

Project Assessment Report ONR-SEL-PAR-15-011
Revision 0B
29 February 2016

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Published 06/2016

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EXECUTIVE SUMMARY

Title

Withdrawal and Continued Enforcement of Historical Specifications and Approvals

Permission Requested

The Office for Nuclear Regulation (ONR) has carried out a review of a number of historical Licence Instruments (LI) which placed Specifications and granted Approvals under the site licences for the Sellafield (Windscale Works and Calder Works) or Windscale sites. This includes three historical Specifications that Sellafield Ltd has specifically requested that ONR reviews.

Background

ONR has carried out a review of relevant historical Specifications and Approvals that have the potential for on-going requirements.

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

Each of the historical Specifications and Approvals has been considered, incorporating specialist assessment or advice where this is relevant to the need for continued enforcement or potential removal of the requirement.

In some cases, the requirements of a Specification are no longer required by ONR. No mechanism is available to modify, revise or withdraw (either wholly or in part) a Specification. Therefore, to effectively remove the requirements, ONR needs to record its regulatory decision not to enforce, for the time being, compliance against the Specification and communicate this decision to the licensee together with advice that the position will be kept under review.

Where the requirements of an Approval are no longer required by ONR, the Approval can be withdrawn by a licence instrument issued under licence condition 1(3).

Matters arising from ONR's work

I have recommended a course of action (retention of the extant Specification or Approval, Withdrawal of an Approval or a decision to no longer enforce a Specification) in each case. I have prepared the appropriate letters and licence instruments to implement the recommendations made in Section 3.

Conclusions

I conclude that ONR needs to take action to address a number of historical LIs which placed Specifications or granted Approvals under the site licence for the Sellafield Site. I have recommended course of action in each case and drafted a Withdrawal and a regulatory letter to the licensee.

In particular, I consider that two Specifications that place additional requirements on the licensee are no longer needed. This is because there have been improvements in the licensee's arrangements and our regulatory confidence in the period since they were issued. In line with specialist advice in the relevant technical areas, I recommend that, in the interests of improving efficiency and assisting with the ONR Sellafield Programme Strategy to remove unnecessary distractions and diversions away from the strategic objective of hazard and risk reduction at the Sellafield Site, the requirements of these Specifications should be suspended.

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Recommendations

Recommendation 1: I recommend that ONR writes to Sellafield Limited to confirm that ONR no longer requires it to comply with the requirements of Specification LI 165 issued under site licence 31E and that no enforcement action will be taken under LI 165 until further notice.

Recommendation 2: I recommend that ONR writes to Sellafield Limited to confirm that ONR no longer requires it to comply with the requirements of Specification LI 306 issued under site licence 31F and that no enforcement action will be taken under LI 306 until further notice.

Recommendation 3: I recommend that Specification LI 611 issued under site licence 31G should remain in force and ONR should continue to enforce the requirements of this licence instrument. I recommend that ONR writes to Sellafield Limited in response to its request for a review of this Specification to confirm that it remains in force.

Recommendation 4: I recommend that Approval No. 4 granted under site licence 31 and Approval No. 42 granted under site licence 31B should be withdrawn by licence instrument.

Recommendation 5: I recommend that Approval No. 49 granted under site licence 31B should remain in force and ONR should continue to enforce the requirements of this licence instrument.

Recommendation 6: I recommend that Approval Nos. 2, 10, 12 and 54 granted under site licence 31F should be withdrawn by licence instrument.

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LIST OF ABBREVIATIONS

EU	European Union
HASS	High Activity Radioactive Sealed Sources and Orphan Sources (Regulations)
LC	Licence Condition
LI	Licence Instrument
mSv	millisievert
ONR	Office for Nuclear Regulation
OR	Operating Rule
PAR	Project Assessment Report
RP	Radiological Protection
SL	Sellafield Ltd
TRIM	ONR's Document Management System

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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.....	11
5	CONCLUSIONS	11
6	RECOMMENDATIONS.....	11
7	REFERENCES	13

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1 PERMISSION REQUESTED

1. The Office for Nuclear Regulation (ONR) has carried out a review of a number of historical Licence Instruments (LI) which either placed Specifications or granted Approvals under the site licences for the Sellafield (Windscale Works and Calder Works) or the Windscale site. This includes three historical Specifications that Sellafield Ltd (SL) has specifically requested that ONR reviews.

2 BACKGROUND

2. In response to the licensee's request, ONR has carried out a review of all historical Specifications relating to the Sellafield site (across eight site licences; 31-31G) and Windscale site (across four site licences; 83 and 46-46B) that have the potential for on-going requirements. In addition a review of historical Approvals was carried out by examining the Approvals either granted under or carried over into the current sites licences. This work (Refs. 1 and 2) was begun by the Sellafield Programme Assurance function as part of assurance activities carried out in support of Programme Assurance Theme 4 (Regulatory Effectiveness and Reporting) Topic 4.LP (Licensing and Permissioning). The reviews enabled ONR to compile a master spreadsheet of LIs issued under the licences associated with the sites (Ref. 3), containing TRIM links to issued LIs where available.

2.1 Historical Specifications

3. The review of historical Specifications with the potential for on-going requirements established that the majority are one-off Licence Condition (LC) 30 (Periodic Shutdown) Specifications, Specifications for the submission of documents for Approval, or have already been the subject of letters from ONR stating that it will no longer enforce compliance against them. However, the review identified three Specifications with on-going requirements that remain in force. These all relate to the Sellafield site (licences 31E, 31F and 31G) and are the same three Specifications for which SL has requested ONR review.
 - LI 165 issued in December 1992 under site licence 31E condition 18(1) (and the same condition under the current licence 31G) – Annual dose notification level of 5 mSv;
 - LI 306 issued in January 2000 under site licence 31F condition 29(1) (and the same condition under the current licence 31G) – Annual civil and structural inspection report of the B*** Medium Active Liquor Tank Farm;
 - LI 611 issued in October 2006 under site licence 31G condition 25(4) (and the same condition under the current licence 31G) – Records of material subject to High Activity Radioactive Sealed Sources and Orphan Sources (HASS) Regulations.

2.2 Historical Approvals

4. The review of historical Approvals established that there are nine historical Approvals carried forward from earlier site licences for which corresponding withdrawals cannot be found and for which there has been no recent consideration of their on-going applicability:
 - Approval No. 4 granted in April 1972 under site licence 31 condition 46 (now under condition 4(3)¹ of site licence 31G) – Storage of fissile material;

¹ Note that Schedule 2 of Site Licence 31G states 4(2) apparently in error.

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- Approval No. 42 granted in March 1985 under site licence 31B condition 36(1) (now under condition 4(4) of site licence 31G) – Storage of natural uranium Mk IV fuel in Calder Hall fuel element stores;
- Approval No. 49 granted in June 1985 under site licence 31B condition 36(1) (now under condition 4(4) of site licence 31G) – Arrangements to use Calder fuel element preparation rooms as fuel element stores;
- Approval No. 21 granted in December 1991 under site licence 31E under condition 6(2) (and the same condition under the current licence 31G) – Documents, records, authorities and certificates;
- Approval No. 2 granted in June 1994 under site licence 31F under condition 23(5) (and the same condition under the current licence 31G) – Amendment to Calder Hall operating rule 3.7;
- Approval No.10 granted in December 1994 under site licence 31F under condition 23(5) (and the same condition under the current licence 31G) – Review of Calder Hall operating rule 7;
- Approval No. 12 granted in December 1994 under site licence 31F under condition 23(5) (and the same condition under the current licence 31G) – Calder Hall amendment to operating rule 4;
- Approval No. 54 granted in March 1999 under site licence 31F under condition 23(5) (and the same condition under the current licence 31G) – Approves the change to operating rule 2.

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

5. ONR has reviewed the outstanding Specifications and Approvals identified in Section 2 (as detailed in sub-sections 3.1 to 3.5 below) with the exception of Approval No. 21 which will be progressed separately and is therefore outside the scope of this Project Assessment Report (PAR).
6. In some cases, the requirements of a Specification are no longer required by ONR. No formal mechanism is currently available to modify, revise or withdraw (either wholly or in part) a Specification. Therefore, to effectively suspend the requirements of a Specification, ONR needs to make and record to its regulatory decision that it does not intend to enforce compliance for the time being and to communicate this decision to the licensee. This approach was discussed and endorsed by the ONR Sellafield Programme Board and ONR Legal Liaison. This PAR recommends wording for the letter to the licensee based on that utilised in a recent, similar decision (Ref. 4). This has been discussed and agreed with the ONR Legal Liaison.
7. Where the requirements of an Approval are no longer required by ONR, the Approval can be withdrawn by a licence instrument issued under licence condition 1(3).

3.1 Specification LI 165 issued under site licence 31E – Annual dose notification level of 5 mSv

8. This Specification was placed in 1992 and requires the licensee to notify ONR should the average effective dose equivalent (including any committed effective dose) exceed 5 mSv for any class of person specified in the licensee's arrangements.

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9. I have discussed the on-going requirement for this Specification with an ONR Radiological Protection (RP) Specialist Inspector (Ref. 5), who is of the opinion that the dose notification requirement imposed by LI 165 is no longer required. This view is supported by the wider RP specialist discipline and the RP professional lead (Ref. 6).
10. The Radiological Protection Specialist Inspector has advised that the licensee already has adequate arrangements in place for assessing and recording exposures (including average effective dose equivalents) made to comply with the requirements of LC18 and the Ionising Radiation Regulations 1999. The specialist inspector also notes that SL provides its annual Radiological Protection Report, containing occupational doses, to ONR upon request.
11. Given the advice from the Radiological Protection Specialist Inspector, I consider that ONR has sufficient visibility of the radiological exposures occurring at the Sellafield site through the existing arrangements. I judge that the additional administrative requirement imposed by this Specification no longer add any regulatory value.
12. I therefore believe that, in the interests of improving efficiency and assisting with the ONR Sellafield Programme Strategy to remove unnecessary distractions and diversions away from the strategic objective of hazard and risk reduction at the Sellafield Site, the requirements of LI 165 should be suspended.

Recommendation 1: I recommend that ONR writes to Sellafield Limited to confirm that ONR no longer requires it to comply with the requirements of Specification LI 165 issued under site licence 31E and that no enforcement action will be taken under LI 165 until further notice.

3.2 Specification LI 306 issued under site licence 31F – Annual civil and structural inspection report of the B* Medium Active Liquor Tank Farm**

13. This Specification was placed in 2000 and requires the licensee to carry out a civil and structural inspection of the B*** Medium Active Liquor Tank Farm at intervals not exceeding 12 months in accordance with the licensee's arrangements for such inspections. The licensee is required to provide an initial technical review report within 28 days of each individual cell inspection as well as the results of the final review as soon as practicable.
14. The ongoing requirement for this Specification has been assessed by an ONR Civil Engineering Specialist Inspector (Ref. 7). The Assessment Report notes that, since the Specification was issued, the licensee has established a programme of acoustic monitoring, precise level monitoring, asset inspection and coupon viewing to supplement the video monitoring that was originally required. The Civil Engineering Specialist Inspector is content that, given our confidence in the adequacy of the current monitoring regime, the ongoing requirements of the Specification are no longer needed.
15. Given the advice from the Civil Engineering Specialist Inspector I consider that ONR has sufficient confidence in the adequacy of the current monitoring regime associated with the B*** Medium Active Liquor Tank Farm to the extent that the requirements of this Specification no longer add any regulatory value.
16. I therefore believe that, in the interests of improving efficiency and assisting with the ONR Sellafield Programme Strategy to remove unnecessary distractions and diversions away from the strategic objective of hazard and risk reduction at the Sellafield Site, the requirements of LI 306 should be suspended.

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Recommendation 2: I recommend that ONR writes to Sellafield Limited to confirm that ONR no longer requires it to comply with the requirements of Specification LI 306 issued under site licence 31F and that no enforcement action will be taken under LI 306 until further notice.

3.3 Specification LI 611 issued under site licence 31G – Records of material subject to High Activity Radioactive Sealed Sources and Orphan Sources Regulations

17. This specification was placed in 2006 and requires the licensee to provide records of radioactive material subject to the HASS regulations which is brought onto site, held on site or consigned off site.
18. I have discussed the on-going requirement for this Specification with an ONR Radiological Protection Specialist Inspector (Ref. 5) who is of the opinion that the HASS notification requirement imposed by LI 611 remains necessary and that the Specification should continue to be observed by the licensee and enforced by ONR. This is because it implements the requirements of the European Union (EU) HASS Directive (2003/122/Euratom; EU HASS) and is required in order for the UK to meet the requirements of the directive on nuclear licensed sites.

Recommendation 3: I recommend that Specification LI 611 issued under site licence 31G should remain in force and ONR should continue to enforce the requirements of this licence instrument. I recommend that ONR writes to Sellafield Limited in response to its request for a review of this Specification to confirm that it remains in force.

3.4 Approval No. 4 granted under site licence 31 and Approval Nos. 42 and 49 granted under site licence 31B – relating to the storage of fuel at Calder Hall

19. Approval No. 4 was granted in 1972 and approves the licensee's arrangements for the storage of specified limited quantities of fissile material at the Calder Hall Fuel Element Store. Approval No. 42 was granted in 1985 and approves the arrangements for the storage of up to 130 tonnes of natural uranium Mk IV fuel in the Calder Hall Fuel Element Store. SL has confirmed (Ref. 8) that the activities covered by Approval No. 4 and Approval No. 42 no longer take place. The Calder Hall Fuel Element Store itself no longer exists and this has been confirmed by the Site Inspector following a separate enquiry with the licensee (Ref. 9). On this basis, I consider that these Approvals should be withdrawn.

Recommendation 4: I recommend that Approval No. 4 granted under site licence 31 and Approval No. 42 granted under site licence 31B should be withdrawn by licence instrument.

20. Approval No. 49 was granted in 1985 and approves the licensee's arrangements to use the Calder Hall Fuel Element Preparation Rooms as fuel element stores. SL has confirmed (Ref. 8) that the Calder Hall Fuel Element Preparation Room at one of the Calder Hall Reactors continues to be used to store a number of unirradiated fuel elements. I therefore recommend that Approval No. 49 should remain in force for the time being.

Recommendation 5: I recommend that Approval No. 49 granted under site licence 31B should remain in force and ONR should continue to enforce the requirements of this licence instrument.

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3.5 Approval Nos. 2, 10, 12 and 54 granted under site licence 31F – Calder Hall Operating Rules

21. Approval Nos. 2, 10, 12 and 54 were granted from 1994-1999 and approve amendments to the Calder Hall reactor operating rules (OR).
22. The Calder Hall reactors were shut down on 31 March 2003 and these ORs ceased to be required. In September 2003, therefore, ONR issued Withdrawal No. 1. This withdrew all of the Approvals granted under site licences 31E and 31F relating to OR amendments although four early Approvals appear to have been overlooked: Nos. 2, 10, 12 and 54.
23. Approval Nos. 2, 10, 12 and 54 are no longer relevant but have not been formally withdrawn. In order to avoid any ambiguity and to be consistent in the approach taken by ONR in formally withdrawing other ORs that are no longer required, I recommend that the Approvals are similarly withdrawn by LI.

Recommendation 6: I recommend that Approval Nos. 2, 10, 12 and 54 granted under site licence 31F should be withdrawn by licence instrument.

4 MATTERS ARISING FROM ONR'S WORK

24. I have reviewed a number of historical Specifications and Approvals that remain legally in force and suggested a course of action in each case. I recommend that some of the licence instruments should remain in force whilst some should either be formally withdrawn (in the case of some historical Approvals of activities that no longer take place) or that ONR writes to the licensee confirming that it will not be enforcing the requirement (in the case of a historical Specification) until further notice.
25. I have prepared the appropriate letter (unique number SEL77573N) and licence instruments (LIs 895, 897, 898, 899, 900 and 901) to implement my recommendations.

5 CONCLUSIONS

26. I conclude that ONR needs to take action to address a number of historical LIs which placed Specifications or granted Approvals under the site licence for the Sellafield Site. I have recommended course of action in each case.
27. In particular, I consider that two Specifications that place additional requirements on the licensee are no longer needed. This is because there have been improvements in the licensee's arrangements and our regulatory confidence in the period since they were issued. In line with specialist advice in the relevant technical areas, I recommend that, in the interests of improving efficiency and assisting with the ONR Sellafield Programme Strategy to remove unnecessary distractions and diversions away from the strategic objective of hazard and risk reduction at the Sellafield Site, the requirements of these Specifications should be suspended.

6 RECOMMENDATIONS

28. This PAR makes the following recommendations
 - **Recommendation 1:** I recommend that ONR writes to Sellafield Limited to confirm that ONR no longer requires it to comply with the requirements of Specification LI 165 issued under site licence 31E and that no enforcement action will be taken under LI 165 until further notice.

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- **Recommendation 2:** I recommend that ONR writes to Sellafield Limited to confirm that ONR no longer requires it to comply with the requirements of Specification LI 306 issued under site licence 31F and that no enforcement action will be taken under LI 306 until further notice.
- **Recommendation 3:** I recommend that Specification LI 611 issued under site licence 31G should remain in force and ONR should continue to enforce the requirements of this licence instrument. I recommend that ONR writes to Sellafield Limited in response to its request for a review of this Specification to confirm that it remains in force.
- **Recommendation 4:** I recommend that Approval No. 4 granted under site licence 31 and Approval No. 42 granted under site licence 31B should be withdrawn by licence instrument.
- **Recommendation 5:** I recommend that Approval No. 49 granted under site licence 31B should remain in force and ONR should continue to enforce the requirements of this licence instrument.
- **Recommendation 6:** I recommend that Approval Nos. 2, 10, 12 and 54 granted under site licence 31F should be withdrawn by licence instrument.

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7 REFERENCES

- 1 Historical Review of Approvals. Sellafield Programme Assurance. [REDACTED] May 2015. TRIM 2015/138044.
- 2 Historical Review of Specifications. Sellafield Programme Assurance [REDACTED]. May 2015. TRIM 2015/193384.
- 3 Historical Licence Instruments Spreadsheet. August 2015. TRIM 2015/90141 Revision 143.
- 4 Sellafield Limited's Request for Removal of the Requirements Placed on [REDACTED] by Specification Licence Instrument 527. ONR-SEL-PAR-14-011 Rev 0. [REDACTED] 7 October 2014. TRIM 2014/362763.
- 5 Email from [REDACTED] RE: Historical Lis. 23 July 2015. TRIM 2015/311905.
- 6 Email from [REDACTED] with approval trail from professional lead. 28 January 2016. TRIM 2016/39329.
- 7 ONR Assessment Report. Civil Engineering Review of the Licence Instrument No. 306. ONR-SEL-AR-15-004 Rev 0. [REDACTED] 25 September 2015. TRIM 2015/366232.
- 8 Email from [REDACTED] (SL) to ONR. RE: Licence Instrument Review. 6 August 2015. TRIM 2015/311558.
- 9 Email from [REDACTED] to [REDACTED]. RE: Licence Instrument Review. 8 December 2015. TRIM 2016/35080.