|  |
| --- |
|  |
| ONR Technical Inspection Guide (TIG)  LC7 – Incidents on the Site |



ONR Technical Inspection Guide (TIG)

LC7 – Incidents on the Site

**Head of Profession** – Operational Inspection

**Authored by** – Nuclear Safety Inspector

**Approved by** – Head of Profession

**Issue:** 6.2

**Published**: September 2025

**Next scheduled review**: September 2030

**Document reference**: NS-INSP-GD-007

**Record reference**: [ONRHH-822789359-20375](https://prodonrgov.sharepoint.com/sites/HOW2Hub/_layouts/15/DocIdRedir.aspx?ID=ONRHH-822789359-20375)

Revision commentary

|  |  |
| --- | --- |
| Issue | Description of update(s) |
| 6.0 | Three year review completed with minor changes to: reflect the new IAEA specific safety guide SSG-50; add guidance for managing corrective actions and update reference. |
| 6.1 | Minor update – Review date extended from July 2021 to July 2025. |
| 6.2 | Minor update – document simplification. No significant change to the intent. The content that was previously in the appendix relating to operation experience (OE) has been removed from document and published onto HOW2 Hub for reference. |

# Introduction

1. Technical Inspection Guides (TIG) support inspectors undertaking compliance inspections to make regulatory judgements in relation to the adequacy of compliance and in providing regulatory advice on specific Licence Conditions (LCs) to licensees. The purpose of this guidance is to facilitate a consistent approach to Licence Condition (LC) 7 – Incidents on the Site[[1]](#footnote-2).
2. The guidance should not be regarded as exhaustive or mandatory, but provides a clear framework for inspectors to judge the adequacy of the licensee's arrangements and their adequate implementation.
3. This guidance should be read in conjunction with ONR’s policy on Risk-Informed and Targeted Engagements (RITE) [1], which sets out how ONR expects inspectors to target regulatory engagements in a risk-informed manner. It supports inspectors in deciding what to engage dutyholders on, based on their judgement of risk, prior to and during regulatory interventions.

# LC7 – Incidents on the Site

1. The LC states:

‘**7(1)** The licensee shall make and implement adequate arrangements for the notification, recording, investigation and reporting of such incidents occurring on the site’

* as is required by any other condition attached to this licence;
* as ONR may specify; and
* as the licensee considers necessary.

**7(2)** The licensee shall submit to ONR for approval such part or parts of the aforesaid arrangements as ONR may specify.

**7(3)** The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements unless ONR has approved such alteration or amendment.’

# 

# Purpose and outcomes of LC7

1. The purpose of LC7 is to ensure that licensee’s have adequate arrangements to ensure that safety significant incidents are appropriately managed and learning is identified to prevent recurrence of similar future incidents and detect any trends.
2. The main regulatory outcomes of LC7 focus on the following areas:

* Ensuring that the licensee is meeting legal and regulatory obligations for incident management, including timely notification and thorough investigation by suitably qualified personnel.
* Ensuring the reporting by licensees includes a comprehensive account of incidents, detailing the nature, cause and impact of each event.
* Ensuring that all incidents, regardless of their severity, are accurately recorded and analysed to identify any underlying issues or trends (which may be precursors for more significant events) or learning to be disseminated.

1. Incidents on site will likely interface across the majority of arrangements in place for other LC’s in relation to notifying ONR. However, LC7 is specifically referred to in the following LC’s:

* LC23(3) – ‘…..identifies any matter indicating that the safety of any operation or the safe condition of any plant may be affected that person shall bring that matter to the attention of the licensee forthwith who shall take appropriate action and ensure that the matter is then notified, recorded, investigated and reported in accordance with arrangements made under Condition 7.’
* LC28(8) – ‘…..the suitably qualified and experienced person appointed to control or supervise such examination, inspection, maintenance or test shall bring it to the attention of the licensee forthwith who shall take appropriate action and ensure the matter is then notified, recorded, investigated and reported in accordance with arrangements made under Condition 7.’
* LC34(2) – ‘……that any such leak or escape is then notified, recorded, investigated and reported in accordance with arrangements made under Condition 7’.

# 

# Guidance on the purpose and inspection outcomes for LC7

## Arrangements

1. In judging the adequacy of the arrangements, it is important to sample not only their scope and adequacy, but also their practical implementation at the workplace. This involves discussions with various levels of management and the workforce performing the tasks. When assessing the adequacy of the arrangements consider:
2. That the arrangements are documented within the licensee’s safety management system, current and authorised by an appropriate SQEP individual.
3. Whether the arrangements outline the process and procedures of notification, recording, investigation and reporting. The arrangements should employ a system for the reporting and categorisation of incidents by type and safety significance and aligned to the ONR incident reporting process ([ONR-OL-PROC-002-Process for notifying incidents to ONR](https://prodonrgov.sharepoint.com/sites/HOW2Hub/Shared%20Documents/ONR-OL-PROC-002%20-%20Process%20for%20notifying%20incidents%20to%20ONR.docx?web=1)) [2]. If the significance of an incident only becomes apparent following a detailed investigation then retrospective notification may be necessary.
4. The categorisation system should comply with those LC’s which refer specifically to LC7. It should also cover LC13(10) notification requirements. The arrangements should include the option for licensees to bring to the attention of the Nuclear Safety Committee details of the most safety significant incidents for its consideration and advice.
5. That the arrangements make provision for submissions for approval to ONR of such part or parts of the arrangements that ONR may specify.   
   Always check whether ONR has approved parts of the LC7 arrangements (LC7(3)) and if so, confirm that the approved arrangements are in place, implemented and subject to configuration control and oversight.
6. That the roles and responsibilities of staff involved in the processes are clearly defined with associated training, experience and qualifications specified. Confirm that arrangements identify management expectations for all staff with regard to reporting incidents.
7. That reporting requirements are communicated to all staff (including contracted / temporary staff) during initial and refresher training.
8. That sufficient records/details (as required by LC6) of incidents are adequately recorded to enable a permanent record of incidents occurring to be maintained, and provide data to assess an incident’s safety significance.
9. Incidents which challenge safety to be reviewed immediately and appropriate corrective action to be taken. The arrangements identify screening criteria to consistently select and prioritise incidents for further investigation and should also identify requirements for:

* nominating suitably qualified and experienced staff to carry out investigations;
* identifying the scope and/or terms of reference of the investigation;
* confirming the extent of condition and the effect of the incident over and above what is normal;
* recording the outcome from the investigation including root cause identification, where appropriate and
* recommending actions in the interests of safety.

1. The arrangements should ensure that any implications for design, procurement, commissioning, operation, maintenance, decommissioning, training, human and organisational factors are evaluated.
2. The arrangements should include the methods for identifying the apparent, direct and root causes of incidents and should ensure that corrective actions are clearly identified to address the causes of an incident. The actions should be intended to correct an adverse condition, prevent recurrence and enhance safety, where appropriate.
3. LC7 does not explicitly refer to corrective action in response to incidents notified under the LC, but LC17 quality management arrangements will require timely corrective action to eliminate the causes of non-conformances, so the expectation is that the licensee’s arrangements include requirements to rectify conditions adverse to safety identified from their incident investigations. The arrangements should therefore identify the systems used to record, implement and track any corrective actions identified as a result of an investigation and ensure that an auditable trail for completion of actions placed and closure of the incident response is provided.

## Notification

1. ONR is the UK enforcing authority for legislation related to its five statutory purposes. This legislation places duties on organisations and individuals undertaking relevant activities. Part of these duties include notifying the enforcing authority of incidents. Dutyholders should identify and record all incidents based on their actual and reasonable foreseeable consequences. The arrangements should include the requirement for ONR to be notified of incidents prescribed under the applicable legislation.
2. The arrangements should ensure that details of incidents affecting safety on the site are notified to ONR, indicating the reason for notification in relation to the categorisation system and include reference to the current national and international reporting criteria, for example, INES. Arrangements should identify the person responsible for informing ONR with all notifications made in a timely manner; within limits specified by the arrangements.   
   The arrangements should reference the ONR incident reporting process and include clear links across to the ONR incident codes. The notification process, criteria and applicable legislation are within [ONR-OL-PROC-002-Process for notifying incidents to ONR](https://prodonrgov.sharepoint.com/sites/HOW2Hub/Shared%20Documents/ONR-OL-PROC-002%20-%20Process%20for%20notifying%20incidents%20to%20ONR.docx?web=1) [2].
3. It is important to sample not only the scope and adequacy of the arrangements, but also their practical implementation, consider:

* That the licensee is discharging its statutory duty to report certain incidents to ONR and to ministers.
* That incidents are reported within the requisite timescales to the appropriate regulatory purposes / functions / bodies.
* Whether the classification of incidents aligns with regulatory thresholds.
* That the Nuclear Safety Committee is notified of significant incidents.
* That staff are aware of / trained in their responsibility for notifying incidents.
* Potential consequences of incidents is also applicable to new build projects on licenced sites, for instance where a safety functional design requirement has been challenged, but there is not yet any nuclear inventory.
* That the potential consequences of an incident or near miss are considered and High Potential (HiPo) events are identified and investigated appropriately. A HiPo event is an incident or near miss that, while not resulting in actual harm or significant consequences, had the potential, under slightly different circumstances, to lead to a serious safety/operational impact. On a licensed nuclear site, a HiPo event is particularly important as it can reveal latent weaknesses in systems, processes, or human performance that, if left unaddressed, could contribute to a future event with more severe outcomes.

## Recording

1. Timely and accurate recording of incidents is vital. In assessing the adequacy consider whether there is a centralised system for logging all incidents.
2. By sampling that incidents are adequately recorded to enable a permanent record of incidents occurring to be maintained, and provide data to assess an incident’s safety significance. The records made should be suitable to allow ranking, analysis and trending of the incidents recorded. Verify that in all cases where an incident or near miss is classified as a HiPo event, it has been subject to a formal root cause analysis investigation, the scope of which should extend beyond the immediate and direct causes to determine the underlying systemic or organisational failures.

* Incident records are complete (i.e., date, time, location, personnel, description, etc.). Evaluate the completeness and accuracy of incident logs and databases. Are incident categories and severity levels clearly defined and used consistently.
* Records should be kept in accordance with the requirements of LC6 - Documents, records, authorities and certificates. Incident records must be maintained in a way that allows for traceability, auditability, and retrieval. Is access to incident records controlled and auditable?   
  Are updates and follow-up actions recorded in the system?
* How accessible incident report information is to plant personnel / inspectors to judge adequacy and whether information is collected centrally in a manner that is suitable for timely retrieval, collation and subsequent analysis.

## Investigation

1. There is a clear linkage between the investigation process and the Operational Experience Framework (OEF). LC7 does not explicitly refer to the OEF or corrective actions, however, further guidance in this area is provided within on HOW2 Hub, specifically on the expectations of an OEF and the associated outcomes. For information, there is a HSE workbook on [investigating accidents and incidents (HSG245)](https://www.hse.gov.uk/pubns/books/hsg245.htm) [3].
2. In assessing the adequacy of an investigation consider:

* Whether incidents which challenged the safety of the plant / facility were reviewed immediately and appropriate corrective action taken.
* Verify that screening criteria are established and that there are clear responsibilities for decision making in relation to screening. By sampling that incidents are screened consistently to ensure that the appropriate level of investigation is undertaken based upon the potential significance of the incident and / or the learning that may be derived.
* Whether the persons or group undertaking the screening have the necessary breadth of experience and sufficient knowledge of the plant or process. Confirm that members of the investigation teams are SQEP to adequately investigate and analyse the incident information.
* The investigation methods utilised are adequately defined and appropriate to the significance of the incident. When necessary, do the methods identify direct and root causes, together with contributory factors?
* Whether the methods used do address plant, procedural and personnel issues adequately. Check that human error is not being identified as the root cause without understanding of the factors leading to the human error. Check if failed barriers, organizational weaknesses and error likely situations are considered.
* That similar internal or external incidents are considered during the investigation / analysis process. Confirm that the sources or database of information relating to similar incidents or precursors are easily accessible, retrievable and easy to use by those carrying out the investigation/analysis. Evaluate if effectiveness of corrective actions taken to previous similar incidents are considered during an incident investigation.
* That analyses of incidents or group of low-level incidents and near misses are performed to identify root causes or precursors of declining performance. Confirm that periodically the database is reviewed and that a methodology is established to perform root cause analysis to an accumulation or trend of low-level incidents and near misses in the same area or with a similar pattern.
* Whether the investigations are conducted in a timely manner and completed in accordance with times set out in the arrangements.   
  Check if there is a procedure for gathering information from incident participants and the scene as promptly as possible after the occurrence and that where necessary scene preservation was in evidence.
* That investigations are conducted and completed in a timely manner with arrangements in place to ensure that information is gathered as soon as possible after the incident has taken place.
* Whether the screening and investigation process considers extent of condition across the site.
* That the results of investigations are used to develop corrective actions that are implemented in due time to avoid any recurrence of the incidents. Confirm that corrective actions have been reviewed and approved in accordance with defined arrangements before implementation.
* Whether / where the status and effectiveness of corrective actions is monitored and that the appropriate level of management is held accountable for completion of the corrective actions and that closure is recorded and formally closed out.
* Whether / where corrective actions from investigations are monitored and managed by the licensees LC17 corrective action process or by other appropriate means.
* That there is a system in place for the review of progress of closure of corrective actions. Confirm that there is a procedure to review the effectiveness of corrective actions.

## Reporting

1. Licensees are required to ensure that following an investigation into the circumstances surrounding an incident on the site, a documented report is produced. The reports should contain the following information as proportionate and appropriate:

* Time, date, and place of the incident.
* Site and plant affected, and duty shifts involved.
* A description of the circumstances of the incident.
* Details of any casualties or otherwise affected persons.
* Estimation of any radiological effects or contamination spread.
* Condition of the affected plant and suitability for service.
* Assessment of the consequences or potential consequences for safety in the short and long term (including the INES rating).
* Details of initial action taken to eliminate, control, contain or mitigate the hazard.
* Requirements for preservation of scene.
* Details of categorisations, organisations notified and feedback obtained.
* Investigation undertaken.
* Identification of the direct and root causes.
* Assessment of extent of condition.
* Identification of repeat incidents, including contributory factors and review of previous corrective actions taken.
* Corrective actions recommended, with their target completion dates.
* Learning opportunities for similar operations, plants or facilities.
* Details of relevant operational experience (including information provided to other licensees).

1. In assessing the adequacy of implementation, consider:

* Whether investigation reports are completed, comprehensive and authorised.
* The accessibility of incident report information to plant personnel.
* Whether extent of condition has been undertaken and that applicable learning is disseminated to appropriate staff in a timely manner.
* Evidence that learning from investigations is fed back into safety cases.
* That significant incidents prompt a review of key assumptions in safety cases.

## Conclusion

1. LC7 requires the licensee to make and implement adequate arrangements for the notification, recording, investigation, and reporting of incidents.   
   Its fundamental goal is to ensure that all safety-significant events, including HiPo’s and other near misses, are captured and understood to prevent recurrence. Accurate and timely recording supports effective investigation / root cause analysis, regulatory oversight and continuous improvement in nuclear safety.
2. LC7 (whilst not explicitly) underpins a learning culture, where operational experience is used to strengthen defences, undertake corrective actions and reduce risk.
3. The main purpose of an OEF[[2]](#footnote-3) is to enhance safety, reliability, and performance by ensuring that past experiences inform future decisions, procedures, and behaviours. Together all these elements are vital as they ensure transparency, accountability, and proactive risk management in a high-hazard nuclear environment.

# References

|  |  |
| --- | --- |
| [1] | ONR, “ONR-RD-POL-002 - Risk-informed and targeted engagements (RITE),” [Online]. Available: https://prodonrgov.sharepoint.com/sites/HOW2Hub. |
| [2] | ONR, “ONR-OL-PROC-002 - Process for Incident Notifications to ONR,” [Online]. Available: https://prodonrgov.sharepoint.com/sites/HOW2Hub. |
| [3] | HSE, “HSG245 - Investigating accidents and incidents - A workbook for employers, unions, safety representatives and safety professionals,” 2004. [Online]. Available: https://www.hse.gov.uk/pubns/books/hsg245.htm. |

1. This guidance aligns with IAEA Guidance (for example, Specific Safety Guide SSG-50). [↑](#footnote-ref-2)
2. Search ‘operational experience’ on HOW2 Hub for more information. [↑](#footnote-ref-3)