



ONR GUIDE			
LC5 CONSIGNMENT OF NUCLEAR MATTER			
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1 INTRODUCTION

1.1 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 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 the suite of documents provided by ONR for this purpose.

2 PURPOSE AND SCOPE

2.1 This guidance has been prepared as an aid to inspection activities carried out by ONR Nuclear Safety Inspectors at Nuclear Installations in judging the Licensees' compliance with the requirements of Licence Condition 5 (LC 5). This guidance provides a framework for these inspection activities within which the Inspector is expected to exercise his/her discretion. This framework is provided to facilitate a consistent approach to LC 5 compliance inspection.

2.2 The guidance is for use by all Nuclear Inspectors in ONR. The guidance does not indicate when or to what extent LC 5 inspections should be carried out as these matters are covered in individual Inspector's inspection plans.

2.3 The guidance provided is split into four main elements:

- Purpose of the Licence Condition
- Guidance on procedures for LC 5
- Guidance on inspection of procedures for LC 5
- Guidance on inspection of implementation of procedures for LC 5

3 LICENCE CONDITION 5: CONSIGNMENT OF NUCLEAR MATTER

3.1 5(1) The licensee shall not consign nuclear matter (other than excepted matter and radioactive waste) to any place in the United Kingdom other than a relevant site except with the **consent** of ONR

3.2 5(2) The licensee shall keep a record of all nuclear matter (including excepted matter and radioactive waste) consigned from the site and such record shall contain particulars of the amount, type and form of such matter, the manner in which it was packed, the name and address of the person to whom it was consigned and the date when it left the site.

3.3 5(3) The licensee shall ensure that the aforesaid record is preserved for 30 years from the date of dispatch or such other period as ONR may **approve** except in the case of any consignment or part thereof subsequently stolen, lost, jettisoned or abandoned, in which case the record shall be preserved for a period of 50 years from the date of such theft, loss, jettisoning or abandoning.

4 PURPOSE OF LICENCE CONDITION 5

- 4.1** LC 5 is a standard condition attached to all Nuclear Site Licences. Nuclear Site Licensees are required to comply with the licence condition. How this compliance is achieved is for the Licensees to decide. However, ONR must judge the adequacy of this compliance. It carries out this function by compliance inspection.
- 4.2** The purpose of this licence condition is to require that the licensee follows certain requirements in regard to consigning nuclear matter from the licensed nuclear site. Firstly, to ensure that the transfer of nuclear matter, other than excepted matter and radioactive waste, to sites in the UK other than relevant sites is carried out only with the consent of ONR. Secondly, that records are kept of all nuclear matter, including excepted matter and radioactive waste, consigned from the site. The records should be kept for a minimum of 30 years to comply with condition 5(3) except for the case of theft, loss, etc in which case retention of 50 years is required. An important aspect of this LC is a good understanding of the terms "nuclear matter", "relevant site", "excepted matter", and "radioactive waste". Paragraphs 4.3 to 4.10 discuss these terms and paragraphs 4.11 to 4.15 consider significant aspects in regard to the implementation of the licence condition.
- 4.3** LC 1: Interpretation states that "nuclear matter" has the meaning assigned thereto in the Nuclear Installations Act 1965 (as amended); Section 26 of this Act states: "nuclear matter" means, subject to any exceptions which may be prescribed:
- (a) any fissile material in the form of uranium metal, alloy or chemical compound (including natural uranium), or of plutonium metal, alloy or chemical compound, and any other fissile material which may be prescribed; and
 - (b) any "radioactive material" produced in, or made radioactive by exposure to the radiation incidental to, the process of producing or utilising any such fissile material as aforesaid."
- 4.4** Further information on the meaning of "nuclear matter" and "radioactive material" is provided in paragraph 9 - Definitions and in paragraph 8 - Further reading.
- Note - The interpretation of whether a substance or article is "nuclear matter" and "radioactive material" for the purposes of the Nuclear Installations Act can be complex and where necessary Inspectors should seek advice from an Inspector from the Nuclear Liabilities Regulation specialism.
- 4.5** LC 1: Interpretation states that "relevant site" has the meaning assigned thereto in the Nuclear Installations Act 1965 (as amended). Section 26 (1) of this Act states: "a "relevant site" means any of the following, that is to say -
- (a) a licensed site at any time during the period of the licensee's responsibility;
 - (b) any premises at any time when they are occupied by the Authority;
 - (c) any site at any time when it is occupied by a government department, if that site is being or has been used by that department as mentioned in section 9 of the Act;
 - (d) any site in a relevant territory other than the United Kingdom at any time when that site is being used for the operation of a relevant installation by a relevant foreign operator.

4.6 The meaning of item a) above needs no further explanation. Item b) above is no longer of such significance since four of the UKAEA sites involved in nuclear activities are now licensed sites and hence covered by item a) above. The UKAEA site at Culham is not licensed and hence is a relevant site under item b) above. Item c) refers to section 9 of the Act; in the context of this guidance it means the site to which the transfer is being made would be a licensed site if the 1965 Act applied to the Crown. Item d) does not apply since the LC only applies to Great Britain.

4.7 LC 1: Interpretation states that "excepted matter" has the meaning assigned thereto in the Nuclear Installations Act 1965 (as amended) and the Nuclear Installations (Excepted Matter) Regulations 1978. Section 26(1) of the Act states that "excepted matter" means nuclear matter consisting only of one or more of the following, that is to say:

- (a) isotopes prepared for use for industrial, commercial, agricultural, medical scientific or educational purposes;
- (b) natural uranium;
- (c) any uranium of which isotope 235 forms not more than 0.72 per cent;
- (d) nuclear matter of such other description, if any, in such circumstances as may be prescribed.

4.8 In broad terms, excepted matter is nuclear matter which, because of its nature, its preparation or the smallness of its quantity, cannot give rise to the exceptional hazards for which the Act provides. Hence, excepted matter can be freely traded since the classification of nuclear matter as "excepted matter" permits the licensee to detach the absolute liability for harm once such material has left the licensed site. The isotopes referred to in item a) are in a form where they have completed the production process, are fully fabricated and ready for use. Item d) has been used to implement "The Nuclear Installations (Excepted Matter) Regulations 1978, Statutory Instrument 1978 no 1779. To satisfy the definitions of "excepted matter" stated in these regulations, nuclear matter must fall within the radioactivity and mass limits stated in the regulations and be packed in accordance with the appropriate IAEA regulation. Further detail on the meaning of "excepted matter" is provided in paragraph 9 - Definitions and in paragraph 8 - Further reading.

4.9 LC 1: Interpretation states that "radioactive waste" has the meaning assigned thereto in:

- In England and Wales - Paragraph 3 of part 2 of Schedule 23 to the Environmental Permitting (England and Wales) Regulations 2010 (EPR 2010),
- In Scotland - Section 1A of the Radioactive Substances Act 1993.
- Note - Nuclear site licences issued in England and Wales after EPR 2010 came into force refer to these regulations for the meanings of both radioactive waste and radioactive material, and in Scotland to the Radioactive Substances Act 1993. Nuclear site licences issued prior to EPR 2010 refer to the previous radioactive substances act legislation.

4.10 Further detail on the meaning of "radioactive waste" is provided in paragraph 9 - Definitions and in paragraph 8 - Further reading. The interpretation of whether a substance or article is "radioactive waste" for ONR purposes can be complex and where necessary Inspectors should seek advice from an Inspector from the Nuclear Liabilities Regulation specialism.

- 4.11** LC5(1) allows “excepted matter” and “radioactive waste” to be consigned to any place in the United Kingdom without the consent of ONR. In the case of excepted matter, for instance, this allows many isotopes to be consigned to hospitals without the consent of ONR. In the case of radioactive waste, this makes current radioactive waste consignment activities compatible with existing legislation particularly when material is being consigned for disposal; the latter being the main reason for consigning radioactive waste. The 1965 NI Act made provision for prescribing disposal of radioactive waste amongst other activities, i.e. requiring a nuclear site licence; however, the subsequent 1971 Nuclear Regulations which prescribed many of the activities in the 1965 Act did not prescribe disposal. Hence, a disposal site does not currently require a nuclear site licence and it is also possible that it is not a relevant site i.e. the site does not fall into the categories in paragraph 4.5. Without the exception in LC5 (1) for excepted matter and radioactive waste, all consignments would require consent from ONR if they were being consigned to a non-relevant site. This could be an extremely onerous task for what are currently low hazard activities.
- Note: it is not common practice to consign radioactive waste other than low-level waste from a licensed site. This guidance does not address any possible future changes to this practice such as consignment for final disposal of higher activity wastes.
- 4.12** The consequences of the Nuclear Installations Regulations 1971 give rise to one of the circumstances where LC 5(1) is implemented and ONR would grant a consent.
- These regulations prescribe activities which cannot be undertaken unless a nuclear site licence is in place; the activities include nuclear fuel element manufacture, the processing of enriched uranium or plutonium, the storage of fuel elements, irradiated nuclear fuel, and bulk quantities of any radioactive matter, etc. However, assay or metallographic investigation of enriched uranium or plutonium compounds was excluded from the list of prescribed activities. Such compounds are not excepted matter and probably not classified as radioactive waste. Hence, if a licensee requires to send such material to a university for assay then a consent under LC 5(1) will be required from ONR since nuclear matter is being sent to a place which is not a relevant site.
- 4.13** Further information on the application of LC 5 and the interpretation of the term “consign” is provided in paragraph 8 – Further reading. This shows that with the exception of those transfers which are explicitly stated to be outside the scope of LC 5, (“excepted matter”, “radioactive waste” and transfers to “relevant sites”), the requirements of LC 5 apply to all transfers of nuclear matter from a licensed site, to places other than a relevant site, irrespective of whether some or all of that matter will subsequently be returned to that site. Furthermore that:
- The meaning of “consign” should be taken to be the ordinary common sense meaning of the term, i.e. to deliver or transmit goods for sale or custody.
 - LC 5 consents are not granted for the refuelling of nuclear submarines on licensed sites.
- 4.14** LC 5 does not formally require the licensee to make and implement adequate arrangements. However suitable written procedures should be produced to enable compliance with this condition to be visible. These procedures should ensure that a consent is sought from ONR before nuclear matter is sent to non-relevant sites in the UK as required by condition 5(1).
- 4.15** Requests for consent under 5(1) should be supported by sufficient justification for consignment. Inspectors should:

- Check that the site receiving the nuclear matter does not require licensing and whether a permit under section 2 of the NI Act is required.
- Contact the relevant ONR Radioactive Materials Transport inspector or, as appropriate, the Defence Nuclear Safety Regulator (DNSR), (Transport Competent Authority), to obtain advice on the safe transport of the nuclear matter and to provide opportunity to ensure that the appropriate regulations for road, sea, rail or air transport of radioactive material are complied with.
- Contact the HSE inspector responsible for inspecting the place to which the nuclear matter is being sent to provide opportunity to confirm that any required radioactive notifications and assessments are made.
- Contact the appropriate Environment Agency, Scottish Environment Protection Agency or Natural Resources Wales inspector to provide opportunity for any permits and authorisations to be issued under EPR 2010 or RSA 93 as appropriate.

5 GUIDANCE ON PROCEDURES FOR LC5

- 5.1** The licensee should have procedures in place to demonstrate compliance with LC 5; the following list considers aspects of the requirements. The list is neither exclusive nor exhaustive and will be subject to review and revision in light of operational experience. If licensees have generic model(s) for arrangements then it is for the site to justify any deviation from the model(s).
- 5.2** Procedures should be provided to comply with LC 5.
- 5.3** Procedures shall address the licence condition requirements. The person responsible for compliance should be identified.
- 5.4** Procedures should be readily available and should be up to date, signed by an appropriate senior manager and controlled under a system compliant with the requirements of LC 17 – Management systems.
- 5.5** The licensee should include in the procedure the following definitions;
- Relevant Site.
 - Nuclear Matter.
 - Excepted Matter.
 - Radioactive Waste.
 - Radioactive Material.
- 5.6** Furthermore, the procedures should provide a clear interpretation of the meaning of the above definitions.
- 5.7** The procedures should ensure that nuclear matter, other than excepted matter and radioactive waste, is only consigned to a relevant site and prevent the consigning of nuclear matter to any other site except with the consent of ONR. Person(s) responsible for complying with this requirement should be identified.
- 5.8** Procedures should ensure that when nuclear matter, including excepted matter and radioactive waste is consigned from site, records are made of the amount, type and form of such nuclear matter, details of packaging, the name and address of the consignee and the date it left the licensee's site.

- 5.9** The procedures should ensure that records made under LC 5(2) are kept for a period of 30 years from the date of consignment unless:
- The consignment, or part thereof, has been lost, stolen, jettisoned or abandoned, in which case a period of 50 years applies or,
 - ONR specifies a different record period.
- 5.10** The procedures should identify the person(s) responsible for seeking the consent of ONR if nuclear matter is to be consigned to any location other than a relevant site.
- 5.11** The procedures should identify the person(s) responsible for complying with any specification of record retention period made by ONR, and should identify the system whereby constraints, caveats or conditions imposed by ONR are implemented.

6 GUIDANCE ON INSPECTION OF PROCEDURES FOR LC 5

- 6.1** Part 6 of this guidance is to assist inspectors in judging the adequacy of the licensee's procedures. The following list is neither exclusive or exhaustive and will be subject to review and revision in light of operational experience. It does however, provide a list of aspects of LC 5 that can be examined during routine inspections.
- 6.2** Check that procedures have been made to demonstrate compliance with the LC.
- 6.3** Examine the procedures documentation layout and check that it is consistent. Review the procedures to establish validity, whether any changes have been made since the last review and whether the identified responsible persons are correct. Note whether instructions, methods and quality assurance requirements claimed in procedures have been followed and whether any changes that have been made have been correctly incorporated and validated.
- 6.4** Check that the procedures contain suitable and sufficient definitions with respect to:
- A relevant site;
 - Nuclear matter;
 - Excepted matter;
 - Radioactive material; and,
 - Radioactive waste.
- 6.5** The definitions should cross-refer to the relevant legislation and the procedures should provide a clear interpretation on the meaning of the definitions.
- 6.6** Examine procedures concerning consignment and check that they ensure nuclear matter other than excepted matter and radioactive waste is only consigned to a relevant site unless a consent is received from ONR.
- 6.7** Examine procedures concerning consignment and check that procedures adequately detail the requirement to keep a record of all nuclear matter (including excepted matter and radioactive waste) consigned from the site. The record should contain particulars of the amount, type and form of such nuclear matter, the manner in which it was packed, the name and address of the person to whom it was consigned and the date when it left the site.
- 6.8** Examine procedures concerning record keeping and check that procedures adequately detail the requirements to preserve records as stated in LC 5 (3).

7 GUIDANCE ON INSPECTION OF IMPLEMENTATION OF PROCEDURES FOR LC 5

- 7.1** Part 7 of this guidance is to assist inspectors in judging the adequacy of the Licensee's implementation of their procedures i.e. is the licensee complying with the procedures. The following list is neither exclusive or exhaustive and will be subject to review and revision in light of operational experience. It does however, provide a hit list of aspects of LC 5 that can be examined during routine inspections.
- 7.2** Check whether any consignments have been made that involve the requirements of LC 5(1). If so, check against LC 5(1) with respect to an application for a consent; check that there are legitimate reasons for the transfer of nuclear matter and that the site receiving the nuclear matter does not need to be licensed under the Nuclear Installations Act. Check whether or not a permit is required under section 2 of the Act and, if so required that it has been granted.
- 7.3** Examine a number of nuclear matter consignment records to ascertain whether they involve this LC. If so, check for compliance with this licence condition.
- 7.4** Check a sample of records held in the site's documentation or record centre and establish that they satisfy LC 5(3) in respect of storage records. Confirm that they contain suitable signatures and are dated as required.
- 7.5** With respect to any consignment of nuclear matter or any part thereof which has been lost, stolen, jettisoned or abandoned, check the records to ensure that this is recorded appropriately. Such records should be allocated a storage period of 50 years from the date of any such occurrence.
- 7.6** Discuss with the responsible person identified in the compliance procedures the requirements of this licence condition and confirm that suitable control is being exercised. Identify whether there are any constraints, caveats or conditions imposed by the licensee or ONR and confirm that they are being duly complied with and that records show this to be the case.

8 FURTHER READING

- 8.1** Note to file - Guidance on the Meaning of "Nuclear Matter", "Radioactive Material", "Excepted Matter", "Radioactive Waste" and "Consign", Trim reference 2016/35543.

9 DEFINITIONS

9.1 Nuclear Matter

- 9.1.1** The term "Nuclear Matter" for the purposes of LC 5 under the Nuclear Installations Act 1965 includes "fissile material", "radioactive material", "excepted matter" and "radioactive waste".

9.2 Radioactive Material

- 9.2.1** The NIA 65 use of the term "radioactive material" has not been defined in Acts or regulations. The term "radioactive material" used in the definition of "nuclear matter" in NIA65 is not equivalent to the interpretation of "radioactive material" provided by the Environmental Permitting Regulations 2010 and LC 1. It is broader and includes "radioactive waste" and can be looked upon as meaning "material that has been made radioactive with and without the intention of using the radioactive, fissile or fertile properties".
- 9.2.2** The interpretation of whether a substance or article is "radioactive material" for the purposes of NIA 65 and LC 5 can be complex and therefore where necessary

Inspectors should seek advice from an Inspector from the Nuclear Liabilities Regulation specialism.

9.3 Excepted Matter

9.3.1 "Excepted matter" is a sub-category of "nuclear matter". When "excepted matter" is present on a licensed site it should be treated in regard to regulatory control in the same manner as all other forms of "nuclear matter". It is only when the "nuclear matter" has left the site that the term "excepted matter" takes on its special meaning as defined in section 26(1) of the Nuclear Installations Act and Nuclear Installations Regulations 1971.

9.4 Radioactive Waste

9.4.1 "Radioactive waste", for the purposes of LC 5 is identical to the interpretation found under LC 1. It is substances and articles, as interpreted under EPR 2010, that satisfy the form, activity and "waste" criteria found in EPR 2010, i.e. that it is scrap, surplus, requires to be disposed of, is discharged, discarded or dealt with as if it were waste.

9.4.2 The interpretation of whether a substance or article is "radioactive waste" for the purposes of LC 1 and LC 5 can be complex and therefore where necessary Inspectors should seek advice from an Inspector from the Nuclear Liabilities Regulation specialism.