

## NUCLEAR SITE LICENCE CONDITIONS

The Nuclear Installations Act 1965 (as amended) (NIA65) requires HSE to attach conditions to nuclear site licences. Licence conditions define areas of nuclear safety to which a licensee should pay attention to ensure safe operation of the site. While some conditions impose specific duties others require the licensee to devise and implement adequate arrangements in particular areas. The issues covered range from arrangements for ensuring the safety of plant and for controlling operations to management issues such as the supervision and training of staff. Breach of a licence condition is an offence under NIA65 s.4(6).

A schedule of 35 standard conditions was incorporated into all nuclear site licences granted between 1990 and 1999. A new licence condition, Licence Condition 36 (LC36), was attached to all nuclear site licences at the end of July 1999. LC36(5) came into effect on 1 August 1999 and LC36(1) - (4) came into effect on 1 April 2000; this delay allowed time for licensees to develop their arrangements to achieve compliance.

The full text of each of the 36 standard licence conditions is set out below (in italics) together with some explanatory text. In the case of LC3 two alternative wordings are also shown.

### 1 **INTERPRETATION**

(1) *In the conditions set out in this Schedule to this licence, unless the context otherwise requires, the following expressions have the meanings hereby respectively assigned to them, that is to say -*

*"commissioning" means the process during which plant components and systems, having been constructed or modified, are made operational and verified to be in accordance with design assumptions and to have met the appropriate safety criteria;*

*"excepted matter" has the meaning assigned thereto in the Nuclear Installations Act 1965 (as amended) and the Nuclear Installations (Excepted Matter) Regulations 1978 made thereunder;*

*"the Executive" means the Health & Safety Executive;*

*"experiment" means any test or non-routine activity other than an activity carried out pursuant to conditions 21 and 28;*

*"installation" means "nuclear installation" and has the meaning assigned thereto in the Nuclear Installations Act 1965 (as amended);*

*"the licensee" and "the site" each has the meaning assigned thereto in paragraph 1 of this licence;*

*"modification" means any alteration to buildings, plants, operations, processes or safety cases and includes any replacement, refurbishment or repairs to existing buildings, plants or processes and alterations to the design of plants during the period of construction;*

*"nuclear matter" and "relevant site" each has the meaning assigned thereto in the Nuclear Installations Act 1965 (as amended);*

*"nuclear safety committee" means any nuclear safety committee established pursuant to condition 13 of this Schedule;*

*"operations" includes maintenance, examination, testing and operation of the plant and the treatment, processing, keeping, storing, accumulating or carriage of any radioactive material or radioactive waste and "operating" and "operational" shall be construed accordingly;*

*"radioactive material" and "radioactive waste" each has the meaning assigned thereto in the Radioactive Substances Act 1993;*

*"safety" refers to the safety of persons whether on or off the site;*

*"safety case" means the document or documents produced by the licensee in accordance with condition 14 of this Schedule.*

(2) *In these conditions except where the context otherwise requires -*

*(a) any reference to the singular shall include the plural and vice versa and any reference to the masculine shall include the feminine;*

*(b) any reference to any arrangement, agreement, approval, consent, direction, specification, notification or any formal communication between the Executive and the licensee (and vice versa) shall be deemed to be a reference to a written document;*

*(c) any reference to a numbered condition is a reference to the condition so numbered in this Schedule.*

(3) *Where in these conditions the Executive requires any matter to be approved or to be carried out only with its consent or to be carried out as it directs the Executive may -*

*(a) from time to time modify, revise or withdraw either wholly or in part any such approval, direction or consent;*

*(b) approve either wholly or in part any modification or revision or any proposed modification or revision to any matter for the time being approved.*

The purpose of this condition is to ensure there is no ambiguity in the use of certain specified terms which are found in the text of the Conditions. It also contains important powers for the Executive to modify, revise or withdraw approvals etc. and

to approve modifications to any matter currently approved. Where appropriate reference is made back to the relevant statutory Acts of Parliament.

## **2 MARKING OF THE SITE BOUNDARY**

(1) *The licensee shall make and implement adequate arrangements to prevent unauthorised persons from entering the site or, if so directed by the Executive, from entering such part or parts thereof as the Executive may specify.*

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

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

(4) *The licensee shall mark the boundaries of the site by fences or other appropriate means and any such fences or other means used for this purpose shall be properly maintained.*

(5) *The licensee shall, if so directed by the Executive, erect appropriate fences on the site in such positions as the Executive may specify and shall ensure that all such fences are properly maintained.*

The purpose of this Condition is to ensure the licensee takes the necessary steps to prevent unauthorised access to those parts of the licensed site that HSE specifies in order to prevent unauthorised persons entering the site and injuring themselves or damaging safety related plant or equipment.

## **3 RESTRICTION ON DEALING WITH THE SITE**

*The licensee shall not convey, assign, transfer, let or part with possession of the site or any part thereof or grant any licence in relation thereto without the consent of the Executive.*

The purpose of this Condition is to ensure that the licensee does not let, convey, assign or transfer any part of the nuclear licenses site to a third party without seeking the permission of the HSE. This is to ensure that the licensee does not change the character of the activities that are licensed and to prevent activities being carried out on the site which could put nuclear operations at risk. Also it is essential that nothing confuses the absolute responsibility of the licensee under the NI Act in respect of safety on the whole licensed site. The licensee should be able to demonstrate that there are organisational procedures to prevent individuals within the company from conveying, assigning, transferring, feuing or granting any licences in relation to the site or parts of the site without first obtaining the Consent of the Executive.

Alternative wording of LC3 for licensed nuclear sites in Scotland:

*The licensee shall not feu, convey, assign, transfer, let or part with possession of the site or any part thereof or grant any licence in relation thereto without the consent of the Executive.*

Alternative wording of LC3 for defence-related sites:

*(1) The licensee shall not convey, assign, transfer, let or part with possession of the site or any part thereof or grant any licence in relation thereto except to the Secretary of State for Defence without the consent of the Executive.*

*(2) The licensee shall notify the Executive forthwith if occupancy of the site or any part thereof is taken by the Secretary of State for Defence.*

#### **4 RESTRICTIONS ON NUCLEAR MATTER ON THE SITE**

*(1) The licensee shall ensure that no nuclear matter is brought onto the site except in accordance with adequate arrangements made by the licensee for this purpose.*

*(2) The licensee shall ensure that no nuclear matter is stored on the site except in accordance with adequate arrangements made by the licensee for this purpose.*

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

*(4) The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements unless the Executive has approved such alteration or amendment.*

*(5) For new installations, if the Executive so specifies, the licensee shall ensure that no nuclear matter intended for use in connection with the new installation is brought onto the site for the first time without the consent of the Executive.*

The purpose of this Condition is to ensure that the licensee has adequate arrangements to control the introduction and storage of nuclear matter on the licensed site to ensure safety. It also provides HSE / NII with powers to specify that certain types of nuclear matter cannot be brought onto the site without the consent of Executive. This enables HSE /NII to intervene to ensure that, for specific activities, it can assess the adequacy of the licensee's arrangements before nuclear matter is brought onto the site. (Nuclear matter being nuclear fuel, radioactive waste, etc., as defined by the NI Act).

#### **5 CONSIGNMENT OF NUCLEAR MATTER**

*(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 the Executive.*

(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 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.*

(3) *The licensee shall ensure that the aforesaid record is preserved for 30 years from the date of dispatch or such other period as the Executive 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.*

The purpose of this Condition is to ensure that the transfer of nuclear matter, other than excepted matter and radioactive waste, to sites in the UK other than relevant sites:

(a) is carried out only with the consent of the Executive; and that

(b) the licensee has adequate records of where such nuclear matter has been sent. The licensee should also be able to demonstrate that there are organisational procedures to prevent individuals from inadvertently consigning such matter to non-relevant sites without first obtaining a Consent from the Executive.

This condition is aimed at ensuring not only that there is a record of where nuclear matter is sent so that HSE / NII can be sure that there are adequate arrangements for safely handling such material at the destination, but also to ensure that licensable activities are not carried out on non-licensed sites.

[Relevant sites are other licensed or Crown sites as defined in the NI Act and S.I. 1965/1826 and S.I. 1978/1779.]

## **6 DOCUMENTS, RECORDS, AUTHORITIES AND CERTIFICATES**

(1) *The licensee shall make adequate records to demonstrate compliance with any of the conditions attached to this licence.*

(2) *Without prejudice to any other requirements of the conditions attached to this licence the licensee shall make and implement adequate arrangements to ensure that every document required, every record made, every authority, consent or approval granted and every direction or certificate issued in pursuance of the conditions attached to this licence is preserved for 30 years or such other periods as the Executive may approve.*

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

*(4) The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements unless the Executive has approved such alteration or amendment.*

*(5) The licensee shall furnish to the Executive copies of any such document, record, authority or certificate as the Executive may specify.*

The purpose of this Condition is to ensure that adequate records are held by the licensee for a suitable period to ensure that the safety case for operation is available at all times, that design and construction information is available for decommissioning, that operational records are available to assist investigations in the event of an accident or incident and operational records are available for the statutory number of years after the cessation of operations for the purpose of assisting any claims of damage to health as a result of exposure to ionising radiation.

## **7 INCIDENTS ON THE SITE**

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

- (a) as is required by any other condition attached to this licence;*
- (b) as the Executive may specify; and*
- (c) as the licensee considers necessary.*

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

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

The purpose of this Condition is to ensure that the licensee has adequate arrangements to deal with incidents that may occur on the nuclear licensed site. It is essential that the licensee keeps a record of all such incidents, notifies the HSE / NII when appropriate, investigates the cause of each incident and produces a report of the investigation to ensure that lessons are learnt.

## **8 WARNING NOTICES**

*The licensee shall ensure that suitable and sufficient notices are kept on the site for the purposes of informing persons thereon of each of the following matters, that is to say:*

- (a) the meaning of any warning signal used on the site;*

(b) *the location of any exit from any place on the site, being an exit provided for use in the event of an emergency;*

(c) *the measures to be taken by such persons in the event of fire breaking out on the site or in the event of any other emergency;*

*and that such notices are kept posted in such positions and in such characters as to be conveniently read by those persons.*

The purpose of this Condition is to ensure the safety of all people on the so that they can respond appropriately and without delay to an emergency situation. The Licensee therefore needs to ensure that all warning notices are in appropriate places to advise people on what to do in that area in the event of a fire or any other emergency.

## **9 INSTRUCTIONS TO PERSONS ON THE SITE**

*The licensee shall ensure that every person authorised to be on the site receives adequate instructions (to the extent that this is necessary having regard to the circumstances of that person being on the site) as regards the risks and hazards associated with the plant and its operation, the precautions to be observed in connection therewith and the action to be taken in the event of an accident or emergency on the site.*

The purpose of this Condition is to ensure that the licensee provides adequate instructions to all persons allowed on the site so that they are aware of the risks and hazards associated with the plant and its operations, the precautions that must be taken to minimise the risk to themselves and others and the actions to be taken in the event of an accident or emergency.

## **10 TRAINING**

(1) *The licensee shall make and implement adequate arrangements for suitable training of all those on site who have responsibility for any operations which may affect safety.*

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

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

The purpose of this Condition is to ensure that all people who carry out activities during design, construction, manufacture, commissioning, operation or decommissioning of a nuclear installation which may affect safety are adequately trained for that purpose. The licensee is expected to ensure that the necessary training requirements are identified for each activity, that individuals who carry out

these activities can demonstrate that they have received such training and that records are kept to demonstrate that individuals have been trained. This Condition is in addition to the general duty under the Health and Safety at Work Act (HSW Act) s.2(2)(c) and the Ionising Radiation Regulations 1999, reg. 14.

## **11 EMERGENCY ARRANGEMENTS**

- (1) *Without prejudice to any other requirements of the conditions attached to this licence the licensee shall make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects.*
- (2) *The licensee shall submit to the Executive for approval such part or parts of the aforesaid arrangements as the Executive may specify.*
- (3) *The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements unless the Executive has approved such alteration or amendment.*
- (4) *Where any such arrangements require the assistance or co-operation of, or render it necessary or expedient to make use of the services of any person, local authority or other body the licensee shall ensure that each person, local authority or other body is consulted in the making of such arrangements.*
- (5) *The licensee shall ensure that such arrangements are rehearsed at such intervals and at such times and to such extent as the Executive may specify or, where the Executive has not so specified, as the licensee considers necessary.*
- (6) *The licensee shall ensure that such arrangements include procedures to ensure that all persons in his employ who have duties in connection with such arrangements are properly instructed in the performance of the same, in the use of the equipment required and the precautions to be observed in connection therewith.*

Even though nuclear installations are designed and operated to high safety standards it is recognised that it is prudent to plan for accidents. The purpose of this Condition is to ensure that the licensee has adequate arrangements in place to respond effectively to any incident or accident. The licensee is required to have arrangements in place to cover a wide range of events from minor incidents which are restricted to on-site locations to large incidents or emergencies which can result in a significant release of radioactive material to the environment. The Condition gives HSE the powers to ensure that the licensee's emergency arrangements are exercised. HSE uses its powers to ensure the licensee's exercises demonstrate adequate performance to protect both workers and the public.

## **12 DULY AUTHORISED AND OTHER SUITABLY QUALIFIED AND EXPERIENCED PERSONS**

- (1) *The licensee shall make and implement adequate arrangements to ensure that only suitably qualified and experienced persons perform any duties which may*

*affect the safety of operations on the site or any duties assigned by or under these conditions or any arrangements required under these conditions.*

*(2) The aforesaid arrangements shall also provide for the appointment, in appropriate cases, of duly authorised persons to control and supervise operations which may affect plant safety.*

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

*(4) The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements unless the Executive has approved such alteration or amendment.*

*(5) The licensee shall ensure that no person continues to act as a duly authorised person if, in the opinion of the Executive, he is unfit to act in that capacity and the Executive has notified the licensee to that effect.*

The purpose of this Condition is to ensure that only suitably qualified and experienced persons perform duties which may affect safety. The licensee is required to ensure that all activities that can affect safety are identified and the experience and qualification requirements for people to carry out these activities are defined. The licensee must ensure that the qualifications and experience of people match those required for the job. The Condition gives HSE the power to remove a person from safety related work if he or she is not suitably qualified or experienced for the job.

### **13 NUCLEAR SAFETY COMMITTEE**

*(1) The licensee shall establish a nuclear safety committee or committees to which it shall refer for consideration and advice the following:*

*(a) all matters required by or under these conditions to be referred to a nuclear safety committee;*

*(b) such arrangements or documents required by these conditions as the Executive may specify and any subsequent alteration or amendment to such specified arrangements or documents;*

*(c) any matter on the site affecting safety on or off the site which the Executive may specify; and*

*(d) any other matter which the licensee considers should be referred to a nuclear safety committee.*

*(2) The licensee shall submit to the Executive for approval the terms of reference of any such nuclear safety committee and shall not form a nuclear safety committee without the aforesaid approval.*

- (3) *The licensee shall ensure that once approved no alteration or amendment is made to the terms of reference of such a nuclear safety committee unless the Executive has approved such alteration or amendment.*
- (4) *The licensee shall appoint at least seven persons as members of a nuclear safety committee including one or more members who are independent of the licensee's operations and shall ensure that at least five members are present at each meeting including at least one independent member.*
- (5) *The licensee shall furnish to the Executive the name, qualifications, particulars of current posts held and the previous relevant experience of every person whom he appoints as a member of any nuclear safety committee forthwith after making such appointment. Notwithstanding such appointment the licensee shall ensure that a person so appointed does not remain a member of any nuclear safety committee if the Executive notifies the licensee that it does not agree to the appointment.*
- (6) *The licensee shall ensure that the qualifications, current posts held and previous relevant experience of the members of any such committee, taken as a whole, are such as to enable that committee to consider any matter likely to be referred to it and to advise the licensee authoritatively and, so far as practicable, independently.*
- (7) *The licensee shall ensure that a nuclear safety committee shall consider or advise only during the course of a properly constituted meeting of that committee.*
- (8) *The licensee shall send to the Executive within 14 days of any meeting of any such committee a full and accurate record of all matters discussed at that meeting including in particular any advice given to the licensee.*
- (9) *The licensee shall furnish to the Executive copies of any document or any category of documents considered at any such meetings that the Executive may specify.*
- (10) *The licensee shall notify the Executive as soon as practicable if it is intended to reject, in whole or in part, any advice given by any such committee together with the reasons for such rejection.*
- (11) *Notwithstanding paragraph (7) of this condition, where it becomes necessary to obtain consideration of, or advice on, urgent safety proposals (which would normally be considered by a nuclear safety committee) the licensee may do so in accordance with appropriate arrangements made for the purpose by the licensee, considered by the relevant nuclear safety committee and approved by the Executive.*
- (12) *The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements described in paragraph (11) of this condition unless the relevant nuclear safety committee has considered and the Executive has approved such alteration or amendment.*

The purpose of this Condition is to ensure that the licensee sets up a senior level committee to consider and advise the licensee on matters which affect the safe design, construction, commissioning, operation and decommissioning of any installations on its licensed site and any other matter relevant to safety. The committee must have members who are adequately qualified to perform this task including members who are independent of the licensee. The condition gives HSE the power to veto the appointment of or continued presence of any member. The committee is intended to act as a check on the licensee's decision making process to ensure that safety considerations are given due weight. However, the committee is intended to be purely advisory and must not be considered to have an executive function. Where the licensee rejects the advice of the committee the Condition requires the licensee to notify the Executive; in this way NII can investigate the justification of the licensee's safety related actions.

#### **14 SAFETY DOCUMENTATION**

(1) *Without prejudice to any other requirements of the conditions attached to this licence the licensee shall make and implement adequate arrangements for the production and assessment of safety cases consisting of documentation to justify safety during the design, construction, manufacture, commissioning, operation and decommissioning phases of the installation.*

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

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

(4) *The licensee shall furnish to the Executive copies of any such documentation or any such category of documentation as the Executive may specify.*

The purpose of this Condition is to ensure that the licensee sets up arrangements for the preparation and assessment of the safety related documentation used to justify safety during design, construction, manufacture, commissioning, operation and decommissioning. The arrangements for the assessment of safety related documentation are intended to ensure an independent review of the quality and accuracy of the licensee's safety related decisions and activities to ensure they have been adequately justified.

#### **15 PERIODIC REVIEW**

(1) *The licensee shall make and implement adequate arrangements for the periodic and systematic review and reassessment of safety cases.*

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

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

(4) *The licensee shall, if so directed by the Executive, carry out a review and reassessment of safety and submit a report of such review and reassessment to the Executive at such intervals, within such a period and for such of the matters or operations as may be specified in the direction.*

The purpose of this Condition is to ensure that the licensee periodically stands back and reviews the safety case for his installations. The objective of the review is to compare the safety case against modern standards to see if there are reasonably practicable improvements that could be made, to demonstrate that the plant is safe to continue to operate for the next defined period (usually 10 years) and to identify any life limiting factors.

## **16 SITE PLANS, DESIGNS AND SPECIFICATIONS**

(1) *The licensee shall submit to the Executive an adequate plan of the site (hereinafter referred to as the site plan) showing the location of the boundary of the licensed site and every building or plant on the site which might affect safety.*

(2) *The licensee shall submit to the Executive with the site plan a schedule giving particulars of each such building and plant thereon and the operations associated therewith.*

(3) *If any changes are made on the site which affect the said buildings, plant or operations, the licensee shall forthwith send an amended site plan and schedule to the Executive incorporating these changes.*

(4) *The licensee shall furnish to the Executive such plans, designs, specifications or other information relating to such buildings, plants and operations as the Executive may specify.*

The purpose of this Condition is to ensure that the licensee indicates, using a site plan, all buildings and plant or areas which might affect safety and provides a schedule updated as necessary giving details of each building and its associated operations. This is to ensure that not only does the licensee understand the content and function of all safety related buildings on his site, but it also enables NII to inspect the adequacy of activities and storage conditions across the site.

## **17 QUALITY ASSURANCE**

(1) *Without prejudice to any other requirements of the conditions attached to this licence the licensee shall make and implement adequate quality assurance arrangements in respect of all matters which may affect safety.*

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

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

(4) *The licensee shall furnish to the Executive such copies of records or documents made in connection with the aforesaid arrangements as the Executive may specify.*

The purpose of this Condition is to ensure that the licensee applies quality assurance to all activities associated with the design, construction, manufacture, commissioning, operation and decommissioning of the installations on the site including the preparation and review of safety documentation. The licensee's arrangements are expected to include the provision of a QA department to oversee the specification, audit and review of QA arrangements.

## **18 RADIOLOGICAL PROTECTION**

(1) *The licensee shall make and implement adequate arrangements for the assessment of the average effective dose equivalent (including any committed effective dose equivalent) to such class or classes of persons as may be specified in the aforesaid arrangements and the licensee shall forthwith notify the Executive if the average effective dose equivalent to such class or classes of persons exceeds such level as the Executive may specify.*

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

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

[N.B. Following the introduction of the Ionising Radiations Regulations 1999 the measure 'effective dose equivalent' has been superseded by 'effective dose'.]

The purpose of this Condition is to ensure that the licensee makes and implements adequate arrangements to assess the average effective dose for any class or classes of workers the executive specifies. It also requires the licensee to notify the Executive if the dose exceeds a specified level. This is complementary to the Ionising Radiations Regulations 1999, reg. 25.

## **19 CONSTRUCTION OR INSTALLATION OF NEW PLANT**

(1) *Where the licensee proposes to construct or install any new plant which may affect safety the licensee shall make and implement adequate arrangements to control the construction or installation.*

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

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

(4) *The aforesaid arrangements shall where appropriate divide the construction or installation into stages. Where the Executive so specifies the licensee shall not commence nor thereafter proceed from one stage to the next of the construction or installation without the consent of the Executive. The arrangements shall include a requirement for the provision of adequate documentation to justify the safety of the proposed construction or installation and shall where appropriate provide for the submission of this documentation to the Executive.*

(5) *The licensee shall, if so directed by the Executive, halt the construction or installation of a plant and the licensee shall not recommence such construction or installation without the consent of the Executive.*

The purpose of this Condition is to ensure that the licensee provides and implements adequate control over the construction and installation of new plant which may affect safety. The objective is for the licensee to plan the design and construction of any safety related plant. This is to ensure that before construction takes place a pre-construction safety report is produced to demonstrate the safety of the installation. The condition gives the power to HSE to prevent the commencement of construction until it is satisfied with the safety case and / or put hold points during the construction process to ensure the installation is being constructed in accordance with the stated intent. HSE's control can be either through using the direct powers in the condition or through secondary powers built into the licensee's arrangements.

## **20 MODIFICATION TO DESIGN OF PLANT UNDER CONSTRUCTION**

(1) *The licensee shall ensure that no modification to the design which may affect safety is made to any plant during the period of construction except in accordance with adequate arrangements made and implemented by the licensee for that purpose.*

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

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

(4) *The aforesaid arrangements shall provide for the classification of modifications according to their safety significance. The arrangements shall where appropriate divide modifications into stages. Where the Executive so specifies the*

*licensee shall not commence nor thereafter proceed from one stage to the next of the modification without the consent of the Executive. The arrangements shall include a requirement for the provision of adequate documentation to justify the safety of the proposed modification and shall where appropriate provide for the submission of this documentation to the Executive.*

The purpose of this Condition is to ensure that the licensee cannot change the design of an installation once HSE has given its consent or agreement to construction without going through a proper design change process which assesses the modification in relation to its safety significance and defines the degree of safety justification required. The condition gives HSE the power to intervene and stop a modification if it believes there is inadequate safety justification.

## **21 COMMISSIONING**

- (1) The licensee shall make and implement adequate arrangements for the commissioning of any plant or process which may affect safety.*
- (2) The licensee shall submit to the Executive for approval such part or parts of the aforesaid arrangements as the Executive may specify.*
- (3) The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements unless the Executive has approved such alteration or amendment.*
- (4) The aforesaid arrangements shall where appropriate divide the commissioning into stages. Where the Executive so specifies the licensee shall not commence nor thereafter proceed from one stage to the next of the commissioning without the consent of the Executive. The arrangements shall include a requirement for the provision of adequate documentation to justify the safety of the proposed commissioning and shall where appropriate provide for the submission of this documentation to the Executive.*
- (5) The licensee shall appoint a suitably qualified person or persons for the purpose of controlling, witnessing, recording and assessing the results of any tests carried out in accordance with the requirements of the aforesaid commissioning arrangements.*
- (6) The licensee shall ensure that full and accurate records are kept of the results of every test and operation carried out in pursuance of this condition.*
- (7) The licensee shall ensure that no plant or process which may affect safety is operated (except for the purpose of commissioning) until:
  - (a) the appropriate stage of commissioning has been completed and a report of such commissioning, including any results and assessments of any tests as may have been required under the commissioning arrangements referred to in paragraph (1) of this condition, has been considered in accordance with those arrangements; and**

*(b) a safety case or cases as appropriate, which shall include the safety implications of modifications made since the commencement of construction of the plant and those arising from the commissioning of the plant, and any matters whereby the operation of the plant may be affected by such modifications or commissioning, has been considered in accordance with the arrangements referred to in paragraph (1) of this condition.*

*(8) The licensee shall, if so notified by the Executive, submit to the Executive the safety case for the aforesaid plant or processes prepared in pursuance of paragraph (7) of this condition and shall not commence operation of the relevant plant or process without the consent of the Executive.*

When a new plant is constructed or when an existing plant is modified, it is important to commission the various systems to demonstrate they function as intended before the plant goes into routine operation. The purpose of this Condition therefore, is to ensure that the licensee has adequate arrangements for the commissioning of a new or modified plant or process which may affect safety.

The condition gives HSE powers to control various stages of commissioning. This is to ensure that the licensee demonstrates that the plant or modification has been completed according to the design intent, and the necessary safety implications associated with commissioning have been considered and assessed and shown to be acceptable. Usually a hold point is put at the start of inactive commissioning i.e. testing systems before the introduction of radioactive materials, and at the start of active commissioning. This latter hold point is to ensure that the licensee has demonstrated that the plant is functioning and safe to allow the introduction of radioactive materials. Finally the condition gives HSE the power to control the commencement of routine operations by requiring the licensee to produce a pre - operational safety report and seek HSE's consent to start operations.

## **22 MODIFICATION OR EXPERIMENT ON EXISTING PLANT**

*(1) The licensee shall make and implement adequate arrangements to control any modification or experiment carried out on any part of the existing plant or processes which may affect safety.*

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

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

*(4) The aforesaid arrangements shall provide for the classification of modifications or experiments according to their safety significance. The arrangements shall where appropriate divide the modification or experiment into stages. Where the Executive so specifies the licensee shall not commence nor thereafter proceed from one stage to the next of the modification or experiment*

*without the consent of the Executive. The arrangements shall include a requirement for the provision of adequate documentation to justify the safety of the proposed modification or experiment and shall where appropriate provide for the submission of the documentation to the Executive.*

*(5) The licensee shall, if so directed by the Executive, halt the modification or experiment and the licensee shall not recommence such modification or experiment without the consent of the Executive.*

Many accidents across all industries have been caused by modifications to operating plant or changes to processes that have not been adequately assessed. The purpose of this Condition is to ensure that the licensee has adequate arrangements to control all modifications to its installations on a licensed site that may affect safety. The condition also gives HSE the power to control such modifications to ensure that they cannot commence until the licensee has adequately demonstrated the safety of the proposal. These powers can be direct or indirect via the licensee's own voluntary hold points. The condition also gives HSE the power to halt a modification or intervene at any stage in the interest of safety.

## **23 OPERATING RULES**

*(1) The licensee shall, in respect of any operation that may affect safety, produce an adequate safety case to demonstrate the safety of that operation and to identify the conditions and limits necessary in the interests of safety. Such conditions and limits shall hereinafter be referred to as operating rules.*

*(2) The licensee, where the Executive so specifies, shall refer the operating rules arising from paragraph (1) of this condition to the relevant nuclear safety committee for consideration.*

*(3) The licensee shall ensure that operations are at all times controlled and carried out in compliance with such operating rules. Where the person appointed by the licensee for the purposes of condition 26 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 the matter is then notified, recorded, investigated and reported in accordance with arrangements made under condition 7.*

*(4) The licensee shall submit to the Executive for approval such of the aforesaid operating rules as the Executive may specify.*

*(5) The licensee shall ensure that once approved no alteration or amendment is made to any approved operating rule unless the Executive has approved such alteration or amendment.*

*(6) Notwithstanding the preceding provisions of this condition the Executive may, if in its opinion circumstances render it necessary at any time, agree to the temporary suspension of any approved operating rule.*

The safe operation of a nuclear installation results from many factors including the design of the plant, its behaviour under fault or accident conditions and the functions of the operators. It is therefore essential that the totality of these often complex interactions are fully understood. The method of doing this is to require the operator to produce a safety case to justify the operation of the installation. The purpose of this Condition is to ensure that the licensee produces such a safety case and that it identifies all the necessary conditions and limits that ensure that the plant is kept within parameters which ensure the safety of the plant during normal operation and fault and accident conditions.

## **24 OPERATING INSTRUCTIONS**

- (1) The licensee shall ensure that all operations which may affect safety are carried out in accordance with written instructions hereinafter referred to as operating instructions.*
- (2) The licensee shall ensure that such operating instructions include any instructions necessary in the interests of safety and any instructions necessary to ensure that any operating rules are implemented.*
- (3) The licensee shall, if so specified by the Executive, furnish to the Executive copies of such operating instructions and when any alteration is made to the operating instructions furnished to the Executive, the licensee shall ensure that such alteration is furnished to the Executive within such time as may be specified.*
- (4) The licensee shall make and implement adequate arrangements for the preparation, review and amendment of such operating instructions.*
- (5) The licensee shall submit to the Executive for approval such part or parts of the aforesaid arrangements as the Executive may specify.*
- (6) The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements unless the Executive has approved such alteration or amendment.*

The safety of a nuclear installation is influenced by the actions of people who control, maintain or service the plant. It is important given the often complex nature of the safety case for all actions carried out by people to be done in accordance with procedures derived from the safety case. It is also important that actions are not carried out on an ad hoc basis without written evidence. Therefore the purpose of this Condition is to ensure that all operations as defined in Condition 1 which may affect safety, including any instructions to implement Operating Rules, are undertaken in accordance with written operating instructions.

## **25 OPERATIONAL RECORDS**

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

(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.*

(3) *The licensee shall record such additional particulars as the Executive may specify.*

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

The purpose of this Condition is to ensure that adequate records are kept regarding operation, inspection and maintenance of any safety-related plant.

## **26 CONTROL AND SUPERVISION OF OPERATIONS**

*The licensee shall ensure that no operations are carried out which may affect safety except under the control and supervision of suitably qualified and experienced persons appointed for that purpose by the licensee.*

The purpose of this Condition is to ensure that safety-related operations are carried out only under the control and supervision of suitably qualified and experienced personnel.

## **27 SAFETY MECHANISMS, DEVICES AND CIRCUITS**

*The licensee shall ensure that a plant is not operated, inspected, maintained or tested unless suitable and sufficient safety mechanisms, devices and circuits are properly connected and in good working order.*

A nuclear installation is designed to have multiple safety systems to provide defence in depth against mal operation, faults or accidents. It is important that at all times there are sufficient of these systems in good working order because by definition they must be able to function on demand and such instances are unpredictable. The purpose of this Condition is therefore, to ensure that there are always sufficient and operable safety mechanisms, devices and circuits to provide the necessary defence in depth..

## **28 EXAMINATION, INSPECTION, MAINTENANCE AND TESTING**

(1) *The licensee shall make and implement adequate arrangements for the regular and systematic examination, inspection, maintenance and testing of all plant which may affect safety.*

- (2) *The licensee shall submit to the Executive for approval such part or parts of the aforesaid arrangements as the Executive may specify.*
- (3) *The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements unless the Executive has approved such alteration or amendment.*
- (4) *The aforesaid arrangements shall provide for the preparation of a plant maintenance schedule for each plant. The licensee shall submit to the Executive for its approval such part or parts of any plant maintenance schedule as the Executive may specify.*
- (5) *The licensee shall ensure that once approved no alteration or amendment is made to any approved part of any plant maintenance schedule unless the Executive has approved such alteration or amendment.*
- (6) *The licensee shall ensure in the interests of safety that every examination, inspection, maintenance and test of a plant or any part thereof is carried out:*
- (a) by suitably qualified and experienced persons;*
  - (b) in accordance with schemes laid down in writing;*
  - (c) within the intervals specified in the plant maintenance schedule; and*
  - (d) under the control and supervision of a suitably qualified and experienced person appointed by the licensee for that purpose.*
- (7) *Notwithstanding the above paragraphs of this condition the Executive may agree to an extension of any interval specified in the plant maintenance schedule.*
- (8) *When any examination, inspection, maintenance or test of any part of a plant reveals any matter indicating that the safe operation or safe condition of that plant may be affected, the suitably qualified and experienced person appointed to control or supervise any 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.*
- (9) *The licensee shall ensure that a full and accurate report of every examination, inspection, maintenance or test of any part of a plant indicating the date thereof and signed by the suitably qualified and experienced person appointed by the licensee to control and supervise such examination, inspection, maintenance or test is made to the licensee forthwith upon completion of the said examination, inspection, maintenance or test.*

A nuclear installation, like any other complex machine, requires maintenance and if such maintenance is not carried out properly it has the potential to undermine the safety case and put the safety of the plant at risk. The purpose of this Condition therefore, is to ensure that all plant that may affect safety is scheduled to receive

regular and systematic examination, inspection maintenance and testing, by and under the control of suitably qualified personnel and that records of maintenance activities are kept.

## **29 DUTY TO CARRY OUT TESTS, INSPECTIONS AND EXAMINATIONS**

(1) *The licensee shall carry out such tests, inspections and examinations in connection with any plant (in addition to any carried out under condition 28 above) as the Executive may, after consultation with the licensee, specify.*

(2) *The licensee shall furnish the results of any such tests, inspections and examinations carried out in accordance with paragraph (1) of this condition to the Executive as soon as practicable.*

The purpose of this Condition is to enable the Executive, following consultation, to require the licensee to perform any tests, inspections and examinations which it may specify, and to be provided with the results.

## **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.*

It is necessary for an operating nuclear installation to be shut down at regular intervals for inspection and testing of essential components. The maintenance schedule will define the required intervals. The purpose of this Condition is, therefore, to ensure that the plant is shut down in accordance with the plant maintenance schedule and these important examination and maintenance activities are carried out. The Condition also gives HSE the power to intervene and require the licensee to seek the Executive's consent to restart operations following the completion of the necessary maintenance. For nuclear reactors the licensee is required to seek a Consent from HSE to restart after every statutory shut down.

## **31 SHUTDOWN OF SPECIFIED OPERATIONS**

*(1) The licensee shall, if so directed by the Executive, shut down any plant, operation or process on the site within such period as the Executive may specify.*

*(2) The licensee shall ensure that when a plant, operation 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.*

If HSE has concerns about the safety of any nuclear installation and the licensee is unable or unwilling to provide the necessary safety justification for continued operation, it must have the power to order the shut down of the plant or process. The purpose of this Condition is to give HSE the power to instruct the licensee to shut down any plant, operation or process within a given period. Following a direction to shut down the licensee will require a Consent from HSE to restart operations.

### **32 ACCUMULATION OF RADIOACTIVE WASTE**

*(1) The licensee shall make and implement adequate arrangements for minimising so far as is reasonably practicable the rate of production and total quantity of radioactive waste accumulated on the site at any time and for recording the waste so accumulated.*

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

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

*(4) Without prejudice to paragraph (1) of this condition the licensee shall ensure that radioactive waste accumulated or stored on the site complies with such limitations as to quantity, type and form as may be specified by the Executive.*

*(5) The licensee shall, if so specified by the Executive, not accumulate radioactive waste except in a place and in a manner approved by the Executive.*

The purpose of this Condition is to ensure that the licensee has adequate arrangements to ensure that the production and accumulation of radioactive waste on the site is minimised. The Condition also give HSE the power to ensure that radioactive waste is stored under suitable conditions, and that adequate records are kept to enable HSE to monitor the management of radioactive waste on nuclear licensed sites..

### **33 DISPOSAL OF RADIOACTIVE WASTE**

*The licensee shall, if so directed by the Executive, ensure that radioactive waste accumulated or stored on the site is disposed of as the Executive may specify and in*

*accordance with a authorisation granted under the Radioactive Substances Act 1960 or, as the case may be, the Radioactive Substances Act 1993.*

A licensee may wish to store radioactive waste on its site rather than dispose of it even when a suitable disposal facility is available. The purpose of this Condition is to give HSE the power to direct the licensee to dispose of radioactive waste which is stored on the licensed site. This is related to the powers available to the appropriate Agency under the Radioactive Substances Act 1993, s.13. In this context "the appropriate Agency" means, in relation to England and Wales, the Environment Agency, and, in relation to Scotland, the Scottish Environment Protection Agency. HSE would only use this power in conjunction with the appropriate agency.

### **34 LEAKAGE AND ESCAPE OF RADIOACTIVE MATERIAL AND RADIOACTIVE WASTE**

*(1) The licensee shall ensure, so far as is reasonably practicable, that radioactive material and radioactive waste on the site is at all times adequately controlled or contained so that it cannot leak or otherwise escape from such control or containment.*

*(2) Notwithstanding paragraph (1) of this condition the licensee shall ensure, so far as is reasonably practicable, that no such leak or escape of radioactive material or radioactive waste can occur without being detected, and that any such leak or escape is then notified, recorded, investigated and reported in accordance with arrangements made under condition 7.*

*(3) Nothing in this condition shall apply to discharges or releases of radioactive waste in accordance with an approved operating rule or with disposal authorisations granted under the Radioactive Substances Act 1960 or, as the case may be, the Radioactive Substances Act 1993.*

On nuclear licensed sites HSE has the responsibility for regulating the management of radioactive waste. It is therefore important for HSE to have confidence that it knows where the licensee is storing such wastes and its condition. The purpose of this Condition is to place a duty on the licensee to ensure so far as reasonably practicable that radioactive material and radioactive waste is adequately controlled or contained so as to prevent leaks or escapes, and that in the event of any fault or accident which results in a leak or escape, the radioactive material or radioactive can be detected, recorded and reported to HSE.

### **35 DECOMMISSIONING**

*(1) The licensee shall make and implement adequate arrangements for the decommissioning of any plant or process which may affect safety.*

*(2) The licensee shall make arrangements for the production and implementation of decommissioning programmes for each plant.*

(3) *The licensee shall submit to the Executive for approval such part or parts of the aforesaid arrangements or programmes as the Executive may specify.*

(4) *The licensee shall ensure that once approved no alteration or amendment is made to the approved arrangements or programmes unless the Executive has approved such alteration or amendment.*

(5) *The aforesaid arrangements shall where appropriate divide the decommissioning into stages. Where the Executive so specifies the licensee shall not commence nor thereafter proceed from one stage to the next of the decommissioning without the consent of the Executive. The arrangements shall include a requirement for the provision of adequate documentation to justify the safety of the proposed decommissioning and shall where appropriate provide for the submission of this documentation to the Executive.*

(6) *The licensee shall, if so directed by the Executive where it appears to them to be in the interests of safety, commence decommissioning in accordance with the aforesaid arrangements and decommissioning programmes.*

(7) *The licensee shall, if so directed by the Executive, halt the decommissioning of a plant and the licensee shall not recommence such decommissioning without the consent of the Executive.*

It is important that when a nuclear facility reaches the end of its operational life it is decommissioned in a safe and controlled manner and not left to pose a hazard for current and future generations. The purpose of this Condition is therefore to require the licensee to have adequate arrangements for the safe decommissioning of its facilities. It also gives HSE the power to direct the licensee to commence decommissioning of any plant or facility to prevent it being left in a dangerous condition or to ensure decommissioning takes place in accordance with any national strategy. The Condition also gives HSE the power to halt any decommissioning activity if HSE has concerns about its safety.

### **36 CONTROL OF ORGANISATIONAL CHANGE**

(1) *The licensee shall make and implement adequate arrangements to control any change to its organisational structure or resources which may affect safety.*

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

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

(4) *The aforesaid arrangements shall provide for the classification of changes to the organisational structure or resources according to their safety significance. The arrangements shall include a requirement for the provision of adequate*

*documentation to justify the safety of any proposed change and shall where appropriate provide for the submission of such documentation to the Executive.*

*(5) The licensee shall if so directed by the Executive halt the change to its organisational structure or resources and the licensee shall not recommence such change without the consent of the Executive.*

Over recent years the nuclear industry has been undergoing increasing change due to the economic deregulation of the electricity market, privatisation, changing missions in relation to decommissioning and cleanup and the increasing use of contractors. Under these circumstances there has been and continues to be pressures for organisational change and staff reductions. Such changes can, if inadequately conceived or implemented, have a detrimental affect on safety and hence in 1999 HSE decided to introduce a new licence condition to require licensees to introduce arrangements to adequately control organisational changes and resources that may affect safety. The purpose of this Condition is therefore to ensure that the licensee has adequate arrangements to control any change to its organisational structure or resources which could affect safety. These arrangements require the licensee to assess the safety implications of any proposed changes before they are carried out. For changes that could have a significant effect on safety if they were inadequately conceived or executed the Condition gives HSE the power to require the licensee to submit its safety case to HSE, and to prevent the change from taking place until HSE is satisfied that the safety implications are understood and that there will be no lowering of safety standards. The Condition also gives HSE the power to halt any change that has commenced if it is concerned that the safety implications have not been adequately considered.