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| ONR Project Assessment Report  PR-01653 Withdrawal of formal permissioning of Site Emergency Plans under Nuclear Site Licence Condition (LC) 11 for former reactor and lower level waste sites |



ONR Project Assessment Report

**Project Name**: DF&W review of regulatory processes

**Report Title**: PR-01653 Withdrawal of formal permissioning of Site Emergency Plans under Nuclear Site Licence Condition (LC) 11 for former reactor and lower level waste sites

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# Executive summary

**Permission requested**

The permission withdraws the nuclear site licence condition (LC) 11(3) approval licence instruments (LIs) that have been issued to former reactor and lower level waste management sites within the administrative boundaries of the Office for Nuclear Regulation’s (ONR) Decommissioning, Fuel and Waste (DF&W) subdirectorate, and no longer requires licensees to submit top-level emergency planning documents for primary power approval.

The identified sites are Berkeley, Chapelcross, Dungeness A, Harwell, Hinkley Point A, Hunterston A, Oldbury, Sizewell A, Trawsfynydd, Winfrith (both licensees, Nuclear Restoration Services Ltd and Tradebe Inutec Ltd), Wylfa, Cyclife, Amersham, and LLWR. Dounreay, Springfields and Capenhurst have not been considered in this tranche of work due to their differing hazard and risk profiles.

**Background to the request**

ONR DF&W subdirectorate conducted a review of regulatory processes and identified that a disproportionate amount of time is spent conducting primary power permissioning of licensees’ top-level emergency planning documents. Historically the Nuclear Installations Inspectorate (NII), predecessor to ONR, used a legal instrument to specify that the licensees formally submit these for approval. Consequently, ONR take every amendment through ONR’s full due process for issuing a primary power licence. ONR now seeks to reduce unnecessary bureaucracy by removing the requirement to issue an approval LI in specific circumstances where use of primary powers is not proportionate, whilst maintaining effective regulatory oversight.

**Assessment work conducted by ONR in consideration of this request and Conclusions drawn**

Based on consideration of ONR’s regulatory process, the risk of nuclear emergency presented by the former reactor and low level waste management sites, guidance from the regulators code and IAEA requirements, I consider it is appropriate to withdraw extant primary power approvals granted under LC11(3) of the top-level emergency planning documents for the sites identified above. This has previously been accomplished in isolation for the Bradwell site, and the expansion to other sites supports ONR’s broader efficiency agenda, and aligns well with the Regulators’ Code which obliges all regulators to undertake and prioritise their efforts in a risk-based manner.

The above will not result in changes to the requirement for the licensee to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects, as required by LC11(1). The change will only reduce the level of regulatory control over modifications to the arrangements. Neither will this action affect the dutyholder’s requirements under the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR) and the Ionising Radiation Regulations 2017 (IRR17).

ONR will continue to sustain a good level of regulatory understanding, knowledge, and oversight of site emergency arrangements via routine interactions on site (typically once per quarter for these sites), Level 1 emergency exercise demonstrations, and LC11 compliance inspections. I consider that such arrangements will satisfy IAEA expectations for these types of facilities.

**Matters arising from ONR's work**

There are no matters outstanding from ONR’s assessment.

**Recommendations**

I recommend that ONR should, for the nuclear licenced sites specified:

* In accordance with LC1(3)(a) of schedule 2 of the site licence, withdraw extant approvals LIs granted under LC11(3);
* Issue covering letters, worded to withdraw the requirement to obtain ONR approval of any future alterations or amendments of the respective site’s top-level emergency planning document via an LI; and
* In the letters, outline that oversight will be maintained via routine regulatory interactions on site, corporate level arrangements, Level 1 emergency exercise demonstrations and LC11 inspections.

Table 2: List of abbreviations

|  |  |
| --- | --- |
| Term/Acronym | Description |
| C&M | Care and Maintenance |
| DoR | Director of Regulation |
| EDR | Executive Director of Regulation |
| EIM&C | Enhanced Implementation Management and Control |
| HOW2 | (Office for Nuclear Regulation) Business Management System |
| HSE | The Health and Safety Executive |
| IAEA | The International Atomic Energy Agency |
| LC | Licence Condition |
| LI | Licence Instrument |
| ONR | Office for Nuclear Regulation |
| TAG | Technical Assessment Guide (ONR) |

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# Permission requested

1. The Office for Nuclear Regulation’s (ONR) Decommissioning, Fuel and Waste (DF&W) subdirectorate is conducting a review of regulatory processes. It has identified that a disproportionate amount of time is spent conducting primary power permissioning of licensees’ approved emergency plans on sites with a low nuclear hazard. An Emergency Plan is a top level emergency planning document, which in turn signposts the detailed emergency arrangements in lower tier documents. This is done because historically the Nuclear Installations Inspectorate (NII), predecessor to ONR, specified that the licensees should submit their Emergency Plans for approval under LC11(3). The licensee must formally submit every amendment to the Approved Emergency Plan to ONR, who in turn take this through ONR’s full due process for issuing a primary power licence instrument (LI) to approve the proposed amendments. The proposal herein is to:

* Withdraw the nuclear site licence condition (LC) 11(3) approval LIs that have been issued to former reactor and lower-level waste management sites regulated under the DF&W subdirectorate; and
* No longer enforce related historical specifications, i.e., no longer expect that aspects of the emergency plan are supplied to the regulatory body for primary power approval unless a further specification is issued.

1. No permission has been requested by a dutyholder. Instead, this PAR seeks to reduce unnecessary bureaucracy for both ONR and several dutyholders by removing the requirement to issue an approval LI in specific circumstances where use of primary powers is not always proportionate. This has previously been accomplished for the Bradwell site [1], and ONR now seeks to reform its approach to regulation more widely to ensure a consistent and proportionate regulatory footprint.
2. This supports ONR’s broader efficiency agenda and aligns with the Regulators’ Code which requires all regulators to undertake and prioritise their efforts in a risk-based manner.

# Background

1. For each nuclear licensed site, LC 11(1) requires the licensee to “make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects”. Historically the Nuclear Installations Inspectorate (NII), predecessor to ONR, used a legal instrument to specify that the licensees submit part of the emergency arrangements, known as the top level emergency plan, for approval under LC11(3). Under LC11(3), licensees can only implement changes to accident and emergency plans after receiving a new approval from ONR for the revised plans. This means that the plans cannot be changed without ONR’s approval via an LI.
2. ONR’s DF&W subdirectorate is conducting a review of regulatory processes and has identified that a disproportionate amount of time is spent conducting primary power permissioning of licensees approved emergency plans on sites that now present a low nuclear hazard. It is considered appropriate that for the former Magnox reactor sites, the former research reactor sites, and the low-level waste management sites, extant approvals LIs granted under LC11(3) are withdrawn in accordance with LC1(3)(a) of schedule 2 of the site licence.
3. Should safety measures fail subsequent to an incident arising on site, there is very limited potential for off-site nuclear release from these locations compared to operational nuclear power plant sites as:

* There is insignificant potential for fissile material to reach criticality;
* There is an insignificant inventory of fuel that has been subject to fission and could contaminate the surrounding area; and
* Any radioactive inventory primarily presents an onsite radiological hazard to workers which are controlled via dedicated arrangements.

1. The identified licensees and sites are:

* Nuclear Restoration Services (NRS) Ltd:
  + Berkeley
  + Bradwell[[1]](#footnote-2) (not considered in this PAR)
  + Chapelcross
  + Dungeness A
  + Harwell
  + Hinkley Point A
  + Hunterston A
  + Oldbury
  + Sizewell A
  + Trawsfynydd
  + Winfrith
  + Wylfa
* Inutec Ltd:
  + Winfrith
* Cyclife UK Ltd:
  + Lillyhall
* GE Healthcare Ltd:
  + Amersham
* Low Level Waste Repository Ltd (LLWR):
  + Drigg

The Dounreay, Springfield and Capenhurst sites are not considered in this tranche of work due to their differing hazard and risk profiles.

# Assessment work carried out by ONR

## Consideration of regulatory processes

1. Conducting permissioning using the full process required for issuing primary powers LIs is time consuming. ONR’s delegation arrangements [2] for permissioning using primary powers require the Executive Director of Regulation (EDR) or a relevant Director of Regulation (DoR) to sign the associated LI. Permissioning an LC11(3) approval typically involves one or more specialists, a site or project inspector, and acceptance review by a superintending inspector or delivery lead. By the very nature of primary power permissions, the full complement of inspector and senior inspector resource must be engaged regardless of the safety classification of the change.
2. Due to the legal status of primary powers, the situations in which they are used, the requirements for placing, and the mechanism for releasing can be inflexible and often unnecessary for controlling activities. It is ONR’s typical policy that they should be reserved for those activities which carry significant risk, novelty, and complexity.
3. ONR’s ‘Guidance for Nuclear Safety Permissioning’ [3] states that permissioning should always be proportionate to the hazard/risk associated with the proposed activities. In recognition of this, ONR takes a flexible approach to permissioning and utilises several tools to support this, including primary powers, derived powers, flexible Enhanced Implementation Management and Control (EIM&C) arrangements, and routine regulatory interactions at various levels in the organisations.
4. The Regulators’ Code [4]provides a framework for how regulators should engage with those they regulate. ONR has a statutory obligation to give regard to the provisions of the code when setting standards. The following statements from the code are considered relevant in the context of this proposal:

* “When designing and reviewing policies, operational procedures and practices, regulators should consider… how they can best minimise the cost of compliance for those they regulate”; and
* “Regulators should review the effectiveness of their chosen regulatory activities in delivering the desired outcomes and make any necessary adjustments accordingly.”

1. Current practice to employ primary powers for LC11(3) approvals on sites presenting a low nuclear risk has prevented ONR employing discretion and proportionality. This contrasts with ONR’s own guidance and the Regulator’s Code. Therefore, there is a clear mandate to review and implement opportunities for improved efficiency in the way ONR regulates emergency arrangements at low-risk nuclear safety sites.
2. Based on the above consideration of ONR’s regulatory process, the risk of nuclear emergency presented by the former reactor / low level waste management sites and the guidance from the regulators code, I consider it is appropriate to recommend withdrawing primary power approval under LC11(3) of the emergency plans for the sites identified above.

The removal of the approval under LC11(3) will not result in changes to the requirement for the licensee to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects. The change will only reduce the level of regulatory control over modifications to that plan. Neither will this action affect the dutyholder’s requirements under the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR) and the Ionising Radiation Regulations 2017 (IRR17).

## Consideration of international guidance

1. In accordance with its statutory obligations, ONR is required to adopt IAEA safety standards, in accordance with the UK’s obligations as a contracting party to international convention. The relevant IAEA safety standard is ‘General Safety Requirements Part 7 - Preparedness and Response for a Nuclear or Radiological Emergency’ [5]. The key relevant extracts are:

* Paragraph 6.19 states that: “The operating organization of a facility or for an activity in category I, II, III or IV shall prepare an emergency plan. This emergency plan shall be coordinated with those of all other bodies that have responsibilities in a nuclear or radiological emergency, including public authorities, and shall be submitted to the regulatory body for approval”; and
* Approval in the context of IAEA safety guides is defined by the IAEA glossary as meaning “any form of consent from the regulatory body”.

1. The facilities considered via this assessment will either sit within IAEA emergency preparedness category III or be considered “Limited” based on the definitions in ‘IAEA General Safety Requirements’ Part 7 and the ‘IAEA Safety Guide GS-G-2.1’ [6]. It should be noted that other facilities within the same IAEA emergency preparedness category include some hospitals and industrial irradiation facilities that are not nuclear licenced sites and therefore not subject to ONR’s permissioning regime.
2. There is a clear international expectation of some form of regulatory approval. It is viewed that approval in IAEA terminology does not translate literally to the approval primary power within schedule 2 of the standard nuclear site licence. It is viewed that ONR as the competent regulatory authority has the flexibility to determine which amendments to nuclear site emergency plans are candidates for primary power approval under LC11(3).
3. I judge that following the withdrawal of LC11(3) approval requirements, ONR’s LC11 related regulatory footprint with dutyholders remains proportionate and commensurate with the level of risk to the public and workers. ONR will continue to sustain a good level of regulatory understanding, knowledge and oversight of site emergency arrangements via routine interactions on site (typically once per quarter for these sites), Level 1 emergency exercise demonstrations, and LC11 compliance inspections. I consider that such arrangements will satisfy IAEA expectations for these types of facilities.
4. Although considered to be very unlikely, should it be considered necessary, ONR has vires to issue a new primary power Specification to reintroduce the requirement for primary power approval of site emergency plans.

# Matters arising from ONR’s work

1. There are no matters arising from ONR’s assessment.

# Conclusions

1. The proposal is to withdraw (in accordance with LC1(3)(a) of schedule 2 of the site licence) extant approvals LIs granted under LC11(3) to former reactor and lower level waste management sites within the administrative boundaries of ONR’s DF&W subdirectorate (sites listed in paragraph 7) and to no longer seek licensees to submit site emergency plans for primary power approval.
2. For the sites identified, I consider the proposal appropriate based on consideration of ONR’s regulatory process, the risk of nuclear emergency presented by the former reactor and low-level waste management sites and the guidance from the Regulators’ Code. This supports ONR’s broader efficiency agenda and aligns well with the Regulators’ Code, which requires all regulators to undertake and prioritise their efforts in a risk-based manner.
3. The removal of requiring the affected dutyholders to seek primary power approval under LC11(3) will not result in changes to the requirement for the licensee to make and implement adequate arrangements for dealing with any accident or emergency arising on the site and their effects, as required by LC11(1). The change will only reduce the level of regulatory control over modifications to that plan. Neither will this action affect the dutyholders requirements under the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR) and the Ionising Radiation Regulations 2017 (IRR17).
4. I judge that following the removal of LC11(3) approval requirements, ONR’s LC11 related regulatory footprint with dutyholders remains proportionate and commensurate with the level of risk to the public and workers. ONR will continue to sustain a good level of regulatory understanding, knowledge and oversight of site emergency arrangements via routine interactions on site (typically once per quarter for these sites), Level 1 emergency exercise demonstrations, and LC11 compliance inspections. I consider that this will satisfy IAEA expectations for regulatory control of emergency arrangements over these types of facilities.

# Recommendations

1. I recommend that ONR should, for the nuclear licenced sites specified:

* In accordance with LC1(3)(a) of schedule 2 of the Site Licence, withdraw extant approvals LIs granted under LC11(3);
* Issue covering letters to withdraw the requirement to obtain ONR approval of any future alterations or amendments of the respective site’s top-level emergency planning document via a licence instrument; and
* In the letters, outline that oversight would be maintained via routine regulatory interactions on site, corporate level arrangements, Level 1 emergency exercise demonstrations and LC11 inspections.

# References

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| --- | --- |
| [1] | “ONR-SDFW-PAR-18-031, Bradwell LI 519: Application under LC11(3) of revised Bradwell Emergency Arrangements for C&M, CM9: 2018/315406”. |
| [2] | “ONR-GOV-FW-002, Scheme of Delegation, October 2023, CM9: 2023/50038”. |
| [3] | “NS-PER-GD-001, Nuclear Safety Permissioning, Issue 7, October 2023, CM9: 2021/32823”. |
| [4] | “BRDO/14/705, Regulators' Code. April 2014, https://assets.publishing.service.gov.uk/media/5f4e14e2e90e071c745ff2df/14-705-regulators-code.pdf”. |
| [5] | “STI/PUB/1708, IAEA Safety Standard Series Part 7 General Safety Requirements, 2015, https://www-pub.iaea.org/MTCD/Publications/PDF/P\_1708\_web.pdf”. |
| [6] | “IAEA SAFETY STANDARDS SERIES No. GS-G-2.1, Arrangements for Preparedness for a Nuclear or Radiological Emergency, 2007, https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1265web.pdf”. |

# Appendix

Table 4: Detailed extant LC11 LI information for each site

| Nuclear Licenced Site | Current Site Licence No | Extant LC11(3) Approval LI |
| --- | --- | --- |
| Berkeley | 92 | LI 518  CM9: 2020/141399 |
| Bradwell | 93 | LI 515  CM9: 2016/463686  LI 515 was superseded by  LI 517  CM9: 2017/337346  LI 517 was withdrawn via LI 519 (2018/323248) |
| Chapelcross | SC.15 | LI 543  CM9 2021/45558 |
| Dungeness A | 94 | LI 515  CM9: 2018/94367 |
| Harwell | 101 | LI 505  CM9: 2018/344428 |
| Hinkley Point A | 95A | LI 514  CM9: 2020/141416 |
| Hunterston A | SC.16 | LI 532  CM9: 2021/27390 |
| Oldbury | 57A | LI 560  CM9: 2020/141443 |
| Sizewell A | 105 | LI 519  CM9: 2019/342260 |
| Trawsfynydd | 81 | LI 537  CM9: 2023/55460 |
| Winfrith | 100 | LI 504  CM9: 2016/333719 |
| Wylfa | 58A | LI 574  CM9: 2020/71342 |
| Inutec | 102 | LI 505  CM9: 2019/33867 |
| Cyclife | | 91 | LI 513  CM9: 2019/90594 |
| Amersham | | 32A | LI 510  CM9: 2022/19990 |
| Drigg (LLWR) | | 82 | LI 514  CM9: 2021/25221 |

1. Formal ‘Approval’ of the emergency plan was suspended at the Bradwell site in 2018 [1] [↑](#footnote-ref-2)