INSPECTION OF IMPLEMENTATION OF ARRANGEMENTS FOR LC25**

7.1 Check that the persons responsible for compliance with this condition are aware of their appointment and the requirements of this condition, and that they are SQEP for those duties.

7.2 Safety-related records typically include plant operational logs kept by managers and supervisors and records of checks on safety-related parameters and plant configuration. They also include records such as maintenance schedule actions and the results of that work, records associated with other maintenance activities and documents such as permits to work which define the means by which safe working conditions are achieved. Inspectors should satisfy themselves that there is an adequate range of records being kept on the site and that the records available enable the previous status and condition of the plant to be determined (refer also to Section 4 above). The following indicative list, which is not exhaustive, gives a sample of the types of records which could be considered:

- (a) Operational logs (e.g. shift managers' / charge engineers' and supervisors' logs, desk logs, refuelling area log, ponds log, radwaste area log and building logs etc. depending on site or plant);
- (b) Records required to demonstrate compliance with Operating Rules or Technical Specifications;
- (c) Records of the state or configuration of the plant including any necessary safety mechanisms, devices or circuits;

- (d) Records to show the status of any maintenance, inspection, modification, test, calibration or other safety-related work in progress;
  - (e) Records required to demonstrate compliance with the maintenance schedule;
  - (f) Clearance, confined space and permit to work certificates, approved schemes of work etc.;
  - (g) Records of events, incidents and near misses relevant to safety;
  - (h) Records of adjustments of plant parameters;
  - (i) Records of staff rotas, levels and training;
  - (j) Records of Operational Decision Making (ODM) and Conservative Decision Making (CDM) meetings at reactor sites (or their equivalent elsewhere).
- 7.3 In addition to the above, inspectors should check that records are being kept of the type, quantity and location of all radioactive material used, processed, stored or accumulated on site, including nuclear fuel and radioactive waste (refer to NS-INSP-GD-04, 05 and 32). See the Safeguards appendix in this document as these records relate to NSR19 regulations 6 & 10.
- 7.4 Check that a system is in place that ensures the production, review and storage of the records, that storage locations are adequate and are continually maintained to prevent loss or damage and that the records are readily available for inspection.
- 7.5 When inspecting records, particular attention should be given to the following and where appropriate the arrangements for tracking and trending them:
- (a) Operational Records;
- (i) possible breaches of operating rules or instructions;
  - (ii) repetitive or standing alarms;
  - (iii) plant failures, especially to danger;
  - (iv) plant failures following maintenance;
  - (iv) repetitive or long standing plant failures;
  - (v) external events, e.g. grid problems, services & supplies;
  - (vi) radiological events;
  - (vii) operational difficulties;
  - (ix) staffing problems; and
  - (x) comments that are unclear.

If problems are identified, or there are entries not easily understood, discuss with relevant managers, engineers or supervisors. Note that any substantial follow up action should be completed as reactive inspection under the relevant licence condition or other legislation;

- (b) Maintenance Records: Focus on plant or activities which are safety-significant or are linked to statutory requirements and look for reports of:
- (i) failure to danger, unrevealed or repetitive failure, or failure with unexpected or potentially adverse consequences;
  - (ii) problems with the programming or scheduling of safety related work;
  - (iii) lack of, or incorrect, spares;
  - (iv) staffing problems, e.g. shortages, training gaps etc;
  - (v) availability of alternative plant or equipment;
  - (vi) failure to maintain according to the maintenance schedule, or statutory requirements.

If problems are discovered or exceptions to maintenance schedule requirements identified, discuss such entries with the relevant engineers. Plant which cannot be maintained according to the maintenance schedule should be declared unavailable unless or until an extension to the maintenance interval has been agreed. This may,

depending on the extent of maintenance schedule approval, require ONR agreement. Note that any substantial follow up action of the above points should be completed as reactive inspection under the relevant licence condition or other legislation.

- (c) Incident or Event Records. Check that events and incidents known to you (e.g. from discussions with staff or inspection of logs) have been included in the records. Discuss a number of events (selected for potential safety significance or other relevant reason) with the person responsible for keeping these records and check the completion status of the actions. Note, significant follow up action for concerns arising from this inspection should be completed as reactive inspection under LC7.
- (d) Records of Current and Prospective Modifications. Review the register, looking in particular at any new entries since the last inspection:

Further follow-up action or more detailed inspection may need to be carried out in accordance with LC 22 guidance.

- 7.6 Check locally held previous logs or other records to confirm that they are being adequately stored pending archiving or central storage, and that local holdings of records are consistent with the arrangements for LC 5 or LC 6.



## Appendix I – Safeguards

Many of the expectations for LC 25 arrangements in this guidance are applicable to compliance with NSR19 and expectations within ONMACS [\[link\]](#). Most of the commonality centres on the records made, competence of staff, and adequacy of procedures. Inspectors should note the different definitions of “nuclear matter” above, and “qualifying nuclear material” (QNM). QNM is defined in the Nuclear Safeguards Act 2018 and Nuclear Safeguards (Fissionable Material and Relevant International Agreements) (EU Exit) Regulations 2019 as natural uranium, depleted uranium, uranium enriched to less than 20%, uranium enriched to 20% or above, thorium and plutonium.

The details that safeguards records must contain are set out in NSR19 regulations 10 & 11. Safeguards records help ensure that an operator can adequately account for, control, and report on their nuclear material. Expectations for records are set out in “Fundamental Safeguards Expectations” (FSEs) and underpinning “Material Accountancy and Control Expectations” (MACEs) within ONMACS. Operational records under LC 25 will have most relevance to FSEs 6 & 7, records for material measurements and records for inventory control. MACE 8.3 may also be relevant as this describes ONR’s expectations for the storage and management of safeguards records.

As a general rule, any licensee records that record movement, measurement, or storage of QNM are likely to be considered safeguards relevant. There are a number of inspection types carried out by ONR Safeguards that may provide opportunity for joint inspection in which assurance against LC 4 and NSR19 might be gained, if scoped correctly. For instance, ONR Safeguards accountancy-focused compliance inspections may offer useful synergies with this licence condition, as the primary focus of these inspections is verification of records which underpin material accountancy reports. For further guidance on ONR Safeguards inspection please refer to the Nuclear Safeguards Technical Inspection Guide [\[link\]](#).

Specific parts of this TIG that are safeguards-relevant include:

5.5 – Job roles that involve production of operational records regarding QNM affect safeguards performance. NSR19 Schedule 2(2) requires operators to assign and communicate defined safeguards roles to their staff. ONR’s expectation in FSE 3 of ONMACS should also be considered. The procedures reviewed here for LC 25 may be relevant to safeguards as well as safety.

6.3 – The retention periods for LCs 5 & 6 exceed the five year requirement for safeguards (NSR19, regulation 6).

7.3 – Regulations 6 & 10, and Schedule 2(6) of NSR19 refer to recording of similar information as in 7.3 of this TIG. Additionally ONR expectations for “Nuclear Material Tracking”, FSE 7 in ONMACS, are in good alignment. An operator’s safeguards system for QNM, (regulation 6), should be providing information that is expected here for LC 25.

7.4 – Safeguards records are expected to be provided to ONR within 14 days of a written request, regulation 10. Expectations in MACE 8.3 and this TIG state only that they should be “readily retrievable”. The inspector should utilise judgement here to determine acceptable retrieval times for safeguards/safety operational records.

7.5 – ONR expectations for maintenance are in MACE 5.2 of ONMACS; systems and components for accountancy control should receive regular and systemic maintenance. Maintenance records under LC 25 may demonstrate “regular and systemic” maintenance where equipment is dual purpose, i.e. has a safety and safeguards function. In MACE 5.2, maintenance for safeguards should be “commensurate with the required reliability and performance” (for safeguards), for this reason there may be a divergence in what is considered adequate maintenance for safety and safeguards.