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**Sellafield Intermediate Level Waste (ILW) Specifications Review
Consideration of the Continued Regulatory Approach for the ILW Specifications**

Project Assessment Report ONR-SEL- PAR-14-021
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EXECUTIVE SUMMARY

Title

A recommendation on the continued regulatory appropriateness of the extant Specifications related to the control of intermediate level radioactive waste (ILW) on the Sellafield site.

Permission Requested

No permission request is being considered. This report examines the continued appropriateness of the extant Specifications LI 324, 325 and 326 related to the control of intermediate level waste on the Sellafield site and makes a recommendation regarding their suitability for continued use in the Office for Nuclear Regulation's (ONR) strategy for the regulation of Sellafield Ltd (SL).

Background

In 2000, the Nuclear Installations Inspectorate (NII), the nuclear regulator and predecessor of ONR, issued Specifications (LI324, 325 and 326) to address significant concerns regarding the management of ILW stored in several locations on the Sellafield site.

In 2009 and again in 2010, NII decided that enforcement action was not appropriate when requirements within Specification LI 325 were breached. In 2011, ONR recognised the inherent inflexibility associated with the use of Specifications to control complex, novel and long duration decommissioning projects and approved SL's arrangements under Licence Condition 35 for the control of key decommissioning programmes.

In February 2014, ONR, whilst continuing to have significant concerns regarding SL's lack of progress in delivering risk and hazard reduction programmes to address the risks associated with legacy facilities on the Sellafield site, implemented a new regulatory strategy. Key aspects of this strategy are the stimulation and facilitation of hazard and risk reduction through accelerated recovery and remediation of the legacy wastes. An important aspect of the new regulatory strategy is the removal of 'diversions and distractions', e.g. activities that consume SL resource but do not support hazard and risk reduction activities and frequently are bureaucratic in nature.

Assessment and inspection work carried out by ONR

Since their issue in 2000, the continued regulatory appropriateness and effectiveness of the ILW Specifications against the changing regulatory landscape has been examined on several occasions. The new regulatory strategy for Sellafield and the recognition by all key stakeholders that acceleration of hazard and risk reduction at the site is a national priority and that the regulatory environment must be appropriate has provided the context and impetus for this review.

In the course of my assessment of the continued relevance of the ILW Specifications, I have examined the rationale used to justify the issue of the Specifications and the arguments used during previous reviews for their continuation. I have given particular consideration to the contribution of the new strategy for Sellafield, the national priority status and the unprecedented alignment of key stakeholders to the context within which the Specifications should be assessed.

ONR has introduced initiatives to ensure the effectiveness of its regulatory activities. Specifically this includes formalisation of a monthly regulatory interface meeting attended by senior ONR inspectors and introduction of a hold point control plan to track progress of SL activities and projects.

Matters arising from ONR's work

ONR's regulatory strategy for the Sellafield site focuses on stimulating, facilitating and expediting hazard and risk reduction, whilst ensuring that our regulatory approach is

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appropriately targeted, risk-based, proportionate and effective. It is my opinion that the extant ILW Specifications have little relevance to the current environment within which work at Sellafield is being progressed and regulated, imposing an unnecessary layer of bureaucracy.

The continued use of these Specifications does not provide any additional regulatory control over and above that which is available by other, more targetable and proportionate means.

Conclusions

Removal of the requirements placed on Sellafield by Specifications LI324, 325 and 326 will support the ONR's Sellafield regulatory strategy in enabling efficient delivery of hazard and risk reduction. There are now a number of regulatory tools and engagements available to maintain regulatory influence and confidence in these areas, such as, compliance against licence condition arrangements, the G6 Forum, and permissioning through the Level 3 Regulatory Interface Meeting.

Recommendation

I recommend that the requirements on Sellafield Ltd associated with extant Specifications LI324, 325 and 326 concerning the management of ILW are removed and that ONR writes to SL to confirm that ONR no longer expects the licensee to comply with the requirements of these Specifications and that no enforcement action will be taken as a result of non-compliance from the date of that letter.

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LIST OF ABBREVIATIONS

ALARP	As low as reasonably practicable
BSL	Basic Safety level (in SAPs)
BSO	Basic Safety Objective (in SAPs)
CNS	Civil Nuclear Security (ONR)
COSR	Continued Operation Safety Report
DCI	Deputy Chief Inspector
FGMSP	First Generation Magnox Storage Pond
HOW2	(Office for Nuclear Regulation) Business Management System
HR	Human Resources
HSE	The Health and Safety Executive
IAEA	The International Atomic Energy Agency
ILW	Intermediate Level Waste
KDM	Key Decommissioning Milestones
LP&S	Legacy Ponds & Silos
MSSS	Magnox Swarf Storage Silo
NDA	Nuclear Decommissioning Authority
NII	Nuclear Installations Inspectorate (now ONR)
OJEU	Official Journal of the European Union
ONR	Office for Nuclear Regulation
PAR	Project Assessment Report
PCER	Pre-construction Environment Report
PCSR	Pre-construction Safety Report
PCM	Plutonium Contaminated Material
PFCS	Pile Fuel Cladding Silo
PFSP	Pile Fuel Storage Pond
PSA	Probabilistic Safety Assessment
PSR	Preliminary Safety Report
RESPS	Redundant Effluent Sludge Pipework System
RGP	Relevant Good Practice
SAP	Safety Assessment Principle(s)
SFAIRP	So far as is reasonably practicable
ShEx	Shareholder Executive (part of the Business, Innovation and Skills Gov. Dept.)
SL	Sellafield Limited
SSC	Structure, System and Component
TAG	Technical Assessment Guide (ONR)

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1 PERMISSION REQUESTED

1. No permission request is being considered. This report examines the continued appropriateness of the extant Specifications LI 324, 325 and 326 and related to the control of intermediate level waste on the Sellafield site and makes a recommendation regarding their suitability for continued use in the Office for Nuclear Regulation's (ONR) strategy for the regulation of Sellafield Ltd (SL).

2 BACKGROUND

2. In December 2013, the ONR board were concerned with a lack of progress relating to risk and hazard reduction at the Sellafield site and it commissioned the development of a new regulatory strategy for Sellafield with a focus on stimulating, facilitating and expediting Hazard and Risk Reduction.
3. The new regulatory strategy (February 2014, Ref.3), which was accepted by the ONR board, highlighted a number of strategic improvement themes which would provide the means for stimulating, facilitating and expediting Hazard and Risk Reduction.
4. One of the strategic improvement themes is 'Removal of distractions and diversions', and as part of this strategic improvement theme a review of extant specifications is being carried out to ensure they remain suitable regulatory tools. To date review of LI524 on the Active Handling Facility has been completed (October 2014, Ref. 4) and an appropriate way forward identified.
5. In 2000 NII (Nuclear Installations Inspectorate, as is now ONR) issued a number of specifications relating to ILW being stored in specific locations on the Sellafield site. At the time the specifications were issued, NII had significant concerns regarding the management of radioactive waste at Sellafield. A review by NII in 1999 revealed that there had been significant slippages in programme targets and that the situation was unlikely to improve.
6. As detailed in the Inspection Branch Report, 'Achieving Improvement to Ensure Future ILW Safety at Sellafield', (4th August 2000, Ref. 1), it was NII's opinion that the situation was unacceptable, as waste accumulations were continuing to be added to without significant reductions being made to legacy wastes. NII decided that regulatory intervention was necessary in order to secure improvements, and derived a regulatory methodology related to issuing Specifications against Licence Condition 32(4) and 32(5).
7. Three specifications were issued (4th August 2000, Ref. 2);
 - Two of the LI's were targeted at improving ILW containment in the medium term; LI324 (Ref. 5) covered PCM, and the contents of the Pile Fuel Cladding Silo (PFCS) and Medium Active Solid Waste Storage Cells. LI325 (Ref. 6) covered the recovery of 90% of the total sludge volume in Pile Fuel Storage Pond (PFSP) and First Generation Magnox Storage Pond (FGMSP) to safer storage conditions.
 - The third, LI326 (Ref. 7) was to be an overarching specification to ensure that a safe passive form for ILW was achieved. This specified that 80% of the total volume of all ILW sludge originating from operations prior to 1st August 2000 and 90% of the total volume of all PCM originating from operations prior to 1st August 2000 be in a safe, passive form by August 2020.

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8. This PAR will look to provide clarity on the status of the ILW specifications within the current regulatory strategy and reflecting SL risk and hazard priorities.

3 ASSESSMENT AND INSPECTION WORK CARRIED OUT BY ONR

9. The specifications were issued 15 years ago and a number of significant interactions have taken place, I have pulled together a timeline of these interactions and attached this as annex 1 to this project assessment report for completeness.
10. The key ONR assessments that took place in 2009 and 2010 were to address the breaches associated with LI325, and it is these regulatory decisions which provide the basis for this review of the ILW specifications.
11. In August 2009 the first Specification date was breached relating to Specification 325(a) 'at least 90% of the total volume of potentially mobile ILW which has been accumulated as sludge in B** ponds shall be stored as a sludge/slurry form within modern standards stainless steel containment by 1 August 2009'.
12. No action was taken until the specification date was breached. At this point SL provided reasoning for why the requirement of the Specification hadn't been complied with and the work that had been completed to prepare for retrievals from the facility. ONR reviewed this evidence and considered our regulatory position against the enforcement management model (EMM).
13. Assessments carried out by ONR incorporated the following;
 - September 2009, 'Further Consideration of Failure of SL to Meet Specification 325(a)', (Ref. 13). This assessment concluded that based upon the information provided from SL, on the commitment of SL, NDA and ministers regarding remediation of LP&S facilities that ONR did not believe it was proportionate and in the public interest to prosecute SL.
 - Taking into account this assessment the final management decision was made, (Ref. 15) that HSE would not prosecute, and that would need to be backed by a clear, credible and transparent regulatory strategy. This strategy was defined in the management decision paper (Ref. 15) and included using an appropriate regulatory tool that would give NII control and required flexibility – namely LC35 – and the identification of Key Decommissioning Milestones (KDMs) for 'National Priority' facilities.
14. In March 2010, ONR reviewed the options available relating the Specifications, 'Consideration of Way Forward on ILW Specifications', (Ref. 16). This assessment considered superseding the Specifications, removal of the Specifications and leaving the Specifications in place. It concluded that the Specifications should remain in place as a benchmark for the licensee to achieve and as evidence of poor performance / legal compliance. It also acknowledged that a new approach of utilising LC35 arrangements be pursued as a tool which would provide the appropriate flexibility for monitoring risk and reduction progress.
15. In August 2010 the second Specification date was breached relating to Specification 325(b) 'at least 90% of the total volume of potentially mobile ILW which has been accumulated as sludge in B** pond within modern standards stainless steel containment by 1 August 2010'.

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16. The regulatory decision (Ref. 17) was that punitive action not be taken, based upon considering the evidence (work SL has delivered since the Specification was issued in preparing a degraded facility for retrievals) and whether it would be in the public interest (taking into account that the LP&S facilities are now considered national priority to remediate and have ministerial oversight).
17. At the time of these assessments the priority for legacy facilities and new ways of working, such as amendments to the LC35 arrangements and special arrangements for delivering accelerated risk and hazard reduction for FGMSP were starting to have traction. However, these were fairly new initiatives and until their longevity and development had been proven NII wanted to keep the ILW specifications in place.

4 MATTERS ARISING FROM ONR'S WORK

18. For this review I have considered the regulatory decisions that have been made (detailed in section 3 of this report), the current regulatory strategy for Sellafield, the national priority status of remediation of the legacy facilities, validity of the remaining specification dates, the SL arrangements in place which allow monitoring and control of key decommissioning milestones dates and our legal powers.
19. The Specifications have had both a positive and negative impact. From a positive perspective they provided early focus on the areas of most concern at the Sellafield site. However, the specifications prioritised mobile ILW which diverted SL from considering the wider risk and hazard reduction opportunities.
20. Previous Regulatory Decisions:
21. NII believed that leaving the Specifications in place would provide a benchmark outcome that the licensee has to achieve and as a means of us documenting evidence of poor performance.
22. This is undermined as the specification dates were not based upon underpinned mature programmes. The retrieval programmes in 2000 did not adequately reflect the risks and uncertainties in delivering the remediation programmes.
23. Currently, SL and NDA have in place programmes which reflect increasing maturity and provide a range of dates accounting for risk and uncertainty for the delivery of risk and hazard reduction.
24. The specifications are an inflexible regulatory tool for managing complex, novel decommissioning programmes that require long remediation timescales to complete.
25. The Current Regulatory Strategy:
26. In response to the ONRs' board concerns regarding delivery of high hazard and risk reduction programmes, ONR regulatory strategy for Sellafield was changed (Ref. 3). The revised strategy included the focus of stimulating, facilitating and expediting hazard and risk reduction on the Sellafield site.
27. The structure of the regulatory programme was simplified into two sub programmes. One focused on regulatory 'business as usual' (Sellafield Compliance, Intelligence and Enforcement – SCIE) and the other focused on ensuring SL are doing everything that is reasonably practicable to reduce risks and hazard on the site (Project Delivery).
28. The project delivery sub programme works to a prioritised list of risk and hazard reduction projects, prioritised on the highest hazard and risk. In regulating these projects assigned Inspectors consider what are the blockers, diversions or distractions

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associated with delivery and by encouraging fit for purpose solutions influence SL on 'safe delivery sooner'.

29. Within the first year of the new regulatory strategy we have looked to confirm via assessment that both PFCS and MSSS (Ref 21 & 22 respectively) remain intolerable facilities, which we have shared with stakeholders and this further informs our prioritisation and also theirs.
30. From ONR perspective, risk and hazard reduction at Sellafield is the number one priority and this is recognised in ONRs Annual Plan. Our programme regulatory strategy reflects this proactive regulatory approach which has supported SL to start to deliver significant risk and hazard reduction on the site, specifically in PFSP and FGMSF.
31. A key area of the strategy relates to removing diversions and distractions. Having three Specifications which all stakeholders know cannot be met is a distraction for SL and other stakeholders and doesn't align to our current regulatory strategy.
32. ONR has introduced initiatives to ensure the effectiveness of its regulatory activities. Specifically this includes formalisation of a monthly regulatory interface meeting attended by senior ONR inspectors and introduction of a hold point control plan to track progress of SL activities and projects.
33. The National Priority Status of Legacy Facilities:
34. In 2011 due to national concerns regarding the condition of legacy facilities at Sellafield the Sellafield Remediation Forum (SRF) was initiated. This forum provides ministerial oversight to delivery of risk and hazard reduction at Sellafield, (currently Baroness Verma - Parliamentary Under Secretary of State for the Department of Energy & Climate Change), and a clear recognition that remediation legacy facilities at Sellafield is a national priority.
35. All key stakeholders are also part of the G6 (SL, EA, NDA, DECC, ShEx & ONR) group, which has been developed as a key part of the revised ONR regulatory strategy. This has a collaborative approach with a common goal of 'Accelerated Risk and Hazard Reduction at Sellafield', which all stakeholders are invested in.
36. At the time the Specifications were issued this level of priority and this collaborative approach wasn't in place for risk and hazard reduction at the Sellafield site, as a result funding wasn't always available. Over time, from 2009 onwards, the focus on remediation of legacy facilities and security of the site has increased in line with the views of the regulators. It is now a very different environment in all aspects of priority, profile and funding.
37. Meeting the remaining Specification dates:
 - Specification date relating to PFCS is 1 August 2016 (324 (d)).
 - Specification date relating to MSSS is 1 August 2020 (326 (a)).
38. From our focus in these areas we are well aware that the PFCS and MSSS dates are not achievable, as retrievals are not due to start in PFCS and MSSS until 2019.
39. Once retrievals do begin we are aware that it will take decades to complete and a number of uncertainties relating to the waste and the effectiveness of the retrieval

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equipment will not be fully understood until after the start of retrievals, so the specified dates related to PFCS and MSSS are no longer realistic.

40. SL arrangements in place;
41. In discussion with the regulator on an appropriate regulatory tool to monitor risk and hazard reduction progress, SL amended their LC35 arrangements. Specifically the arrangements require the identification and governance (including change control procedures and interface with the regulators and NDA), of key decommissioning milestones.
42. ONR, 'Approved' (Ref. 18 and 19) SL's LC35 arrangements for control of its key decommissioning programmes in 2011. This approval utilising primary powers ensures that SL cannot change these approved arrangements without first informing ONR.
43. Since 2011 SL have implemented these arrangements and they have become part of normal business at level 4 regulatory interface meetings. At these monthly stakeholder (NDA & EA also attend) meetings on specific programmes progress against the milestones is discussed. Any variance is escalated appropriately and we have evidence that the change control process is being adhered to. At an annual level 3 regulatory interface meeting the ONR SI 'approves' the KDMs, ensuring that they provide tangible risk and hazard reduction milestones.
44. I judge that the LC35 arrangements related to key decommissioning milestones provides a robust, unambiguous and flexible tool for us to monitor SL performance against.
45. Our legal powers:
46. The Specifications were intended as a 'line in the sand', denoting our concerns and expectations regarding the accumulation of radioactive waste on the Sellafield site. In passing the specification dates SL would be clearly in breach of the law, at which point this would allow us to consider the EMM and conclude the appropriate enforcement action associated with the breach.
47. Our legal powers are;
 - The licensee has clear duties under LC35, particularly to implement arrangements and programmes.
 - The licensee has clear duties under Section 3 of the Health and Safety at Work Act 1974 Part 1 to conduct its undertakings, so far as is reasonably practicable, to prevent risks to the health and safety of the public.
 - The licensee has clear duties under Section 2 of the Health and Safety at Work Act 1974 Part 1 to conduct its undertakings, so far as is reasonably practicable, to prevent risks to the health and safety of its employees.
 - In Section 40 of the Health and Safety at Work Act 1974 Part 1 the onus is on the licensee to prove that it is not reasonably practicable to do more than was in fact done to satisfy the duty or requirement.
48. Regardless of the ILW Specifications we have the legal powers to support any future enforcement in line with our Enforcement Management Model (EMM) and Enforcement Policy Statement.

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5 CONCLUSIONS

49. I judge, that for the three ILW Specifications, (LI324, 325 & 326) issued in June 2000, ONR removes the requirements detailed in the Specifications, and this judgement is based upon;
- The Specification dates were not derived from underpinned programmes that adequately took account of the risks. They are an inflexible tool and have skewed the licensee's efforts towards meeting the Specification rather than its wider intent of achieving significant hazard and risk reduction.
 - Our revised strategy for regulating Sellafield has been developed to influence SL to accelerate risk and hazard reduction on the site. A key aspect of the strategy is to encourage the removal of diversion and distractions to risk and hazard reduction, and I judge that the Specifications are a distraction for SL.
 - The political and regulatory environment has changed considerably since the specifications were issued. It is now clear that remediation at Sellafield is considered a national priority and that this consideration has been in place for a number of years. Key stakeholders are aligned with a common goal of accelerating risk and hazard reduction at Sellafield.
 - SL LC35 arrangements related to key decommissioning milestones provide a robust, unambiguous and flexible tool for ONR to monitor SL performance against. SL are held to account on delivery at regular level 4 and 3 regulatory interface meetings which maintains our confidence and maximises our influence.
 - The licensee, regardless of the Specifications, has clear duties under the site licence and Health and Safety at Work Act 1974 Part 1, so ONR has enforcement options available should it consider a breach has taken place.
50. As we do not currently have the ability to withdraw Specifications, I suggest that the Sellafield Programme Superintending Inspector writes to Sellafield Ltd to confirm that: ONR no longer expects the licensee to comply with the requirements of Specification LI324, 325 & 326; and that no enforcement action will be taken when the specification dates are passed.
51. I can confirm that I have taken legal advice on this approach, and that it is valid, (Ref. 23).
52. I confirm that I have made Environment Agency aware of our intentions regarding the specifications, (Ref. 24).

6 RECOMMENDATIONS

53. I recommend that the Sellafield Programme (Project Delivery) Superintending Inspector writes to Sellafield Ltd to confirm that: ONR no longer expects the licensee to comply with the requirements of Specification LI324, 325 & 326; and that no enforcement action will be taken when the specification dates are passed.
54. I recommend that ONR consider where the wording in Licence Condition 1 (3) be varied to provide the powers to withdraw a specification.

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7 REFERENCES

1. Inspection Branch Report No. 128 'Achieving Improvement to Ensure Future ILW Safety at Sellafield'. Dated 4 August 2000, TRIM 2013/394618.
2. 'Specification of Improvements for ILW with Timescales', SEL 74316N, dated 4 August 2000, TRIM 2013/394618
3. Sellafield Programme Strategy, v1.0, February 2014, TRIM 2014/141419
4. Sellafield Limited's Request for Removal of the Requirements Placed on B** by Specification Licence Instrument 524, ONR-SEL-PAR-14-011 Rev. 0, TRIM 2014/362763.
5. LI324 Specification under 32(5), SEL74309N, dated 4 August 2000, TRIM 2013/39785
6. LI325 specification under 32(4), SEL74311N, dated 4 August 2000, TRIM 2013/393876
7. LI326 Specification under 32(4), SEL74312N, dated 4 August 2000.
8. Improvement Notice I/2002/NSD/PIB001, SEL75105R, PAR 28, NIW 191/1 February 2002 'Requirements to ensure radioactive material and waste in MSSS compartments 1-12 is adequately controlled so that it cannot leak or escape and to make and implement adequate arrangements for decommissioning MSSS and to produce and implement a decommissioning programme'.
9. Improvement Notice I/2001/NSD/PIB/001, SEL74799R & SEL75375, PAR 135, NIW 191/1, 30 April 2002 'Requirements to make and implement adequate arrangements for decommissioning FGMSF and to produce and implement a decommissioning programme'.
10. HSE Project Review Report, No.187/02, December 2002 'Early Retrieval Options in Relation to B30 & B38 Improvement Notices', TRIM 2013/394658.
11. Letter from SL to HSE regarding specifications 324, 325 & 326, 29 May 2009, SEL76859R, NII/02/3734/03, TRIM 2013/395546.
12. Letter from HSE to SL regarding specification 325(a) relating to PFSP, 15 October 2009, SEL76999N, NII/09/9486/02, TRIM 2013/39765.
13. NII Assessment Report, No. 09/077 'Further Consideration of Failure of SL to Meet Specification 325 (a)', October 2009, TRIM 2009/389420.
14. NII Project Assessment Report, 09/032 'Consideration of Failure of SL to Meet Specification 325 (a)', July 2009, TRIM 2009/274683.
15. NII Management Decisions re SL's Failure to Meet Specification 325(a), 30 September 2009, TRIM 2009/385832.
16. NII Project Assessment Report, 02/2010 'Consideration of Way Forward on ILW Specifications', TRIM 2010/126280.
17. ONR Regulatory Decision 'Sellafield Ltd.'s Failure to Meet Specification 325(b)', March 2011, TRIM 2012/273736.

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18. LI791 Approval granted under LC35 (3), 27 May 2011, TRIM 2015/93077.
19. ONR Project Assessment Report 2010/105, 'Specification and Approval of SL's Arrangements for Control of its Key Decommissioning Milestone Programmes', TRIM 2011/283037.
20. ONR Sellafield Programme Assurance, Regulatory Approach Review for Specifications relating to FGMS & PFSP, 31 October 2013, TRIM 2013/400225.
21. Risks from legacy facilities on the Sellafield site, ONR-SEL-AN-14-010, June 2012, TRIM 2014/257959.
22. Risk from Sellafield Pile Fuel Cladding silo, ONR-SEL-AR-14-035, March 2015, TRIM 2015/72796.
23. E-mail from [REDACTED] to confirm that regulatory approach is acceptable from legal perspective, March 2015, TRIM 2015/108915
24. E-mail to EA to inform them of the review and conclusions, 17 March 2015, TRIM 2015/100196.

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Annex 1 – Timeline of Significant Interactions related to the ILW Specifications

The ILW specifications were issued 15 years ago and there have been a number of interactions on this topic, it is my intention in this annex to only highlight the significant interactions and assessments that have taken place which demonstrate the regulatory decision making process and changing strategies over this timeframe.

February 2002; as a result of continued concerns and 'hard evidence' that SL were not adequately preparing and planning for retrievals, an Improvement Notice (Ref. 8) was issued on MSSS related to 'Requirements to ensure radioactive material and waste in MSSS compartments 1 -12 is adequately controlled so that it cannot leak or escape and to make and implement adequate arrangements for decommissioning MSSS and to produce and implement a decommissioning programme'.

April 2002; an Improvement Notice (Ref. 9) was issued on FGMSF related to 'Requirements to make and implement adequate arrangements for decommissioning FGMSF and to produce and implement a decommissioning programme'. NII consideration of these INs is reflected in the NII PAR 'Early Retrieval Options in Relation to B** & B** Improvement Notices', (December 2002, Ref. 10).

2004; Specification 324 (a) specifies that PCM in various facilities is not accumulated except in a place and manner approved by the Executive, this was completed post the issue of an Improvement Notice (I/2004/NSD/JE1/001) in 2004.

2004; Specification 324 (b) specifies that the contents of specified stores does not accumulated except in a place and manner approved by the Executive, this was completed post the issue of an Improvement Notice (I/2004/NSD/JE1/002) in 2004.

May 2009; after a request from the NII Sellafield Programme Deputy Chief Inspector (DCI) to provide an update against progress with the specifications, SL produced a comprehensive response (May 2009, Ref 11). This response highlighted that the original plans upon which the Specifications were based were not robust and had limited underpinning, and that the progress made to date in relation to legacy ponds and silos (LP&S) had focused on improving the asset condition in preparation for future retrievals.

SL stated in the May 2009 (Ref. 11) response, that the '*Inherited Baseline 2009 in contrast to earlier plans was deliberately constructed to provide a realistic challenge with programme risk robustly applied and a high confidence of deliverability*'. The 2009 dates were step change from previously declared dates which had been aligned to the Specification dates previously.

SL articulated the main impacts on the delivery against the Specification dates, which were in summary;

- Past and Emerging Technical Issues – e.g. asset condition issues, hydrogen generation issues, variability in sludge types and lack of knowledge of the inventory.
- Project Delivery Performance – e.g. lack of appreciation at the outset of the scope and scale in remediating these facilities.
- Asset Condition – e.g. FGMSF Redundant Effluent and Sludge Pipe System (RESPS), ponds Skip Handler Machine operability and support gantry steelwork.
- Engineering Standards – e.g. SMART instrumentation substantiation, more onerous requirements placed by COSRs (Continued Operation Safety Reports) on key structures, systems and components.

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- HR Policies / funding Resource Constraints – e.g. 2004 constraints imposed by the site funding allocations and in 2008 enhanced controls resulted in protracted recruitment timescales and head count limits were set.
- Sanctioning Processes – e.g. in 2005 introduction of revised internal and external sanctioning processes started to affect contract placement, plus the requirement to publish work in the Official Journal of the European Union (OJEU) and the application of the NDA Contract terms were introduced.
- Procurement & Competition Policies – e.g. OJEU, drive for early use of the supply chain didn't work and the intelligent customer infrastructure was insufficient to support, requiring contract re-negotiations.
- Key Events – e.g. Response to the 1999 MDF event and concurrent HSE Team inspection drove more onerous requirements, MSSS Compartment 7 event resulted in local dose rates >1Sv/hr, this delayed building preparation in that area for 7 – 8 years. NII suspended permissioning (November 2007) due to concerns relating to the safe stewardship of nuclear material, which led to delay.
- Stakeholder Alignment – e.g. different stakeholders having different and often conflicting drivers, has required considerable time and effort by SL.

August 2009; the first Specification date was breached relating to Specification 325(a) 'at least 90% of the total volume of potentially mobile ILW which has been accumulated as sludge in B** ponds shall be stored as a sludge/slurry form within modern standards stainless steel containment by 1 August 2009'.

October 2009; NII wrote to SL regarding Specification 325 (a) concluding, '*...in light of the information supplied in your letter and following due process we have decided not to take punitive action against Sellafield Ltd for failing to meet Specification 325a*', (Ref. 12).

This conclusion was reached after a number of assessments were carried out by NII including;

- September 2009; NII produced a related PAR 'Further Consideration of Failure of SL to Meet Specification 325(a)', (Ref. 13). This paper stated that since the June 2009 PAR (Ref. 14) SL had provided further information regarding delivery against the specifications and specifically Pile Fuel Storage Pond and what had been achieved to enable sludge export. The PAR concludes that based upon the further information from SL, on the commitment of SL, NDA and ministers regarding remediation of LP&S facilities that this now questions whether it would be proportionate and in the public interest to prosecute SL.
- Taking these PAR's into account the final management decision was made, (Ref. 15) that HSE would not prosecute, and that would need to be backed by a clear, credible and transparent regulatory strategy. This strategy was defined in the management decision paper (Ref. 15) and included using an appropriate regulatory tool that would give NII appropriate control and required flexibility – namely LC35 – and the identification of Key Decommissioning Milestones (KDMs) for 'National Priority' facilities.

March 2010; ONR reviewed the options available relating the Specifications, 'Consideration of Way Forward on ILW Specifications', (Ref. 16). This assessment considered superseding the Specifications, removal of the Specifications and leaving the Specifications in place. It concluded that the Specifications should remain in place as a benchmark for the licensee to achieve and as evidence of poor performance / legal compliance. It also acknowledged that a new approach of utilising LC35 arrangements be pursued and that the Sellafield Remediation Forum had been set up.

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August 2010; the second Specification date was breached relating to Specification 325(b) 'at least 90% of the total volume of potentially mobile ILW which has been accumulated as sludge in B** pond within modern standards stainless steel containment by 1 August 2010'. The regulatory decision (Ref. 17) was punitive action not be taken, based upon considering the evidence (work SL has delivered since the Specification in preparing a degraded facility for retrievals) and whether it would be in the public interest (taking into account that the LP&S facilities are now considered national priority to remediate and have ministerial oversight).

2010; Specification 324 (c) contents of B*** is not accumulated except in a place and manner approved by the Executive, which was completed in 2010.

May 2011; ONR granted 'Approval of SL's Arrangements for Control of its Key Decommissioning Programmes', (Ref. 18). In the accompanying PAR (Ref. 19) it stated that ONR were reviewing the approach to regulation and enforcement of Sellafield decommissioning, with the aim of providing a more refined approach, moving away from the use of detailed Specifications, which in this instance failed to provide sufficient flexibility in the modern environment.

By Approval of the LC35 arrangements, related to the production of key decommissioning milestones as a means for managing delivery of decommissioning programmes specifically high hazard and risk facilities, ONR place a duty on SL to comply with them and prevent significant changes being made to the key milestone dates without seeking permission from ONR.

October 2013; the new DCI to the Sellafield Programme, asked ONR Programme Assurance to review the regulatory approach of the Specifications for risk reduction within FGMSF and PFSP facilities and the management decisions taken in these areas. The review (Ref. 20) concluded that the decisions not to prosecute and to leave the specifications in place are defensible.

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