



OFFICIAL

LC35 decommissioning programmes for Chapelcross and Hunterston A

Request for Agreement under LC35(2) arrangements to change the LC35 decommissioning programmes to align them with Scottish Government HAW policy

Project Assessment Report ONR-DFW-PAR-15-020
20 January 2016

OFFICIAL

OFFICIAL

© Office for Nuclear Regulation, 2016

If you wish to reuse this information visit www.onr.org.uk/copyright for details.

Published 02/16

For published documents, the electronic copy on the ONR website remains the most current publicly available version and copying or printing renders this document uncontrolled.

OFFICIAL

OFFICIAL

EXECUTIVE SUMMARY

Decommissioning programmes for Chapelcross and Hunterston A – Proposal to change the programmes to align them with Scottish Government Higher Activity Radioactive Waste (HAW) policy

This project assessment report presents the findings of ONR's assessment of Magnox Limited's request for Agreement to change the LC35 decommissioning programmes for Chapelcross and Hunterston A.

Permission Requested

Magnox Limited, the licensee for the Chapelcross and Hunterston A nuclear sites, has proposed to change the LC35 decommissioning programmes for these sites to align them with Scottish Government Higher Activity Waste (HAW) policy. As required under its arrangements for complying with Licence Condition 35(2), the Licensee has requested ONR's Agreement to these changes through the use of derived powers.

Background

In 2011, the Scottish Government published their policy on the management of Higher Activity Radioactive Waste (HAW in this context being Intermediate Level Waste (ILW) and Low Level Waste (LLW) not suitable for disposal in existing LLW facilities). The Scottish Government HAW policy requires that the long-term management of HAW arising in Scotland should be in near-surface facilities, located as near to the site where the waste was produced as possible.

The Nuclear Decommissioning Authority (NDA) has developed a new baseline decommissioning strategy for its Scottish Magnox sites that is compatible with the HAW policy. The strategy is based around storing packaged HAW in on-site, near-surface, storage facilities for up to 300 years, following which the HAW will be consigned to a near-surface disposal facility in Scotland.

The licensee's submission presents a proposal to change the LC35 decommissioning programmes for Chapelcross and Hunterston A to incorporate the NDA baseline decommissioning strategy and align them with the Scottish Government HAW policy.

Assessment and inspection work carried out by ONR in consideration of this request

ONR carried out a programme of work that includes the assessment of the licensee's submission by a nuclear liabilities and radioactive waste specialist inspector, engagement with the licensee and inspection of the proposed changes to the LC35 decommissioning programmes for Chapelcross and Hunterston A, to ensure they are consistent with the Licensee's arrangements and regulatory standards and expectations.

For this assessment, the focus was on gaining assurance that the changes achieved appropriate alignment and consistency between the LC35 decommissioning programmes and the Scottish Government HAW policy, and on the adequacy of the proposed approach for the long-term storage of HAW on the sites.

Matters arising from ONR's work

No unresolved issues remain from ONR's assessment and inspection work.

Conclusions

ONR is satisfied with the claims, arguments and evidence provided in the LC35 change justification report, titled "LC35 change justification Scottish sites long-term storage strategy" and related documentation and other evidence provided through engagement with the Licensee.

OFFICIAL

OFFICIAL

Recommendation

The project assessment report recommends that the Superintending Inspector for the Magnox and Restoration sites sub-programme:

- Signs Licence Instrument 536 granting ONR Agreement to change the LC35 decommissioning programme for Chapelcross, as proposed.
- Signs Licence Instrument 522 granting ONR Agreement to change the LC35 decommissioning programme for Hunterston A, as proposed.

OFFICIAL

OFFICIAL

LIST OF ABBREVIATIONS

C&MP	Care and Maintenance Preparations
FSC	Final Site Clearance
GDF	Geological Disposal Facility
HAW	Higher Activity Radioactive Waste
ILW	Intermediate Level Waste
LC	Licence Condition
LI	Licence Instrument
LLW	Low Level Radioactive Waste
LTP	Lifetime Plan
NDA	Nuclear Decommissioning Authority
NSC	Nuclear Safety Committee
NSEC	Nuclear Safety and Environment Council
ONR	Office for Nuclear Regulation
SAP	Safety Assessment Principle(s)
SEPA	Scottish Environment Protection Agency
SQEP	Suitably Qualified and Experienced Person
TAG	Technical Assessment Guide(s) (ONR)

OFFICIAL

OFFICIAL

TABLE OF CONTENTS

1	PERMISSION REQUESTED	7
2	BACKGROUND	7
3	ASSESSMENT AND INSPECTION WORK CARRIED OUT BY ONR IN CONSIDERATION OF THIS REQUEST	8
4	MATTERS ARISING FROM ONR'S WORK.....	9
5	CONCLUSIONS	9
6	RECOMMENDATIONS.....	9
7	REFERENCES	10

OFFICIAL

1 PERMISSION REQUESTED

1. Magnox Limited, the Licensee for the Chapelcross and Hunterston A nuclear sites, has proposed to change the LC35 decommissioning programmes for these two sites to align them with Scottish Higher Activity Waste (HAW) policy (Ref. 1).
2. As required under its arrangements for complying with Licence Condition 35(2), the licensee has requested ONR's Agreement to these changes through the use of derived powers (Ref. 2, 3).

2 BACKGROUND

3. In 2011, the Scottish Government published their policy on the management of Higher Activity Radioactive Waste (HAW; in this context HAW means ILW and LLW not suitable for disposal in existing LLW facilities, explicitly excluding high level waste, such as spent nuclear fuel; Ref.4). The Scottish Government HAW policy (hereafter referred to as the HAW policy) requires that the long-term management of HAW arising in Scotland should be in near-surface facilities, located as near to the site where the waste was produced as possible. This policy does not support deep geological disposal of HAW.
4. The HAW policy represents a departure for Scottish sites from the earlier Magnox fleet-wide decommissioning strategy, comprising a period of on-site interim storage of packaged HAW, pending the availability of a GDF for final disposal (Ref.5). The Scottish Government HAW policy Implementation Strategy (Ref. 6) identifies the need to develop a new baseline decommissioning approach for Scottish sites that is compatible with the HAW policy. To achieve this, NDA have recently developed a strategy for its Scottish Magnox sites, which will be included in their next published version of the NDA strategy (Ref. 7, 8, 9).
5. The NDA baseline strategy plans for long-term storage and management of packaged HAW in on-site, near-surface, storage facilities for up to 300 years, following which any remaining HAW not suitable for alternative management will be consigned to a near-surface disposal facility in Scotland. It was highlighted within the submission and the draft NDA strategy, that the baseline strategy is a starting point for achieving compliance with the HAW policy and there is an intention to develop strategic opportunities to optimise the approach in the future.
6. This report presents ONR's consideration of the licensee's proposal to change the current decommissioning programmes for Chapelcross (Ref. 10) and Hunterston A (Ref. 11) to incorporate the NDA baseline strategy to align them with the HAW policy. The proposal is supported by a LC35 change justification report (Ref. 1) and by referenced documents.
7. The decommissioning programmes for Chapelcross and Hunterston A have previously been updated to reflect the HAW policy in high level terms (Ref. 10, 11). The current submission proposes to revise the decommissioning programmes for these sites to include the NDA baseline strategy and to make some changes to LC35 milestones for key stages of the decommissioning (Ref.1, 12, 13). Under this baseline strategy, the current plans and timescales for Care and Maintenance Preparations (C&MP) and reactor dismantling activities are unchanged. Only the subsequent long-term management of HAW arising from these activities is changed.
8. The LC35 change justification report presents the claims, arguments and evidence that the proposed change will align the decommissioning programmes with the HAW policy and that the proposed arrangements for radioactive waste management should ensure

OFFICIAL

OFFICIAL

that HAW will be managed adequately over this long period of storage with no detriment to nuclear safety.

3 ASSESSMENT AND INSPECTION WORK CARRIED OUT BY ONR IN CONSIDERATION OF THIS REQUEST

9. ONR has carried out an assessment of the licensee's proposed changes to the Chapelcross and Hunterston A decommissioning programmes to judge if the changes are consistent with the HAW policy and the licensee's arrangements meet regulatory standards and expectations. The assessment concludes that ONR can agree to the proposed changes. The conclusions are underpinned by a detailed assessment by a nuclear liabilities and radioactive waste specialist inspector (Ref. 14).

3.1 INSPECTION

10. For changes to site LC35 decommissioning programmes and milestones, the licensee's arrangements require that the changes are independently reviewed by a Suitably Qualified and Experienced Person (SQEP) reviewer and, as judged appropriate, taken to the Magnox Nuclear Safety and Environment Council (NSEC) and Nuclear Safety Committee (NSC) for advice (Ref. 15).
11. The records from the internal review process have been considered. The LC35 justification report was reviewed by an independent reviewer, and comments made were addressed appropriately (Ref. 16).
12. The minutes of the NSEC meetings held on 6-7 May 2014 and 18-19 November 2014 and the NSC meeting held on 20 January 2015 have been reviewed and are considered to provide assurance of further independent challenge to the proposal. The NSEC and NSC did not raise any objections to introducing the baseline strategy into the LC35 decommissioning programmes, although members noted the potential for optimisation of the strategy in due course (Ref. 17, 18, 19).
13. The licensee's submission is consistent with their arrangements for making changes to site LC35 decommissioning programmes and milestones (Ref. 15).
14. ONR is satisfied that the licensee has appropriate plans to deliver against the commitment identified in the submission to update relevant documents to reflect the changes to the site decommissioning programmes, including the following:
- Magnox Integrated Decommissioning and Waste Management Strategy (S-036)
 - Chapelcross and Hunterston A Lifetime plans
 - Chapelcross and Hunterston A regulatory schedules

3.2 ASSESSMENT

15. For this assessment, effort has been concentrated on assessing two aspects of the proposed changes. Whether the proposed changes achieve appropriate alignment and consistency between the LC35 decommissioning programmes for Chapelcross and Hunterston A and the HAW policy, and that the proposed approach for the long-term storage of radioactive waste on the sites is consistent with regulatory expectations and good practice.
16. The licensee's submission was assessed by an ONR nuclear liabilities and radioactive waste specialist inspector, in line with the relevant ONR SAPs and TAG requirements (Ref. 14).

OFFICIAL

OFFICIAL

17. The ONR specialist inspector assessed the LC35 change justification report and sampled relevant documents (Ref. 14). The conclusion of this assessment was that the presented claims, arguments and evidence provided sufficient support for the proposed changes to the LC35 decommissioning programmes for Chapelcross and Hunterston A.
18. The ONR specialist assessment did not identify any issues or observations that should preclude the licensee implementing the proposed changes to the LC35 decommissioning programmes for Chapelcross and Hunterston A.
19. The Scottish Environment Protection Agency (SEPA) have independently assessed the proposal and have no objections from their perspective (Ref. 20).

4 MATTERS ARISING FROM ONR'S WORK

20. There are no unresolved issues remaining from ONR's assessment and inspection work.

5 CONCLUSIONS

21. This report presents the findings of ONR's assessment of Magnox Ltd's request for Agreement, under derived powers, to change the LC35 decommissioning programmes for Chapelcross and Hunterston A to align them with the Scottish Government HAW policy.
22. ONR is satisfied with the claims, arguments and evidence provided in the LC35 change justification report, titled "LC35 change justification Scottish sites long-term storage strategy" and related documentation and other evidence provided through engagement with the licensee. On the basis of this assessment, ONR Agreement can be granted to the licensee's proposal to change the LC35 decommissioning programmes for Chapelcross and Hunterston A, as proposed.

6 RECOMMENDATIONS

23. The project assessment report recommends that the Superintending Inspector for the Magnox and Restoration sites sub-programme:
 - Signs Licence Instrument 536 granting ONR Agreement to change the LC35 decommissioning programme for Chapelcross, as proposed.
 - Signs Licence Instrument 522 granting ONR Agreement to change the LC35 decommissioning programme for Hunterston A, as proposed.

OFFICIAL

OFFICIAL

7 REFERENCES

1. LC35 change justification Scottish sites long-term storage strategy (M/WF/GEN/REP/0003/15) Issue 1, September 2015 (TRIM: 2015/425885)
2. Letter from Chapelcross requesting agreement to changes to Licence Condition 35 decommissioning programme as described in M/WF/GEN/REP/0003/15 (CX50541R) (TRIM: 2015/425882)
3. Letter from Hunterston A requesting agreement to changes to Licence Condition 35 decommissioning programme as described in M/WF/GEN/REP/0003/15 (HNA 51176R) (TRIM: 2015/425883)
4. Scotland's Higher Activity Radioactive Waste policy, 2011 (TRIM: 2015/426050). Policy statement at: www.gov.scot/Topics/Environment/waste-and-pollution/Waste-1/16293/higheractivitywastepolicy/detailedpolicystatement
5. Magnox plan summary – Magnox lifetime plan 2013 (<https://magnoxsites.com/wp-content/uploads/2014/02/Magnox-Plan-Summary-2013.pdf>)
6. Scottish Government consultation on an implementation strategy for Scotland's policy on higher activity radioactive waste (TRIM: 2015/436310)
7. Magnox - Proposed baseline strategy for NDA sites in Scotland for storage of higher activity waste (HAW) - Long term plan, November 2013 (TRIM: 2015/438160)
8. NDA strategy for the long term management of higher activity waste arising at Magnox sites in Scotland. The strategic case (Gate 0), Issue 1, March 2014 (TRIM: 2015/444326)
9. NDA Draft Strategy, September 2015 (www.nda.gov.uk/publication/draft-strategy-early-version/)
10. Chapelcross: LC35 decommissioning programme, Issue 6, July 2014 (DWSD02) (TRIM: 2015/444314)
11. Hunterston A: LC35 decommissioning programme, Issue 10, August 2014 (HNA/1000/MA/PRG/160) (TRIM: 2015/444317)
12. Chapelcross: LC35 decommissioning programme, Issue 7, October 2015 (DWSD02) (TRIM: 2015/426674)
13. Hunterston A: LC35 decommissioning programme, Issue 11, October 2015 (HNA/1000/MA/PRG/160) (TRIM: 2015/426658)
14. Assessment Report on the Proposed Changes to the LC35 Decommissioning Programmes for Chapelcross and Hunterston A (TRIM: 2015/473866)
15. Magnox Company Management Control Procedure (MCP035) Decommissioning arrangements for nuclear site Licence Condition 35(2), Issue 2, November 2014 (TRIM: 2015/425887)
16. Verification plan (TRIM: 2015/468151) and Verification statement for independent review (TRIM: 2015/468146)
17. Magnox Nuclear Safety and Environment Council (NSEC), Meeting 6-7 May 2014 (TRIM: 2015/448172)

OFFICIAL

OFFICIAL

18. Magnox Nuclear Safety and Environment Council (NSEC), Meeting 18-19 November 2014 (TRIM: 2015/448174)
19. Magnox Nuclear Safety Committee (NSC), meeting 20 January 2015 (TRIM: 2015/448187)
20. Statement of SEPA agreement to the proposed changes to the decommissioning programmes at Chapelcross and Hunterston A (TRIM: 2016/9357)

OFFICIAL