Defence
Safety Authority

DSA02-DNSR Defence Nuclear Safety Regulations of the Defence Nuclear Enterprise

Version 1.1 March 2024

Amendment Record

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Foreword by Head, Defence Nuclear Safety Regulator

The Defence Nuclear Enterprise (DNE) comprising the Naval Nuclear Propulsion Programme (NNPP) and the Nuclear Weapon Programme (NWP) of the Ministry of Defence continues to be a fundamental component of the UK's defence posture and has been so for many years. Those involved in these programmes, including contractors' staff, have a duty of care to their workforces, the public and the environment.

Nuclear and radiological safety and environmental protection are important, not only because of legal and moral responsibilities, but also because if effectively managed it safeguards defence capability.

As the Head of the Defence Nuclear Safety Regulator (DNSR) I am responsible for the regulation of nuclear safety across Defence activities in the DNE through the provision of a MOD regulatory regime for nuclear safety. As a regulator within the Defence Safety Authority (DSA), I am empowered to enforce these regulations. Compliance with the regulations contained within this publication is mandatory, and it is the responsibility of everyone, at all levels within the DNE, to ensure that personnel, including contractors, involved in the management, supervision and conduct of defence nuclear activities are competent and fully aware of their responsibilities.

This document defines and promulgates the nuclear regulatory regime for the DNE, and the companion document, DSA03–DNSR, provides additional guidance to Authorisees and duty holders. Those responsible for implementing DNE programmes shall comply with these requirements.

Mr D Langbridge
Head, Defence Nuclear Safety Regulator
March 2024

Contents

Authority

1. The Secretary of State for Defence (SofS(D)) Policy Statement on Health, Safety and Environmental Protection (HS&EP) and the DSA Charter authorises Director General Defence Safety Authority (DG DSA) to empower suitably qualified and experienced Crown servants to regulate HS&EP activity across Defence where it has Disapplications, Exemptions or Derogations (DED) from statutory requirements and provide SofS(D) assurance that the HS&EP statement is implemented.

2. DG DSA has appointed the head of the Defence Nuclear Safety Regulator (DNSR-Hd) and delegated authority to the DNSR to regulate nuclear safety within the DNE, and as such granted DNSR the authority to develop and maintain these regulations as part of a consistent system of standards, Defence regulations, working practices, and the promotion of a positive culture for safety.

DNSR Regulation of the Defence Nuclear Enterprise

3. Where DED exist against UK legislation, DNSR-Hd formally regulates within the DNE through the Authorisation of specific posts responsible for activities which may affect nuclear safety. Each Authorisee is responsible for specific activities associated with Nuclear Weapons (NW) or Naval Reactor Plant (NRP). Authorisees are required to develop, maintain and implement adequate safety management arrangements compliant with the requirements set out in this document, informed by DSA03–DNSR and cognisant of SofS(D)'s Policy Statement as amplified in the DSA01 series of Standards and Joint Service Publication (JSP) 815.

4. It is the responsibility of each Authorisee or duty holder to determine applicable legal requirements relating to the operations undertaken by their organisations, and to implement adequate safety management arrangements and provide adequate safety cases for activities.

5. DNSR regulates the transport of Defence nuclear material under empowerment from SofS(D) as Competent Authority for the transport of DNE Radioactive Material (RAM). Regulation of RAM transport is regulated via Regulation Transport Condition 1 (TC1) and is applicable to Authorisees and other "non-Authorisee" duty holders involved in DNE RAM transport activities.

How to use this Defence Safety Regulatory Publication

6. DSA02–DNSR (Defence Nuclear Safety Regulations of the Defence Nuclear Enterprise), supported by DSA03-DNSR Guidance form the DNSR regulatory framework and are to be used by staff responsible for the planning, management, supervision and execution of Defence nuclear activities worldwide, including members of the armed forces, civilian employees, and others, including contractors.

Application of Authorisation Conditions (AC) /Further Authorisation Conditions (FAC) /Transport Condition (TC)

7. Nuclear operations within the DNE are regulated via the process of Authorising specific posts in organisations to undertake activities. In line with SofS(D) Policy amplification in DSA01 series of Standards, DSA02–DNSR sets out requirements in the form of AC, FAC and TC. DNSR formally regulates compliance against these requirements and the permissioning of activities within the DNE via inspection and assessment.

8. A system of Authorisation has been determined as being fundamental to regulating nuclear safety within the DNE. Authorisation is a system closely equivalent to Licensing under the Nuclear Installations Act 1965 (NIA65). The requirements are defined in 36 AC which are as far as possible aligned to the 36 Licence Conditions (LC) applied under statute to Licenced operators of nuclear installations. As required by DNSR's regulatory responsibilities to Defence, FAC address issues not covered by Licence Conditions (e.g. the mobility of NRP and NW, the need to have formal interfaces between Authorisees and duty holders to ensure through life safety and the necessity for clear accountabilities to integrate safety across the whole of the DNE). Requirements specific to Authorisees with Design Authority responsibilities for Naval Reactor Plant or Nuclear Weapon activities are also incorporated into the ACs and FACs within DSA02–DNSR as additional clauses.

9. Regulatory requirements for the transport of DNE RAM are described in DSA02–DNSR Transport Condition TC1.

10. The AC, FAC and TC are applied to Authorisees responsible for managing the risk presented to their respective workforces, the public and the environment by the nuclear assets and activities under their managerial control and as specified within their respective Certificates of Nuclear Authorisation (CONA). In practice, Authorisees and duty holders within the DNE need the support of the respective MOD Design Authority function for the NW or NRP to discharge their responsibilities for nuclear safety.

Supply Chain Management

11. Whilst not necessarily directly Authorised, the supply chain delivers goods, services and information such as data, materials, components, support equipment and maintenance which have a direct bearing on the nuclear safety of end products within the DNE. DNSR will maintain oversight of the supply chain via Authorisees and duty holders and seek evidence that the supply chain has appropriate management arrangements in place to ensure that where goods, services or information are supplied in support of Defence, including those provided directly via Government, they meet the requirements of SofS(D) Policy.

12. DNSR may assess any nuclear safety claims, arguments and evidence relating to information, components and/or equipment received under the terms of the UK/US 1958 Agreement on the Uses of Atomic Energy for Mutual Defence Purposes, or the 1963 Polaris Sales Agreement as amended for Trident. DNSR requires Authorisees to understand any associated limits and conditions of operation and ensure full consideration as part of safety analysis in accordance with Authorisation Condition 23.

Authorisees with Design Authority Responsibilities for the Naval Reactor Plant or Nuclear Weapon

13. The Head of the Nuclear Propulsion Project Team (NP-Hd) and Managing Director Warhead (MD WHD) have been identified as Authorisees with Design Authority responsibilities for the NRP and NW, respectively. This status is reflected in the relevant CONA. Authorisees with Design Authority responsibilities are regulated with the same formality as those with direct responsibility for day-to-day safety on account of the fundamental importance of design to through life safety of DNE activities.

Leadership and Management for Safety

14. In common with other regulators in high-hazard industries, DNSR places great emphasis on the importance of effective Leadership and Management for Safety (L&MfS) in Authorisees and duty holders, including the development and maintenance of a positive safety culture. One of DNSR's duties as a Defence Regulator is to 'promote an engaged safety culture', as stated in the DSA Charter. DNSR gathers and uses evidence relating to Authorisees L&MfS and safety culture as part of its routine regulatory activities; specific regulatory interventions on Authorisee L&MfS and culture for safety may also be undertaken. This approach is in line with DNSR's support to the Directorate of Defence Safety (DDS) 3rd Line of Defence (3LOD) articulated in JSP 815. DNSR will engage with Authorisees on their L&MfS performance in accordance with the DNSR Technical Assessment Guidance documents on Authorisee Control of Activities (DNSR/TAG/D018) and Independent Nuclear Oversight (DNSR/TAG/D017), as well as relevant good practice.

Emergency Response

15. The Defence position as described in JSP 471, Defence Nuclear Emergency Response, mirrors that of the statutory regulator (and articulated in the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR 19) that Authorisees and duty holders, with the support of the Department, shall maintain an adequate organisational capability to respond to DNE incidents or emergencies, notwithstanding assessments which may show them to be highly unlikely. This approach takes account of the societal concerns associated with a nuclear incident or emergency within the DNE. For this reason, Authorisees and duty holders shall maintain a nuclear emergency response capability and periodically demonstrate its adequacy, in accordance with the requirements of AC11.

Enforcement

16. The DSA Charter gives authority to Defence Regulators to maintain, promulgate, assure compliance with, and where necessary, enforce Defence regulations. DSA Standard 01.3 Enforcement, provides a framework for each Defence Regulator to develop and implement domain specific Enforcement Management Models. DNSR's Enforcement Management Model

is based on, and consistent with the DSA framework, whilst also reflecting relevant aspects of the models implemented by the Office for Nuclear Regulation (ONR) and the Health and Safety Executive (HSE).

17. As a result of its regulatory activities, DNSR may identify an issue affecting nuclear/radiological safety or environmental protection. DNSR's process for the management of issues is graduated and escalatory, communicating clearly to an Authorisee the status, importance and urgency of an issue DNSR considers having an impact on safety or environmental protection and facilitating its efficient resolution.

18. The DNSR process for enforcement ensures that it is impartial, justified and grounded in objective evidence. DNSR enforcement decision-making will be made in accordance with DNSR's values, such that it is targeted, proportionate, consistent and transparent.

19. There may be occasions where an Authorisee does not agree with the enforcement action being taken by DNSR, either on the basis of the evidence used or the process followed. If so:

a. The Authorisee should raise a formal appeal in writing to DNSR, within 10 working days of the enforcement action being served. DNSR-Hd will review the appeal and respond within 20 working days of the appeal being received;

b. In the event of an unsuccessful appeal to DNSR, the Authorisee may escalate the appeal up their command/management chain to appeal to DG DSA. In such cases, the appeal should be raised in writing within 20 working days of the response to the original appeal. DG DSA should review the appeal and respond within 20 working days of the appeal being received. Should the Authorisee still not be satisfied following appeal to DG DSA, an appeal may be submitted to SofS(D), whose decision will be final;

c. In the case of an appeal against a Prohibit Notice, the requirement to cease activity remains extant while the appeal is being considered.

Regulations

20. Authorisees shall comply with all clauses stated within Authorisation Conditions, Further Authorisation Conditions and Transport Condition 1 in accordance with issued Certificates of Nuclear Authorisation. Additional clause/s within the Authorisation Condition or Further Authorisation Condition with the following nomenclature DNSR.1, DNSR.2 etc. have been determined to be necessary by DNSR for inclusion in DSA02–DNSR. This is to take account of the unique nature of the DNE and through life safety issues and are applicable to Authorisees with Design Authority Responsibilities.

21. Where an Authorisee has Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon, this will be identified on the Certificate of Nuclear Authorisation.

22. Authorisees are to make and implement adequate management arrangements that satisfy the requirements of each relevant AC, FAC and TC. Authorisees shall provide evidence of compliance to the satisfaction of DNSR as requested.

23. Authorisees seeking disapplication of specific AC, FAC or TC on the grounds of their inapplicability should in the first instance contact the relevant DNSR Principal Inspector before

submitting a case in writing to DNSR. If agreed, the disapplication shall be identified in the Certificate of Nuclear Authorisation.

24. Further information and Guidance on complying with these Regulations can be found in DSA03–DNSR.

Regulation of Transport of DNE Class 7 Goods

25. DNSR Transport Condition 1 (TC1) exists to ensure the transport of Class 7 goods in support of the DNE is regulated in a manner consistent with the transport of Civil Class 7 goods. As a result, DNSR regulations and terminology pertaining to transport differ from the Authorisation model applied by DNSR throughout DSA02-DNSR and is based on UK Legislation and the internationally agreed approach defined in the International Atomic Energy Agency (IAEA) Safety Standard 'Regulations for the Safe Transport of Radioactive Material', SSR-6.

26. Transport of Civil Class 7 goods are undertaken in accordance with the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (as amended) (CDGR) and the requirements of ONR as the Competent Authority (Part 6, Reg 25(3a)), therefore does not require a specific Licence Condition.

27. CDGR identifies SofS(D) as the Competent Authority (CA) (Part 6, Reg 25(3)(b)) in relation to Class 7 goods. The Defence CA function has been delegated to DNSR and applies to Class 7 goods which-

(i) are, or form part of, an instrument of war;
(ii) are required for research into, or the development or production of, any such instrument or part of such instrument; or
(iii) are produced in the course of, or in connection with, such research, development or production.

In its role as CA and subsequent delegations, DNSR applies TC1 to ensure that the UK legislative requirements are met.

28. CDGR has a Defence exemption (Part 3, Reg 17) relating to Class 7 goods as defined above in para 27 transported under the control of the Armed Forces. Where this exemption applies. TC1 requires that adequate arrangements are in place that comply with legislation and meet SofS(D) policy on HS&EP.

29. Where the 'Instrument of War' and related material exemption does not apply, but where SofS(D) remains CA, transport of Class 7 goods are to be undertaken in accordance with CDGR.

30. In the context of TC1, the key duty holders are defined as the Applicant, the Consignor, the Carrier and the Consignee. It is the responsibility of every duty holder involved in the transport of DNE Class 7 goods to ensure that requirements of TC1 are captured within their arrangements.

Primary and Derived Powers

31. In conducting regulatory business, DNSR, where appropriate, may apply its Primary or Derived powers:

Primary: These are DNSR powers associated with the Authorisation Conditions, Further Authorisation Conditions and Transport Condition. The Authorisation Conditions provide six primary powers comprising "Agreement", "Approval", "Consent", "Direction", "Notification" and “Specification".

Derived: These are powers granted to DNSR through the Authorisee’s arrangements made to satisfy certain Authorisation Conditions, Further Authorisation Conditions and Transport Condition, for instance powers to permission selected activities through the release of hold points. They are also known as secondary powers.

Permissioning

32. DNSR operates a permissioning regime which requires Authorisees to seek regulatory permission before conducting activities; the elements of this regime are stated in AC, FAC and TC where appropriate. DNSR also requires Authorisees with Design Authority responsibilities to obtain regulatory permission prior to granting an approval to operate/use to other Authorisees in accordance with AC21. Permission is granted subject to the assessment of safety cases together, where necessary, with the outcome of inspections of the adequacy and implementation of arrangements and/or activities.

Authorisation Conditions

AC1: Interpretation

Rationale

The purpose of this Authorisation Condition is to ensure there is no ambiguity in the use of certain specified terms which are found in the text of the Conditions. The Condition defines important powers for DNSR to modify, revise or withdraw approvals etc. and to approve modifications to any matter currently approved. Where appropriate, references are made back to the relevant statutory Acts of Parliament.

Regulation AC1

Interpretation

(1) In the Conditions set out herein, unless the context otherwise requires, the following expressions have the meanings hereby respectively assigned to them, that is to say –

"An Agreement" allows the Authorisee to proceed in accordance with a course of action;

"An Approval". The Authorisee is required to submit its arrangements for Approval if so specified by DNSR; Once Approved these arrangements cannot be changed without DNSR's approval.

"An Authorised activity" is a nuclear activity which is controlled by an Authorisee as stated by DNSR on the appropriate Certificate of Nuclear Authorisation, and in compliance with Authorisation Conditions, Further Authorisation Conditions and Transport Condition;

"An Authorised site" is a defined site within which nuclear activities are controlled by an Authorisee in compliance with Authorisation Conditions, Further Authorisation Conditions and Transport Condition;

"The Authorisee" is the accountable post-holder identified on the Certificate of Nuclear Authorisation, duly Authorised by DNSR-Hd to operate in compliance with the Authorisation Conditions, Further Authorisation Conditions and Transport Condition. The role of Authorisee cannot be delegated to any other person, in whole or in part, formally or informally;

"Commissioning" means the process by means of which systems and components of facilities and activities (including any Naval Reactor Plant, Nuclear Weapon, component, relevant support equipment, plant or process), having been constructed or modified, are made operational and verified to be in accordance with the design and to have met the required safety criteria;

“A Consent” is required before the Authorisee can carry out any activity for which DNSR has so specified the need;

“A Direction” requires the Authorisee to take a particular course of action;

“Design Authority” The defined function of an identified DNE organisation with the responsibility for, and the requisite knowledge to approve and maintain the design intent, integrity and safety of a Naval Reactor Plant, Nuclear Weapon, nuclear facility or supporting equipment as appropriate through life;

“DNSR” means the Defence Nuclear Safety Regulator;

“Excepted matter” has the meaning assigned thereto in the Nuclear Installations Act 1965 and the Nuclear Installations (Excepted Matter) Regulations 1978 made thereunder;

“Experiment” means any test or non-routine activity other than an activity carried out pursuant to Authorisation Conditions 21 and 28;

“Installation” means “nuclear installation” and has the meaning assigned thereto in the Nuclear Installations Act 1965 ; where the requirement covers more than the ‘installation’ this is clarified in the text of the specific requirement;

“Modification” means any alteration to structure, systems, equipment, buildings, plant, operations, processes or safety cases including any replacement, refurbishment or repairs to existing Naval Reactor Plant, Nuclear Weapons, components, support equipment, buildings, plants or processes and alterations to the design of Naval Reactor Plant, Nuclear Weapons, components or relevant support systems and plant during the period of construction;

“Notification” means when so notified, an Authorisee is required to submit information to DNSR;

“Nuclear matter” and “relevant site” each has the meaning assigned thereto in the Nuclear Installations Act 1965;

“Nuclear Safety Committee” means any Nuclear Safety Committee established pursuant to Condition 13 herein;

“Operations” includes any operation involving nuclear material including, operation and maintenance of the Naval Reactor Plant, manufacture, assembly, disassembly, maintenance, examination, testing of a Nuclear Weapon or components or materials, the treatment, processing, keeping, storing, accumulating or carriage of any radioactive material or radioactive waste, the passage, movement and berthing of vessels and “operating” and “operational” shall be construed accordingly;

"Radioactive material" and "radioactive waste" each has the meaning assigned thereto in the Environmental Permitting (England and Wales) Regulations 2016, and the Environmental Authorisations (Scotland) Regulations 2018, as appropriate;

"Relevant support equipment" means equipment which may affect safety of a Naval Reactor Plant, Nuclear Weapon, or components, and is the responsibility of the MOD;

"Safety case" means the document or documents produced by the Authorisee in accordance with Authorisation Condition 14 herein. The safety case refers to the totality of an Authorisee's or duty holder's documentation to demonstrate safety.

"Specification" means an instruction from DNSR via the Authorisation Conditions to furnish particular information, or to submit something for Approval.

(2) In these Conditions except where the context otherwise requires –

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

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

(c) any reference to a numbered Authorisation Condition is a reference to the Authorisation Condition so numbered herein.

(3) Where in these Conditions DNSR requires any matter to be approved or to be carried out only with its consent or to be carried out as it directs DNSR 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.

AC2: Marking of the Site Boundary

Rationale

The purpose of this Authorisation Condition is to ensure the Authorisee adequately marks the extent of the Authorised site and prevents unauthorised access to the Authorised site.

Regulation AC2

Marking of the Site Boundary

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

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

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

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

AC3: Restriction on dealing with the Site

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee does not let, convey, assign or transfer any part of the nuclear Authorised site to a third party without seeking the consent of DNSR. This is to ensure that the Authorisee does not change the character of the activities that are Authorised and to prevent activities being carried out on the site which could affect the safety of nuclear operations.

Regulation AC3

Restriction on dealing with the Site

(1) The Authorisee **shall** not convey, assign, transfer, let or part with possession of the site or any part thereof or grant any Authorisation in relation thereto without the consent of DNSR.

AC4: Restriction on Nuclear Matter on the Site

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee has adequate arrangements to control the introduction and storage of nuclear matter on the Authorised site to ensure safety. The Condition provides DNSR with the ability to specify that certain types of nuclear matter cannot be brought onto the Authorised site without the consent of DNSR. This enables DNSR to intervene to gain assurance that, for specific activities, the Authorisee's arrangements are adequate before nuclear matter is brought onto the site. (Nuclear matter being as defined by the Nuclear Installations Act 1965).

Regulation AC4

Restriction on Nuclear Matter on the Site

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

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

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

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

(5) For new installations, if DNSR so specifies, the Authorisee **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 DNSR.

AC5: Consignment of Nuclear Matter

Rationale

The purpose of this Authorisation Condition is to ensure that the transfer of nuclear matter from the Authorised site to another location is handled in accordance with requirements and that adequate records are kept of the transfer.

Regulation AC5

Consignment of Nuclear Matter

(1) The Authorisee **shall** not consign nuclear matter (other than excepted matter and radioactive waste) to any place other than an Authorised or regulated site except with the consent of DNSR.

(2) The Authorisee **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 Authorisee **shall** ensure that the aforesaid record is preserved for 30 years from the date of despatch or such other period as DNSR 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.

AC6: Documents, Records, Authorities and Certificates

Rationale

The purpose of this Authorisation Condition is to ensure that adequate records relating to Authorisation Condition compliance are held by the Authorisee for a suitable period. Additionally, records relating to Authorised activities are to be available for the statutory number of years after the cessation of Authorised activities for the purpose of assisting any claims of damage to health as a result of exposure to ionising radiation.

Regulation AC6

Documents, Records, Authorities and Certificates

(1) The Authorisee **shall** make adequate records to demonstrate compliance with any of the Conditions attached to this Authorisation.

(2) Without prejudice to any other requirements of the Conditions attached to this Authorisation the Authorisee **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 associated with this Authorisation is preserved for 30 years or such other periods as DNSR may approve.

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

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

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

AC7: Incidents

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee implements adequate arrangements to report incidents that may occur, keeps a record of all such incidents, notifies DNSR when appropriate, investigates the cause of each incident and produces a report of the investigation to ensure that lessons are learnt.

Regulation AC7

Incidents

(1) The Authorisee **shall** make and implement adequate arrangements for the notification, recording, investigation and reporting of any anomalous condition or incident that may adversely affect safety occurring on a site, or involving a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment:

(a) At the earliest opportunity and as is required by any other Condition attached to this authority;

(b) as DNSR may specify; and

(c) as the Authorisee considers necessary.

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

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

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon **shall** make and implement adequate arrangements to assist other Authorisees in the investigation of incidents.

AC8: Warning Notices

Rationale

The purpose of this Authorisation Condition is to ensure the safety of all people on the Authorised site through the appropriate placement of warning notices so that they understand the hazards present and can respond appropriately and without delay to an emergency situation.

Regulation AC8

Warning Notices

(1) The Authorisee **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.

AC9: Instructions to persons on the Site and Information on Hazards

Rationale

The purpose of this Authorisation Condition is to ensure the Authorisee provides adequate instructions and information to all persons on the Authorised site, or involved in any activities through life with Naval Reactor Plant Nuclear Weapons, components, relevant support equipment or transportation, so that they are aware of the risks and hazards associated with Authorised activities.

The condition requires the identification of the precautions that shall be taken to minimise the risks to themselves and others and the actions to be taken in the event of an accident or emergency (including emergency responders).

Regulation AC9

Instructions to persons on the Site and Information on Hazards

(1) The Authorisee **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.

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or the Nuclear Weapon **shall** ensure that adequate information is provided to Authorisees as regards the risks and hazards associated with a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment, the precautions to be observed in connection therewith and the action to be taken in the event of an accident or emergency (as required by AC11).

AC10: Training and Information on Training

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee adequately trains all people who carry out activities during design, construction, manufacture, commissioning, operation or decommissioning of a nuclear installation, Naval Reactor Plant, Nuclear Weapon, or relevant support equipment which may affect safety. This Condition is in addition to the general duty under the Health and Safety at Work etc Act 1974 s.2(2)(c) and the Ionising Radiation Regulations 2017, section 15.

Regulation AC10

Training and Information on Training

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

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

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

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon **shall** make and implement adequate arrangements to provide relevant information to other Authorisees on suitable training of those who conduct operations with a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment.

AC11: Emergency Arrangements

Rationale

The purpose of this Condition is to ensure that the Authorisee has adequate arrangements in place to respond effectively to any accident or emergency. The Authorisation Condition gives DNSR the ability to ensure that the Authorisees' emergency arrangements are exercised. DNSR uses its powers to ensure the Authorisees exercises demonstrate adequate performance to protect both workers and the public.

Regulation AC11

Emergency Arrangements

(1) Without prejudice to any other requirements of the Conditions attached to this Authorisation the Authorisee **shall** make and implement adequate arrangements for dealing with any accident or emergency arising and their effects.

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon **shall** make and implement adequate arrangements to provide suitable information and support to other Authorisees in the event of an accident or emergency.

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

(3) The Authorisee **shall** ensure that once approved no alteration or amendment is made to the approved arrangements unless DNSR 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 Authorisee **shall** ensure that each person, local authority or other body is consulted in the making of such arrangements.

(5) The Authorisee **shall** ensure that such arrangements are rehearsed at such intervals and at such times and to such extent as DNSR may specify or, where DNSR has not so specified, as the Authorisee considers necessary.

(6) The Authorisee **shall** ensure that such arrangements include procedures to ensure that all persons in their 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.

AC12: Duly Authorised and other Suitably Qualified and Experienced Persons

Rationale

The purpose of this Authorisation Condition is to ensure that only duly authorised and other suitably qualified and experienced persons perform duties which may affect safety. The Authorisation Condition gives DNSR the power to remove a person from nuclear safety related work if they are not suitably authorised, qualified or experienced for the role.

Regulation AC12

Duly Authorised and other Suitably Qualified and Experienced Persons

(1) The Authorisee **shall** make and implement adequate arrangements to ensure that only duly authorised and other 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.

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon **shall** make and implement adequate arrangements to;

(a) ensure that only suitably qualified and experienced persons perform any design and approval duties which may affect the safety of a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment;

(b) provide information to other Authorisees about the required qualifications and experience of their personnel conducting operations with a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment.

(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 Authorisee **shall** submit to DNSR for approval such part or parts of the aforesaid arrangements as DNSR may specify.

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

(5) The Authorisee **shall** ensure that no person continues to act as a Duly Authorised Person, if, in the opinion of DNSR, the person is unfit to act in that capacity and DNSR has notified the Authorisee to that effect.

AC13: Nuclear Safety Committee

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee sets up a senior level committee to consider and advise on matters which affect the safe design, construction, commissioning, operation and decommissioning of any installation, Naval Reactor Plant or Nuclear Weapon on its Authorised site, and any other matter relevant to safety.

Regulation AC13

Nuclear Safety Committee

(1) The Authorisee **shall** establish a nuclear safety committee or committees to which it shall refer for consideration and advice on 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 DNSR may specify and any subsequent alteration or amendment to such specified arrangements or documents;

(c) any matter on the site affecting safety of Naval Reactor Plant, Nuclear Weapon, components or relevant support equipment on or off the site, which DNSR may specify; and

(d) any other matter which the Authorisee or Design Authority function considers should be referred to a nuclear safety committee.

(2) The Authorisee **shall** submit to DNSR 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 Authorisee **shall** ensure that once approved no alteration or amendment is made to the terms of reference of such a nuclear safety committee unless DNSR has approved such alteration or amendment.

(4) The Authorisee **shall** appoint at least seven persons as members of a nuclear safety committee including one or more members who are independent of the Authorisee's operations and shall ensure that at least five members are present at each meeting including at least one independent member.

(5) The Authorisee **shall** furnish to DNSR the name, qualifications, particulars of current posts held and the previous relevant experience of every person whom they appoint as a member of any nuclear safety committee forthwith after making such appointment. Notwithstanding such appointment the Authorisee shall ensure that a person so

appointed does not remain a member of any nuclear safety committee if DNSR notifies the Authorisee that it does not agree to the appointment.

(6) The Authorisee **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 Authorisee authoritatively and, so far as practicable, independently.

(7) The Authorisee **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 Authorisee **shall** send to DNSR 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 Authorisee.

(9) The Authorisee **shall** furnish to DNSR copies of any document or any category of documents considered at any such meetings that DNSR may specify.

(10) The Authorisee **shall** notify DNSR 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 clause (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 Authorisee may do so in accordance with appropriate arrangements made for the purpose by the Authorisee, considered by the relevant nuclear safety committee and approved by DNSR.

(12) The Authorisee **shall** ensure that once approved no alteration or amendment is made to the approved arrangements described in clause (11) of this Condition unless the relevant nuclear safety committee has considered and DNSR has approved such alteration or amendment.

AC14: Safety Documentation

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee implements adequate arrangements for the preparation and assessment of the safety documentation used to justify safety during design, construction, manufacture, commissioning, operation and decommissioning.

Regulation AC14

Safety Documentation

(1) Without prejudice to any other requirements of the Conditions attached to this Authorisation the Authorisee **shall** make and implement adequate arrangements for the production and assessment of safety cases and documentation to justify safety during the design, construction, manufacture, commissioning, operation and decommissioning phases of the installation, plant or equipment.

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon **shall** make and implement adequate arrangements for the production and assessment of safety cases consisting of;

(a) documentation to justify the safety of a Naval Reactor Plant or Nuclear Weapon design, component or relevant support equipment including the requirement for Safety Mechanisms, Devices and Circuits (SMDC),
(b) such information as is required by Authorisees to justify the safety of their operations with Naval Reactor Plant, Nuclear Weapons, components or relevant support equipment.

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

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

(4) The Authorisee **shall** furnish to DNSR copies of any such documentation or any such category of documentation as DNSR may specify.

DNSR.2 The aforesaid arrangements **shall** provide for the classification of safety documentation according to safety significance.

AC15: Periodic Review

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee periodically reviews the safety cases for their installations, Naval Reactor Plant or Nuclear Weapons.

Regulation AC15

Periodic Review

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

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

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

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

AC16: Plans, Diagrams, Designs and Specifications

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee indicates, using a site plan, all buildings and plant or areas within the site boundary and showing the site boundary which might affect nuclear safety and provides a schedule, updated as necessary, including details of each building and its associated operations.

Regulation AC16

Plans, Diagrams, Designs and Specifications

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

(2) The Authorisee **shall** submit to DNSR 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 Authorisee **shall** forthwith send an amended site plan and schedule to DNSR incorporating these changes.

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

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon **shall** submit to DNSR adequate schematic diagrams, specifications of a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment that illustrate the safety attributes and functions, or other information as DNSR may specify.

DNSR.2 If any changes are made that affect the information provided in DNSR.1 the Authorisee **shall** send such amendments to DNSR incorporating the changes.

AC17: Management Systems

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee establishes and implements management systems which give due priority to safety. It also ensures the Authorisee applies quality management principles to all activities which may affect safety, including supply chain management.

Regulation AC17

Management Systems

(1) Without prejudice to any other requirements of the Conditions attached to this Authorisation the Authorisee **shall** establish and implement management systems which give due priority to safety.

(2) The Authorisee **shall**, within its management systems, make and implement adequate quality management arrangements in respect of all matters which may affect safety.

(3) The Authorisee **shall** submit to DNSR for approval such part or parts of the aforesaid management systems or part or parts of the aforesaid quality management arrangements as DNSR may specify.

(4) The Authorisee **shall** ensure that once approved no alteration or amendment is made to the approved management systems or approved quality management arrangements unless DNSR has approved the alteration or amendment.

(5) The Authorisee **shall** furnish to DNSR such copies of records or documents made in connection with the aforesaid quality management arrangements as DNSR may specify.

DNSR.1 The Authorisee **shall** provide a proportionate internal assurance function with the capability to undertake assurance activities and provide independent challenge and advice to the Authorisee.

AC18: Radiological Protection

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee makes and implements adequate arrangements to assess the average effective dose for such class or classes of persons as the Authorisee may specify. This is complementary to the Ionising Radiations Regulations 2017, reg. 26.

Regulation AC18

Radiological Protection

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

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

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

AC19: Construction or Installation of New Plant

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee makes and implements adequate arrangements to control the construction and installation of new plant which may affect safety. Design of Naval Reactor Plant or Nuclear Weapons is covered in FAC5, but the supply of design related information is pertinent to this condition.

Regulation AC19

Construction or Installation of New Plant

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

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

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

(4) The aforesaid arrangements **shall** where appropriate divide the construction or installation into stages. Where DNSR so specifies, the Authorisee shall not commence nor thereafter proceed from one stage to the next of the construction or installation without the consent of DNSR. 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 DNSR.

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

AC20: Modification of Design of Plant Under Construction

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee cannot modify the design of an installation post DNSR permission to commence construction without going through a design change process which assesses the modification in relation to its safety significance and defines the level of safety case required. The Condition gives DNSR the power to intervene and stop a modification if it considers there is an inadequate safety case.

Regulation AC20

Modification of Design of Plant Under Construction

(1) The Authorisee **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 Authorisee for that purpose.

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

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

DNSR.1 Where the modification effects more than one Authorisee there **shall** be an exchange of relevant information such that the safety significance can be assigned and fully justified by each Authorisee.

(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 DNSR so specifies, the Authorisee **shall** not commence nor thereafter proceed from one stage to the next of the modification without the consent of DNSR. 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 DNSR.

AC21: Commissioning

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee has adequate arrangements for the commissioning and approval of a new or modified plant, Naval Reactor Plant, Nuclear Weapon, relevant support equipment or process which may affect safety.

Regulation AC21

Commissioning

(1) The Authorisee **shall** make and implement adequate arrangements for the design, commissioning or approval of any Naval Reactor Plant, Nuclear Weapon, component, relevant support equipment, plant or process which may affect safety.

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

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

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

(5) The Authorisee **shall** appoint a suitably qualified and experienced 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 or approval arrangements.

(6) The Authorisee **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 Authorisee **shall** ensure that no Naval Reactor Plant, Nuclear Weapon, component, relevant support equipment, plant or process which may affect safety is put into service (except for the purpose of commissioning or approval) until:

(a) the appropriate stage of commissioning or approval has been completed and a report of such commissioning or approval, including any results and assessments of any tests as may have

been required under the commissioning or approval arrangements referred to in clause (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 design or construction of the Naval Reactor Plant, Nuclear Weapon, component, relevant support equipment, plant or process and those arising from the commissioning of the above, and any matters whereby the operation of the items listed above may be affected by such modifications or commissioning or approval, has been considered in accordance with the arrangements referred to in clause (1) of this Condition.

(8) The Authorisee **shall**, if so notified by DNSR, submit to DNSR the safety case for the aforesaid Nuclear Weapon, Naval Reactor Plant, component, relevant support equipment or plant, or processes prepared in pursuance of clause (7) of this Condition and **shall** not commence operation of the relevant plant or process without the consent of DNSR.

AC22: Modification or Experiment on Existing Plant, Naval Reactor Plant, Nuclear Weapon, Components or Relevant Support Equipment

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee has adequate arrangements to control all modifications to designs, approvals, plant and experiments (both temporary and permanent), that may affect safety. The Condition also gives DNSR the power to ensure that such modifications cannot commence until the Authorisee has adequately demonstrated the safety of the proposal. The Condition also gives DNSR the power to halt a modification or intervene at any stage in the interest of safety.

Regulation AC22

Modification or Experiment on Existing Plant, Naval Reactor Plant, Nuclear Weapon, Components or Relevant Support Equipment

(1) The Authorisee **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.

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon **shall** make and implement adequate arrangements to control modifications to the design of a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment.

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

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

(4) The aforesaid arrangements **shall** provide for the categorisation of modifications or experiments according to their safety significance. The arrangements **shall** where appropriate divide the modification or experiment into stages. Where DNSR so specifies, the Authorisee **shall** not commence nor thereafter proceed from one stage to the next of the modification or experiment without the consent of DNSR. 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 DNSR.

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

AC23: Operating Rules

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee produces an adequate safety case to justify the safety of the activity, plant, facility or design and identifies the limits and conditions necessary in the interests of safety.

Regulation AC23

Operating Rules

(1) The Authorisee **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.

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon, **shall**, in respect of any operation that may affect safety, produce an adequate safety case to demonstrate the safety of a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment, and to identify to other Authorisees the conditions and limits necessary in the interest of safety. Such conditions and limits shall hereinafter be referred to as operating rules.

(2) The Authorisee, where DNSR so specifies, **shall** refer the operating rules arising from clause (1) of this Condition to the relevant nuclear safety committee for consideration.

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

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

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

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

AC24: Operating Instructions

Rationale

The purpose of this Authorisation Condition is to ensure that all operations which may affect safety (including any instructions or information required to implement operating rules), are undertaken in accordance with written operating instructions.

Regulation AC24

Operating Instructions

(1) The Authorisee **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 Authorisee **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.

DNSR.1 Authorisees with Design Authority responsibilities for the Naval Reactor Plant or Nuclear Weapon **shall** ensure that information is provided to other Authorisees to enable the provision of operating instructions for activities involving a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment, including any instructions necessary in the interests of safety and any instructions necessary to ensure that any operating conditions and limits are implemented.

(3) The Authorisee **shall**, if so specified by DNSR, furnish to DNSR copies of such operating instructions and when any alteration is made to the operating instructions furnished to DNSR, the Authorisee **shall** ensure that such alteration is furnished to DNSR within such time as may be specified.

(4) The Authorisee **shall** make and implement adequate arrangements for the preparation, review and amendment of such operating instructions.

(5) The Authorisee **shall** submit to DNSR for approval such part or parts of the aforesaid arrangements as DNSR may specify.

(6) The Authorisee **shall** ensure that once approved no alteration or amendment is made to the approved arrangements unless DNSR has approved such alteration or amendment.

AC25: Operational Records

Rationale

The purpose of this Authorisation Condition is to ensure that adequate records are kept regarding operation, examination, inspection, testing and maintenance of any safety-related plant, process, facility, Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment or High Activity Sealed Source (HASS) important to safety.

Regulation AC25

Operational Records

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

DNSR.1 Authorisees with Design Authority responsibilities **shall** define to other Authorisees the records to be made of the operations, inspection or maintenance conducted with a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment which are necessary to support continued approval for use.

(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 Authorisee **shall** record such additional particulars as DNSR may specify.

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

DNSR.2 The Authorisee **shall** provide DNSR with records of High Activity Sealed Sources held on Authorised sites.

AC26: Control and Supervision of Operations

Rationale

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

Regulation AC26

Control and Supervision of Operations

(1) The Authorisee **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 Authorisee.

AC27: Safety Mechanisms, Devices and Circuits

Rationale

The purpose of this Authorisation Condition is to ensure that there are always suitable, sufficient and operable safety mechanisms, devices and circuits and these are correctly connected and maintained in good working order.

Regulation AC27

Safety Mechanisms, Devices and Circuits

(1) The Authorisee **shall** ensure that nuclear facilities, Naval Reactor Plant, Nuclear Weapons or equipment are not operated, inspected, maintained or tested unless suitable and sufficient safety mechanisms, devices and circuits are properly connected and in good working order.

AC28: Examination, Inspection, Maintenance and Testing

Rationale

The purpose of this Authorisation Condition is to ensure that all systems, components and plant that are important to safety receive regular and systematic examination, inspection, maintenance and testing, by and under the control of suitably qualified and experienced personnel and that records of examination, inspection, maintenance and testing activities are kept.

Regulation AC28

Examination, Inspection, Maintenance and Testing

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

DNSR.1 Authorisees with Design Authority responsibilities **shall** make and implement adequate arrangements to define to other Authorisees requirements for the regular and systematic examination, inspection, maintenance and testing of all Naval Reactor Plant, Nuclear Weapons, components and relevant support equipment.

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

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

(4) The aforesaid arrangements **shall** provide for the preparation of a plant maintenance schedule for each plant. The Authorisee shall submit to DNSR for its approval such part or parts of any plant maintenance schedule as DNSR may specify.

DNSR.2 The aforesaid arrangements are to provide for the examination, inspection, maintenance and testing schedule for Naval Reactor Plant, Nuclear Weapons, components or relevant support equipment. The Authorisee with Design Authority responsibilities **shall** submit to DNSR for its approval such part or parts of any such schedule as DNSR may specify.

(5) The Authorisee **shall** ensure that once approved no alteration or amendment is made to any approved part of any plant maintenance schedule unless DNSR has approved such alteration or amendment.

(6) The Authorisee **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 Authorisee for that purpose.

(7) Notwithstanding the above clauses of this Condition, DNSR 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 Authorisee forthwith who **shall** take appropriate action and ensure the matter is then notified, recorded, investigated and reported in accordance with arrangements made under Authorisation Condition 7.

(9) The Authorisee **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 Authorisee to control and supervise such examination, inspection, maintenance or test is made to the Authorisee forthwith upon completion of the said examination, inspection, maintenance or test.

AC29: Duty to carry out Tests, Inspections and Examinations

Rationale

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

Regulation AC29

Duty to carry out Tests, Inspections and Examinations

(1) The Authorisee **shall** carry out such tests, inspections and examinations in connection with any plant (in addition to any carried out under Authorisation Condition 28) as DNSR may, after consultation with the Authorisee, specify.

(2) The Authorisee **shall** furnish the results of any such tests, inspections and examinations carried out in accordance with clause (1) of this Condition to DNSR as soon as practicable.

AC30: Periodic Shutdown

Rationale

The purpose of this Authorisation Condition is to ensure that the plant or facility is shut down in accordance with the plant examination, inspection, maintenance and testing schedule in order that important examination, inspection, maintenance and testing activities are carried out.

Regulation AC30

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 Authorisee **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 Authorisation Condition 28.

(2) Notwithstanding clause (1) of this Condition DNSR may agree to an extension of a plant's operating period.

(3) The Authorisee **shall**, if so specified by DNSR, ensure that when a plant or process is shut down in pursuance of clause (1) of this Authorisation Condition it shall not be started up again thereafter without the consent of DNSR.

AC31: Shutdown of Specified Operations (Withdrawal of Approval)

Rationale

The purpose of this Authorisation Condition is to give DNSR the authority to instruct the Authorisee to shut down any plant, operation, or process within a specified period. Following a direction to shut down the Authorisee will require a consent from DNSR to restart operations.

Regulation AC31

Shutdown of Specified Operations (Withdrawal of Approval)

(1) The Authorisee **shall**, if so directed by DNSR, shut down any plant, operation or process within such period as DNSR may specify.

(2) The Authorisee **shall** ensure that when a plant, operation or process is shut down in pursuance of clause (1) of this Condition it shall not be started up again thereafter without the consent of DNSR.

DNSR.1 Authorisees with Design Authority responsibilities **shall**, if so directed by DNSR, withdraw their approval for putting into service a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment or process within such a period as DNSR may specify.

DNSR.2 Authorisees with Design Authority responsibilities **shall** ensure that when the approval is withdrawn in pursuance of clause (DNSR.1) of this Condition it is not to be re-instated without the consent of DNSR.

AC32: Accumulation of Radioactive Waste

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee has adequate arrangements to minimise the production and accumulation of radioactive waste and that adequate records are kept The Condition also gives DNSR the authority to ensure that radioactive waste is stored under suitable conditions.

Regulation AC32

Accumulation of Radioactive Waste

(1) The Authorisee **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 Authorisee **shall** submit to DNSR for approval such part or parts of the aforesaid arrangements as DNSR may specify.

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

(4) Without prejudice to clause (1) of this Condition the Authorisee **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 DNSR.

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

AC33: Disposal of Radioactive Waste

Rationale

The purpose of this Condition is to give DNSR the authority to direct the Authorisee to dispose of radioactive waste which is stored on the Authorised site. DNSR would only use this power in conjunction with the appropriate statutory regulator.

Regulation AC33

Disposal of Radioactive Waste

(1) The Authorisee **shall**, if so directed by DNSR, ensure that radioactive waste accumulated or stored on the site is disposed of as DNSR may specify and in accordance with an environmental permit, or an existing permit which has become an environmental permit granted under the Environmental Permitting (England and Wales) Regulations 2016, or the Environmental Authorisations (Scotland) Regulations 2018.

AC34: Leakage and Escape of Radioactive Material and Radioactive Waste

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee adequately controls or contains radioactive material and radioactive waste 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 waste can be detected, recorded and reported to DNSR.

Regulation AC34

Leakage and Escape of Radioactive Material and Radioactive Waste

(1) The Authorisee **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 clause (1) of this Condition the Authorisee **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 Authorisation 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 or permits to dispose granted under Environmental Permitting (England and Wales) Regulations 2016 or the Environmental Authorisations (Scotland) Regulations 2018, as appropriate.

AC35: Decommissioning

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee makes and implements adequate arrangements for the safe decommissioning of Naval Reactor Plant, Nuclear Weapons, nuclear facilities, components or relevant support equipment.

Regulation AC35

Decommissioning

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

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

DNSR.1 Authorisees with Design Authority responsibilities for the Nuclear Weapon or Naval Reactor Plant **shall** make and implement adequate arrangements to enable the following:-

(a) the decommissioning of a Naval Reactor Plant, Nuclear Weapon, component or relevant support equipment;

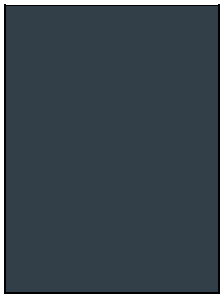
(b) the production of a decommissioning programme for Naval Reactor Plant, Nuclear Weapons, components, or relevant support equipment.

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

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

(5) The aforesaid arrangements shall, where appropriate, divide the decommissioning into stages. Where DNSR so specifies, the Authorisee **shall** not commence nor thereafter proceed from one stage to the next of the decommissioning without the consent of DNSR. 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 DNSR.

(6) The Authorisee **shall**, if so directed by DNSR 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 Authorisee **shall**, if so directed by DNSR, halt the decommissioning of a plant and the Authorisee shall not recommence such decommissioning without the consent of DNSR.

AC36: Organisational Capability

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee maintains adequate financial and human resources to ensure the safety of the Authorised site, plant or activities and implements adequate arrangements to control any change to its justified baseline organisational structure or resources which may affect safety.

Regulation AC36

Organisational Capability

(1) The Authorisee **shall** provide and maintain adequate financial and human resources to ensure the safe operation of the Authorised site, plant or activities.

(2) Without prejudice to the requirements of clause (1), the Authorisee **shall** make and implement adequate arrangements to control any change to its organisational structure or resources which may affect safety.

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

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

(5) The aforesaid arrangements **shall** provide for the categorisation 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 DNSR.

(6) The Authorisee **shall,** if so directed by DNSR, halt the change to its organisational structure or resources and the Authorisee shall not recommence such change without the consent of DNSR.

FAC1: Duty of Co-operation and Support

Rationale

The purposes of the condition are to ensure the maintenance of coherent arrangements between Authorisees to ensure the safe transfer of Naval Reactor Plant or Nuclear Weapons from one to the other; to ensure the maintenance of arrangements for co-operation and, where appropriate, support between Authorisees to ensure that appropriate design control is exercised throughout a Naval Reactor Plant or Nuclear Weapons life and across life-cycle phases. Finally, the Condition ensures that arrangements are made for co-operation with independent organisations (e.g. contractors) and internally within the Authorisee's organisation where this is necessary to maintain safety. This Authorisation Condition results from the mobility of Naval Reactor Plant and Nuclear Weapons in the DNE and the separate responsibilities of Authorisees with Design Authority responsibilities.

Regulation FAC1

Duty of Co-operation and Support

(1) The Authorisee **shall** make and implement adequate arrangements to co-operate with, and where appropriate, support, other Authorisees and to establish and maintain coherent management arrangements with such Authorisees for all activities which could affect safety.

(2) Authorisees with Design Authority responsibilities **shall** make and implement adequate arrangements to co-operate with other Authorisees and relevant Design Organisations, Responsible Designers and Approving Authorities for Naval Reactor Plant, Nuclear Weapons, components or relevant support equipment.

(3) The Authorisee **shall** make and implement adequate arrangements to co-operate with independent organisations (both external and internal) for all activities which could affect safety.

(4) The Authorisee **shall** submit to DNSR for approval such part or parts of the aforesaid arrangements as DNSR may specify.

(5) The Authorisee **shall** ensure that once approved no alteration or amendment is made to the approved arrangements unless DNSR has approved such alteration or amendment.

FAC2: Operational Berths

Rationale

The purpose of this Authorisation Condition is to ensure that regulatory consent is obtained for the use, and the scope of such use, of an operational berth by a nuclear powered warship. This condition results from the need for UK nuclear powered warships to berth at operational berths outside Authorised sites including those in foreign countries.

Regulation FAC2

Operational Berths

(1) The Authorisee **shall** make and implement adequate arrangements for use of operational berths by nuclear powered warships.

(2) The Authorisee **shall** ensure that no operational berth is used by a nuclear powered warship without the consent of DNSR.

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

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

FAC3: Radioactive Discharges

Rationale

The purpose of this Authorisation Condition is to ensure that discharges of radioactive material are minimised and controlled and subject to regulatory consent. This Authorisation Condition results from the need for environmental controls equivalent to those in legislation to apply to all parts of the DNE. DNSR will conduct assessments in accordance with the principles and methodologies adopted for this purpose by EA and SEPA under EPR16, or EA(S)R. If a consent or its equivalent is granted by a statutory regulator, then DNSR will not need to issue a direction under Condition clause (2).

Regulation FAC3

Radioactive Discharges

(1) The Authorisee **shall** make and implement adequate arrangements to minimise and control the discharge of radioactive material to the environment.

(2) The Authorisee **shall** not discharge radioactive material to the environment without the consent of DNSR.

(3) The Authorisee **shall** make and implement adequate arrangements to record information about any discharge of radioactive material to the environment.

(4) The Authorisee **shall** record such additional information as DNSR may specify.

(5) The Authorisee **shall** furnish to DNSR such information about any discharge as DNSR may specify.

(6) The Authorisee **shall** submit to DNSR for approval such part or parts of the aforesaid arrangements as DNSR may specify.

(7) The Authorisee **shall** ensure that once approved no alteration or amendment is made to the approved arrangements unless DNSR has approved such alteration or amendment.

(8) The Authorisee **shall** notify DNSR of any breach of consent at the earliest opportunity.

FAC 4: Not Used

Regulation FAC4

This section has intentionally been left blank.

FAC5: Design of a Naval Reactor Plant or Nuclear Weapon

Rationale

The purpose of this Authorisation Condition is to ensure that the Authorisee with Design Authority responsibilities makes and implements adequate control over the design of a Naval Reactor Plant or Nuclear Weapon.

Regulation FAC5

Design of a Naval Reactor Plant or Nuclear Weapon

(1) Where an Authorisee with Design Authority responsibilities proposes to design a Naval Reactor Plant or Nuclear Weapon they **shall** make and implement adequate arrangements to control the design.

(2) The arrangements **shall** include a requirement for the provision of adequate documentation to justify the safety of the proposed design and the Authorisee with Design Authority responsibilities **shall** provide for the submission of this documentation to DNSR.

(3) The aforesaid arrangements, where appropriate, are to divide the design process into stages. Where DNSR so specifies the Authorisee with Design Authority responsibilities **shall** not commence nor thereafter proceed from one design stage to the next without the consent of DNSR.

(4) The Authorisee with Design Authority responsibilities **shall** develop, maintain and comply with an appropriate and adequate set of safety principles and criteria that reflect MOD policy.

(5) The Authorisee with Design Authority responsibilities **shall** submit to DNSR for approval such part or parts of the aforesaid arrangements as DNSR may specify.

(6) The Authorisee with Design Authority responsibilities **shall** ensure that once approved no alteration or amendment is made to the approved arrangements unless DNSR has approved such alteration or amendment.

FAC6: Nuclear Weapon Periodic Withdrawal

Rationale

The purpose of this Authorisation Condition is to ensure that Nuclear Weapons, components or relevant support equipment are withdrawn from service or use in accordance with the maintenance schedule. The Condition also gives DNSR the power to intervene and require the Authorisees with Design Authority responsibilities to seek DNSR's agreement to return Nuclear Weapons, components or relevant support equipment to service or use.

Regulation FAC6

Nuclear Weapon Periodic Withdrawal

(1) When necessary for the purpose of enabling any examination, inspection, maintenance or testing of any Nuclear Weapon, component or relevant support equipment to take place, an Authorisee with Design Authority responsibilities **shall** specify shutdowns, withdrawals and dispositions of Nuclear Weapons, components and relevant support equipment to enable such examination, inspection, maintenance or testing to take place.

(2) Notwithstanding clause (1) of this Condition DNSR may agree to an extension of the operating period for a Nuclear Weapon, component or relevant support equipment.

(3) An Authorisee with Design Authority responsibility **shall**, if so specified by DNSR, require that when a Nuclear Weapon, component or relevant support equipment is withdrawn in pursuance of clause (1) of this Condition it shall not be returned for use thereafter without the consent of DNSR.

(4) Authorisees **shall** make and implement adequate arrangements to ensure that specified requirements pertinent to this condition are complied with to the satisfaction of Authorisees with Design Authority responsibilities.

TC1: Transport, Packages and Containers

Rationale

This condition results from the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (as amended) (CDGR) identifying a) SofS(D) as the Competent Authority for the Transport of Class 7 goods pertaining to an instrument of war and, b) CDGR Regulation 17granting a Defence Exemption for the transport of Defence Nuclear Materials considered 'Instrument of War and Related Material'. The purpose of this condition is to ensure that the transport of Class 7 (and where necessary, associated Class 1) goods in support of the DNE is undertaken, so far is as reasonably practicable, in accordance with UK legislative requirements in order to meet SofS(D) HS&EP Policy.

Regulation TC1

Transport, Packages and Containers

(1) Authorisees and duty holders with responsibilities associated with transportation of Defence Nuclear Material/Assets **shall** comply with UK Legislative Requirements as if no 'Defence Exemption' applies, except where explicitly agreed with DNSR.

(2) Placarding, marking and labelling **shall** be done in accordance with UK legislation, except where explicitly agreed with DNSR.

(3) For transportation of Nuclear Warheads or goods containing Class 1 & Class 7 materials, packaging **shall** demonstrate compliance with DNSR requirements (see Clause 1) and gain DOSR approval.

(4) Incidents involving transportation of Class 7 goods **shall** be notified in accordance with the Defence Nuclear Enterprise: Radioactive Material Transport Safety: Incident Reporting Criteria.

(5) The Authorisee or duty holder **shall** submit such evidence and information as DNSR may specify.

Glossary of Selected Terminology

This section provides a glossary of the meaning of selected terms as used specifically in regulatory documents. Where possible, DNSR aligns terminology with external Relevant Good Practice e.g. ONR, IAEA etc.

Term	Explanation
Accident	From IAEA Nuclear and Safety Glossary, 2022 (interim) Edition. Any unintended event, including operator errors, equipment failures or other mishaps, the consequences or potential consequences of which are not negligible from the point of view of protection and safety.
Agreement	An Agreement issued by DNSR allows an Authorisee to proceed with an agreed course of action.
ALARP	Abbreviation for achieving risk that is As Low As Reasonably Practicable. The commonly used variant of the legal term So Far As Is Reasonably Practicable (SFAIRP). ALARP and SFAIRP mean essentially the same thing and at their core is the concept of “reasonably practicable”; this involves weighing a risk against the trouble, time and money needed to control it. The requirement for risks to be ALARP is fundamental and applies to all activities within the scope of the Health and Safety at Work (etc) Act 1974 (HSWA).
Approve	The action used throughout the Conditions (AC, FAC and TC), with the purpose of freezing arrangements and giving permission to proceed. Once DNSR Approval is given to a set of arrangements, they shall not be changed or varied unless and until the changes have been agreed by DNSR.
Assessment	The examination of documentation and arrangements that demonstrate the safety of a facility and its processes, operations and organisation. Assessments can inform inspections to verify the accuracy of the safety case (or safety claim), its assumptions, its safety provisions and requirements and compliance with the procedures that ensure that the provisions and Safety Functional Requirements have been implemented and continue to be adhered to. It is also important in establishing confidence in the reliability of the information and conclusions presented.
Assurance	From DSA01.2 Assurance, June 2023. Assurance is a general term for the confidence that can be derived from objective information over the successful conduct of activities, the efficient and effective design and operation of internal control, compliance with internal and external requirements, and the production of insightful and credible information to support decision-making. Confidence diminishes when there are uncertainties around the integrity of information or of underlying processes.
Authorisation	A regulatory mechanism through which DNSR-Hd sets the Conditions permitting an Authorisee to establish their own safety arrangements, whose adequacy shall be demonstrable.
Authorisation Conditions (including Further Authorisation Condition and Transport Condition)	Those obligations that are applied by DNSR-Hd as a condition of being Authorised to conduct specified activities in relation to the Defence Nuclear Enterprise (DNE).
Authorised Site	A site defined within the DNSR Certificate of Nuclear Authorisation where nuclear activities are controlled by an Authorisee in compliance with the Authorisation Conditions, Further Authorisation Conditions and Transport Condition.
Authorisee	The accountable post-holder identified on the Certificate of Nuclear Authorisation, duly Authorised by DNSR-Hd to operate in compliance with the Certificate of Nuclear Authorisation, Further Authorisation Conditions and Transport Condition. The accountability of Authorisee cannot be delegated to any other person, in whole or in part, formally or informally.
Authorisee with Design Authority Responsibilities	The accountable post-holder identified as NW or NRP Design Authority on the Certificate of Nuclear Authorisation, duly Authorised by DNSR-Hd to operate in compliance with the Certificate of Nuclear Authorisation. The accountability of the Authorisee with Design Authority Responsibilities cannot be delegated to any other person, in whole or in part, formally or informally.

Term	Explanation
Authority	The power delegated to DNSR Head by DG DSA to Authorise the conduct of defined activities that may entail a direct or indirect risk to nuclear safety, and the power to provide assurance that the requisite level of nuclear safety is being achieved.
Cause	The origin, sequence or combination of circumstances leading to a hazardous event.
Class 1 Material	Defined in the Carriage of Dangerous Goods Regulations
Class 7 Material	Defined in the Carriage of Dangerous Goods Regulations
Commissioning	The process by means of which systems and components of facilities and activities (including any Nuclear Weapon, Naval Reactor Plant, component, relevant support equipment, plant or process), having been constructed or modified, are made operational and verified to be in accordance with the design and to have met the required safety criteria.
Competent Authority (for Transport of Class 7 goods)	Defined in the Carriage of Dangerous Goods Regulations and IAEA SSR-6.
Consent	Consents are used to release primary power regulatory hold points, which have previously been placed using specifications.
Decommissioning	From IAEA Nuclear and Safety Glossary, 2022 (interim) Edition. Administrative and technical actions taken to allow the removal of some or all of the regulatory controls from a facility.
Defence	Many defence activities are conducted by contractors or partner organisations; the term “Defence” encompasses these as well as organisations within the Ministry of Defence.
Defence Nuclear Enterprise (DNE).	The Defence Nuclear Enterprise comprises the Naval Nuclear Propulsion Programme (NNPP) and the Nuclear Weapon Programme (NWP).
Defence Safety Authority (DSA).	DSA regulates safety and environmental protection for those conducting defence activity, be they Armed forces personnel, MOD civilians, or contractors.
Design	The process and the result of developing a concept, detailed plans, supporting calculations and specifications for NW, NRP, plant or facility and its parts.
Design Authority	The defined function of an identified DNE organisation with the responsibility for, and the requisite knowledge to Approve and maintain the design intent, integrity and safety of a Nuclear Weapon, Naval Reactor Plant, nuclear facility or supporting equipment as appropriate through life.
Design Intent	The fundamental criteria and characteristics (including reliability levels) that need to be realised in a facility, Nuclear Weapon, Naval Reactor Plant, component or relevant support equipment in order that it achieves its operational and safety functional requirements.
Design Organisation	An organisation responsible for designing a specific type of equipment. The Design Organisation may own the design, or pass ownership to a third party.
Direction	A Direction is a mandatory requirement for an Authorisee or duty holder to take a particular action.
Disposal	Emplacement of waste in an appropriate facility without the intention of retrieval.
Dose	See Effective Dose
Duly Authorised Persons (DAP)	Suitably Qualified and Experienced Persons who are appointed to control and supervise operations which may significantly affect nuclear or radiological safety.
duty holder	A person or organisation who has direct responsibility for, and control of, specified activities that influence, directly or indirectly, safety within the DNE. In the context of DNSR regulation of the DNE, duty holder is not capitalised and not to be confused with Duty Holding.

Term	Explanation
Effective Dose	The quantity obtained by multiplying the equivalent dose to various tissues and organs by a weighting factor appropriate to each and summing the products. When comparing effective doses received to annual limits the contributions from external exposure and the committed effective dose from intakes of radionuclides in the same period should be included. Effective dose is measured in Sieverts (Sv).
Emergency Arrangements	The arrangements put in place to deal with all events that might lead to a radiation emergency. Called Emergency Plan in REPPIR.
Emergency Plan	A description of the objectives, policy and concept of operations for the response to an emergency and of the structure, authorities and responsibilities for a systematic, coordinated and effective response. The emergency plan serves as the basis for the development of other plans, procedures and checklists. Its purpose is to minimise harm once an emergency has happened.
Endorse	To endorse a document is to express agreement to its content. Endorsement does not apply to subsequent revisions unless these too are subject to separate assessment and endorsement.
Event	From IAEA Nuclear and Safety Glossary, 2022 (interim) Edition. An event is any occurrence unintended by the operator, including operator error, equipment failure or other mishap, and deliberate action on the part of others, the consequences or potential consequences of which are not negligible from the point of view of protection and safety.
Facility	That part of a nuclear site identified as being a separate unit for the purposes of nuclear or radiological risk. This may be a single reactor, a group of processing plants as on a nuclear fuel-cycle facility or a dock and its support systems containing a naval reactor plant. The term encompasses both the terms 'nuclear installations' as defined in the Nuclear Installations Act 1965 (as amended) and 'plant' as used in nuclear site Licences granted by ONR. It also includes units that might house or process nuclear weapons, components and relevant support equipment.
Further Authorisation Conditions	Conditions that address issues unique to the DNE (mobility of Naval Reactor Plant and Nuclear Weapons for which there are no equivalent Licence Conditions).
Hazard	From IAEA Nuclear and Safety Glossary, 2022 (interim) Edition. The potential for harm or other detriment, especially for radiation risks; a factor or condition that might operate against safety.
Hold Point	A point in any project or operation in the Defence Nuclear Enterprise beyond which progress is prohibited until predetermined criteria which provide safety assurance or risk mitigation are satisfied.
Incident	From IAEA Nuclear and Safety Glossary, 2022 (interim) Edition. Any unintended event, including operating errors, equipment failures, initiating events, accident precursors, near misses or other mishaps, or unauthorized act, malicious or non-malicious, the consequences or potential consequences of which are not negligible from the point of view of protection and safety.
Inspection	A documented activity performed by DNSR inspectors to determine by examination and evaluation of objective evidence the adequacy of process, and adherence to regulatory standards. It also includes an examination of the sustainability of those arrangements and considers factors such as Leadership and Management for Safety. From IAEA Nuclear and Safety Glossary, 2022 (interim) Edition. Inspection is also an examination, observation, surveillance, measurement or test undertaken to assess structures, systems and components and materials, as well as operational activities, technical processes, procedures and personnel competence.

Term	Explanation
Instrument of War	Goods exempted from the CDG which contain Class 7 Material are intended for use as weapon. The exemption covers items that: (a)are, or form part of, an instrument of war; (b)are required for research into, or the development or production of, any such instrument or part of such instrument; or (c)are produced in the course of, or in connection with, such research, development or production. See CDGR 2009 Part 3 Para 17
Leadership and Management for Safety	See IAEA GSR Part 2
Maintenance	From IAEA Nuclear and Safety Glossary, 2022 (interim) Edition. The organised activity, both administrative and technical, of keeping structures, systems and components in good operating condition, including both preventive and corrective (or repair) aspects.
Management Arrangements	Documented methods which describe how particular operations or activities will be controlled.
Modification	Any alteration to buildings, structures, plant, systems, equipment, processes or safety cases including any replacement, refurbishment or repairs to existing buildings, Nuclear Weapons, Naval Reactor Plant, components, relevant support equipment or processes and alterations to the design of Nuclear Weapons, Naval Reactor Plant, components or relevant support equipment through life.
Naval Reactor Plant	The significant systems fundamental to the operation of the Nuclear Steam Raising Plant (NSRP). A meaning assigned to a nuclear reactor comprised in a nuclear-powered warship (NPW), interpreted as if the NIA65 (as amended) applied.
Notification	Notifications are primary powers used to formally inform the Authorisee of a regulatory requirement. It can be used in particular under AC12 to remove the DAP status of an individual worker. The word may also be used when the Authorisee is required to notify DNSR of something e.g. AC7, AC13, etc.
Nuclear Emergency	This refers to a reactor accident, nuclear fuel accident, neutron source accident or a Nuclear Weapon accident, which may lead to a release of fissile or radioactive material or fission products.
Nuclear Matter	From ONR Safety Assessment Principles 2014 Edition, Revision 1 (January 2020). Subject to any exceptions prescribed in NIA and the Nuclear Installations (Excepted Matter) Regulations 1978, nuclear matter is: 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.
Nuclear Safety	From IAEA Nuclear and Safety Glossary, 2022 (interim) Edition. The achievement of proper operating conditions, prevention of accidents and mitigation of accident consequences, resulting in protection of workers, the public and the environment from undue radiation risks.
Nuclear Warhead	The item of hardware that arrives at the point of detonation; for the purposes of DSA02–DNSR this will be taken to mean the aeroshell and its contents.
Nuclear Weapon	A nuclear explosive configured for Ministry of Defence operational use.
Operating Instructions	Written instructions that: a. provide step by step instructions on how to carry out an operation to ensure that it is done in the way claimed in the safety case; b. ensure that operating conditions and limits are implemented; c. are necessary in the interests of safety.
Operating Rule	Any condition or limit in place at a nuclear facility or during an operation through which an Authorisee demonstrates compliance with its safety case.

Term	Explanation
Operational Berth	Any approved berth outside an Authorised site and not covered by an Authorised site's arrangements, which may be visited by a NPW. An Operational Berth may be in the UK, a British Overseas Territory or a foreign country.
Operation(s)	Includes any operation involving nuclear material including, manufacture, assembly, disassembly, maintenance, examination, testing of a Nuclear Weapon or components or materials, operation and maintenance of the Naval Reactor Plant and the treatment, processing, keeping, storing, accumulating or carriage of any radioactive material or radioactive waste, the passage, movement and berthing of vessels and "operating" and "operational" shall be construed accordingly.
Periodic Review	A comprehensive assessment of design, equipment, operations and safety cases against current standards required at appropriate intervals to demonstrate that the risks continue to be as low as reasonably practicable and that ageing and other time-related phenomena will not render the design or operations unsafe before the next review.
Permissioning	Permissioning regimes are a means for controlling Authorisee activities through the use of hold points which require permission from DNSR to start, continue or cease certain activities, using a subset of regulatory powers. These can either be from primary powers (specifications and consents) or derived powers (often agreement though other powers can be used) where the Authorisee has identified their own hold points.
Prohibit Notice	Prohibit Notice is DNSR enforcement on the Authorisee that requires the activity to cease while the corrective action is completed. The recipient of the PN is required to demonstrate to DNSR that the risk has been sufficiently reduced before the PN is lifted and the activity can commence.
Quality Management	The act of oversight to ensure that an organisation, product or service operates and delivers to the required standard.
Radioactive Material	Material designated in national law or by a regulatory body as being subject to regulatory control due to its radioactivity
Radioactive Waste	Radioactive waste has the meaning assigned thereto in paragraph 3 of Part 2 of Schedule 23 to the Environmental Permitting (England and Wales) Regulations 2016.
Responsible Designer	An organisation responsible through formal arrangement for the maintenance of detailed, specialised knowledge of the design of Nuclear Weapons or Naval Reactor Plant through life and possessing an adequate capability for the design of such as required.
Risk	The chance that someone or something is adversely affected in a particular manner by a hazard. Often expressed as probability multiplied by consequence.
Safety Case	In this document, 'safety case' refers to the totality of an Authorisee's, or duty holder's documentation to demonstrate safety.
Safety Criteria	The accepted standards or values against which the calculated risks arising from activities are compared as an aid in judging those risks.
Safety Justification	See Safety Case
Safety Principles	A set of established fundamental nuclear safety aims applicable through life.
Shall	As defined within JSP 940, MOD Policy for Quality, the use of shall indicates a requirement.
Should	As defined within JSP 940, MOD Policy for Quality, the use of should indicates a preferred recommendation as the acceptable means of compliance.
Specification	A Specification is an instruction from DNSR using primary powers to start, continue or cease doing something. Specifications are commonly used to impose a primary power hold point e.g. AC22, to prevent the Authorisee progressing beyond this point in a programme of activities without regulatory consent; but this power has a different meaning in AC32 where it acts as a long term regulatory control. Elsewhere in various Authorisation Conditions, specification means an instruction from DNSR to furnish particular information, or to submit for approval parts of the compliance arrangements.

Term	Explanation
Suitably Qualified and Experienced Persons	Persons that meet the nuclear competence criteria for roles which may affect nuclear and radiological safety.
Support Equipment	Equipment with a nuclear safety function used in the assembly, processing, disassembly or maintenance of a Nuclear Weapon or Naval Reactor Plant.
Transport	The deliberate physical movement of radioactive material (other than that forming part of a means of propulsion) from one place to another. From a regulatory perspective 'transport' comprises all operations and conditions associated with, and involved in, the movement of radioactive material; these include the design, manufacture, maintenance and repair of packaging, and the preparation, consigning, loading, carriage including in-transit storage, unloading and receipt at the final destination of loads of radioactive material and packages [from IAEA SSR-6 para 106].
Transport Condition	DNSR Regulatory condition applied to an Authorisee or duty holder undertaking the transport of defence radioactive material in the Defence Nuclear Enterprise.

Abbreviations

This section provides a list of abbreviations as used in DSA02–DNSR.

AC	Authorisation Condition(s)
ALARP	As Low As Reasonably Practicable
CA	Competent Authority
CDGR	Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009
DAP	Duly Authorised Person(s)
DDS	Directorate of Defence Safety
DED	Disapplication, Exemption or Derogation
DG DSA	Director General, Defence Safety Authority
DNE	Defence Nuclear Enterprise
DNSR	Defence Nuclear Safety Regulator
DNSR-Hd	Head of the Defence Nuclear Safety Regulator
DOSR	Defence Ordnance Safety Regulator
DSA	Defence Safety Authority
EA	Environment Agency
EA(S)R	Environmental Authorisations (Scotland) Regulations
EIMT	Examination, Inspection, Maintenance and Testing
EPR	Environmental Permitting Regulations
FAC	Further Authorisation Condition(s)
HASS	High Activity Sealed Source
HS&EP	Health, Safety and Environmental Protection
HSE	Health and Safety Executive
HSWA	Health and Safety at Work etc. Act 1974
IAEA	International Atomic Energy Agency
JSP	Joint Service Publication
LC	Licence Condition(s)
LCP	Lifecycle Phase
L&MfS	Leadership and Management for Safety
LOD	Line of Defence
MD WHD	Managing Director Warhead
MOD	Ministry of Defence
NIA	Nuclear Installations Act 1965
NNPP	Naval Nuclear Propulsion Programme
NP-Hd	Head of the Nuclear Propulsion Project Team
NPR	Nuclear Propulsion Regulator
NPW	Nuclear Powered Warship
NRP	Naval Reactor Plant
NSC	Nuclear Safety Committee
NW	Nuclear Weapon
NWP	Nuclear Weapon Programme
NWR	Nuclear Weapon Regulator
OB	Operational Berth
ONR	Office for Nuclear Regulation
PN	Prohibit Notice
RAM	Radioactive Material
REPPIR	Radiation Emergency (Preparedness and Public Information) Regulations

SEPA	Scottish Environment Protection Agency
SFAIRP	So Far As Is Reasonably Practicable
SMDC	Safety Mechanisms, Devices and Circuits
SofS(D)	Secretary of State for Defence
SSR-6	IAEA Specific Safety Requirements - 6. Regulations for the Safe Transport of Radioactive Material
SQEP	Suitably Qualified and Experienced Persons
TAG	Technical Assessment Guide
TC	Transport Condition

Further Advice and Feedback - Contacts

The owner of this DSA document is DNSR. For further information on any aspect of this document, or to provide feedback on the content, contact:

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