

Quarterly site report for

SELLAFIELD, CALDER HALL AND WINDSCALE

WEST CUMBRIA SITES STAKEHOLDER GROUP

REPORT FOR PERIOD 1 SEPTEMBER 2011 – 31 DECEMBER 2011

Foreword

This report is issued as part of the Office for Nuclear Regulation's (ONR) commitment to make information about inspection and regulatory activities relating to the above sites available to the public. Reports are distributed quarterly to members of the West Cumbria Sites Stakeholder Group (WCSSG) and they are also available on the ONR website (www.hse.gov.uk/nuclear/llc).

Site Inspectors from ONR attend WCSSG meetings and will respond to any questions raised there by the members of the Group. Any other person wishing to inquire about matters covered by this report should contact the ONR.

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The format and contents of this report for the WCSSG are dictated by the range and scope of plants on the licensed sites reported therein and is structured along the following lines:

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1. INTRODUCTION

1.1 News from ONR

News from ONR

Final Fukushima report

The final report, 11 October, revealed no fundamental safety weaknesses in the UK's nuclear industry but concluded that by learning lessons it can be made even safer. The report, the Government's response and a podcast featuring Mike Weightman is available on the ONR website. A report will be published next year on progress in implementing the lessons for the UK. The Secretary of State for Energy and Climate Change has made a statement about the report and in that statement he specifically highlighted that the report emphasises the need to continue the Sellafield legacy pond and silo cleanup with the utmost vigour and determination. Both ONR and EA will continue to focus on ensuring timely delivery of SL's programmes of work in this area.

Radioactive Materials Transport Team (RMTT) join ONR

The team joined ONR from the Department of Transport on 24 October. The team is responsible for regulating the transport of radioactive material by road and rail in Great Britain, as well as advising on transport by sea and air within the United Kingdom. Their remit covers the transport of material to and from licensed nuclear sites and non-nuclear sectors such as hospitals and education establishments.

Non Governmental Organisations Forum

ONR's second NGO forum was held in London (17 November 2011). Topics covered included openness and transparency, generic design assessment and the final Fukushima report. The forum was well attended with constructive discussion sessions. Minutes will be published on ONR's website and a third forum will be held in April 2012.

International Physical Protection Advisory Service (IPPAS) mission

A team of international nuclear security experts led by the International Atomic Energy Agency (IAEA) visited the UK in October to assess civil nuclear security arrangements. They concluded the state of civil nuclear security in the UK to be sufficiently robust and identified many examples of good practice within the civil nuclear security regime and a number of valuable recommendations and suggestions.

Senior representatives conference

The annual event brought together nuclear industry leaders on 14 November. Discussions focused on: openness and transparency in the post-Fukushima era; promoting a safety culture across all parts of the nuclear industry supply chain; and responding to challenges post-Fukushima.

ONR public consultation – update

The 12 week public consultation to clarify ONR's interpretation of bulk quantities relating to radioactive matter closed on 12 December. ONR is now analysing responses to the consultation and will make a policy announcement once a suitable definition is agreed.

Stress tests

ONR received the progress reports from licensees for UK **non nuclear power plants** by the required date of 15 October. Final reports are due by 31 December with a report due for publication in Spring 2012.

ONR received the final stress tests reports from licensees of UK nuclear power plants by the required date of 31 October. ONR independently reviewed these reports and provided a UK national report for the European Council in December.

Generic Design Assessment

On 14 December generic designs for EDF and Areva's UK EPR and Westinghouse's AP1000 reactors were granted interim acceptance by ONR and the Environment Agency. However, neither reactor can be built in the UK until a number of issues are resolved.

ONR published its second **quarterly report** on 8 November.

1.2 Inspections Statistics

The ONR Inspectors made over 154 visits to the Sellafield Ltd (SL), Calder Hall and Windscale sites during this period. This involved over 361 person days on site. Issues arising from these and previous inspections will be progressed by ONR. The more significant issues identified during these inspections are summarised below.

2 ROUTINE MATTERS

2.1 Nuclear Decommissioning Directorate Operational Nuclear Safety

During the period we carried out an inspection of SL's improvement plan for the conduct of operations in the Magnox Swarf Storage Silo (MSSS) facility. The improvement plan was developed following the HSE improvement notice which was served following the inadvertent disconnection of the hydrogen analysers in August 2010. We consider that SL has made good progress against their plan in a number of areas, notably: staff training and competency assessment; management oversight of frontline work; and plant configuration. We will continue to monitor SL's progress on delivery of operational safety improvements in MSSS and the other high risk legacy facilities.

Following the completion of the pond purge trials in the First Generation Magnox Storage Pond (FGMSP), we consider that SL has made little progress in the provision of a permanent caustic supply which would allow routine operation of the facility. We continue to liaise with SL on progress.

2.1.1 Legacy Silos Projects

We are maintaining oversight of the progress made by SL towards retrieval of the inventory from these facilities. We have seen some indications over recent months that work within MSSS is not progressing at the rate required to achieve the current challenging performance plan; however, SL is aware of these difficulties and is putting in place plans to remedy the situation. Whilst we are content with progress so far, we will continue to monitor the development and delivery of this plan over the next few months.

We continued to engage with SL on the permissioning of the building crane for heavier lifts in the Magnox Swarf Storage Silo (MSSS) facility. This crane is a key enabler to the retrievals project, as it is required to support both the installation of the Silo Emptying Plant and the removal of waste flasks out of the building. We are also currently considering an application from SL for the construction of the second extension lateral restraint; necessary to both improve the seismic capability of MSSS and to facilitate the control of silo liquor levels during retrievals. The permissioning of these projects is delayed because of technical issues arising out of our technical assessment. We are currently resolving these technical issues and anticipate permissioning these activities in the next quarter.

The Liquor Activity Reduction (LAR) project in the third extension continues to deliver activity removal from the mobile phase via SIXEP. Of note is SL's intention to accelerate delivery of LAR in the first extension by around 18 months. We welcome this initiative to advance the progress of hazard reduction in MSSS.

Construction of the Box Transfer facility continues on programme, our latest inspection confirmed that this work is proceeding on schedule and to the desired quality.

Our focus within Pile Fuel Clad Storage Silo (PFCS) during this period has been on monitoring the construction of the waste retrieval facility superstructure, which we permissioned in July. We undertook an inspection relating to the quality of construction and found no significant issues. We also began early engagement on the waste storage boxes, which are required to support retrievals, and are an important aspect of our permissioning of preparation for retrievals activities. In addition, the Box Encapsulation Plants Product Store and the Comprehensive Import/Export Facility projects have been brought into the MSSS work stream, and we have begun engaging in this area. In our opinion, SL is progressing broadly in line with the performance plan in this area.

2.1.2 Legacy Ponds Projects

We continued to monitor progress made by SL with the projects aimed at hazard and risk reduction and those required to enable the retrieval of the inventory from these facilities.

Of note is the work to remediate degradation associated with the First Generation Magnox Storage Pond (FGMSP), which involves the use of novel techniques. Licence Instruments (LIs) 816 and 817 were issued in November and September respectively, giving permission for two elements of the work to proceed. We are continuing to monitor SL's progress in completing the work.

We continued to monitor progress on the major construction projects, Sludge Packaging Plant 1 (SPP1) and Pile Fuel Storage Pond (PFSP) Local Sludge Treatment Plant (LSTP). The SPP1 sludge bulk storage vessels are of welded construction and discussions are ongoing with SL on the techniques for inspecting the welds.

We granted permission for SL to export a single skip of metal fuel from the PFSP to the Fuel Handling Plant (FHP). The objective being to demonstrate that metal fuel can

be exported from the PFSP to FHP. SL's intention is to use the learning from this activity to underpin future metal fuel retrievals. SL successfully exported a skip of metal fuel from the PFSP to the FHP at the end of September 2011.

2.1.3 Site Remediation and Decommissioning Projects (SRDP) and Windscale

We continued to monitor progress made by SL with decommissioning projects in SRDP and Windscale during the period. Inspections were carried out which covered LC27, Intelligent Customer Capability and CE&I design; no areas of significant concern were identified.

ONR, along with other stakeholders, were invited to the Best Available Technique Assessment (BAT) workshop held in November, for the management of the Windscale Trenches. This was a constructive workshop and a credible option was identified which SL agreed to progress further.

2.2 Spent Fuel Management & MoX Directorates

2.2.1 Magnox Operating Programme (MOP)

Nothing to report.

2.2.2 Magnox Reprocessing Operations

We inspected nuclear fire safety within Magnox Reprocessing. The inspection found that a significant degree of attention was being given to the management of fire safety in manned areas of the facility. Operators demonstrated a thorough knowledge of the hazards and safeguards, but the inspection found that SL needs to improve its process for managing the close-out of recommendations arising from its periodic review process. SL agreed with the findings and intends to implement new systems for the forthcoming periodic review of the Magnox reprocessing safety case. Inspectors will evaluate these systems as part of our LTPR intervention and safety case theme

We wrote to SL explaining our intentions for the regulation of the 2012 periodic shutdown of Magnox reprocessing. We will evaluate the adequacy of maintenance activities prior to granting permission for the restart of Magnox reprocessing.

An inspection to confirm the health of processes to learn from experience was carried out by us in Magnox East River (MER). Generally the inspection was positive, but some areas for improvement, related to the control of hardwired overrides, were identified and accepted by SL. We also assessed and permissioned (LI 819) SL's overarching strategy for improving the protection within FHP for preventing worker exposure to radiation.

2.2.3 Plutonium Finishing and Storage (PF&S)

We continued discussions with SL and other stakeholders on the consolidation of special nuclear materials at Sellafield, and this resulted in a revised SL strategy. The inventories of the legacy stores continued to be transferred to more suitable modern facilities, and we will be permissioning further materials movements early in the New Year.

We carried out an event driven inspection on the PF&S storage and feed tanks, and the overall outcome was positive. We were encouraged by the actions SL had taken and concluded that the safety cases for the storage and feed tanks had incorporated lessons from previous events.

2.2.4 THORP (Thermal Oxide Reprocessing Plant) Operations.

An Ionising Radiation Regulations (IRRs) inspection was undertaken and the outcome was reasonable. We were encouraged by the project to 'rollback' the general Thorp building to minimise the size of the controlled area. The 'rollback' change is expected to take place during 2012.

We assessed changes to the criticality safety case for THORP. The changes are required during 2012 to allow the reprocessing of a batch of specific type of stored fuel. A readiness inspection will be undertaken in 2012 before a Licence Instrument allowing the change is issued.

We assessed the Long Term Periodic Review (LTPR) of the Wet Inlet Facility (WIF), a pond used for fuel storage, and were satisfied that SL had undertaken an adequate review of the WIF safety case and safety performance at the facility. We concluded that SL had also adequately addressed the safety significant recommendations identified during the review. We were satisfied that SL had reduced the risk posed by operations at WIF so far as is reasonably practicable, and that subject to routine inspection, maintenance and plant operator activity, continued operation of the facility is justified up to the next periodic review.

We monitored SL's progress on improving the operational availability of fire dampers, and the availability continued to improve. Progress with improving the nuclear fire safety case was continuing, but was slow due to a lack of suitably experienced resources and we are engaging with the licensee on this matter.

We continued to engage with SL on its process and progress for LTPRs of other pond storage facilities in the THORP OU.

2.2.5 SMP (Sellafield Mixed Oxide Plant)

During the reporting period we monitored staff reductions in SMP which was undertaken in compliance with the site's Control of Operational Change (LC36) arrangements; some staff are being redeployed to other areas of site in need of additional resources. In addition we initiated early discussions with SL about the arrangements that cover the rundown of operations, Post Operational Clean Out activities, the future use of the facility and the impact on other site strategies.

2.2.6 Sellafield Product & Residue Store (SPRS)

We continued to monitor SL's progress with active commissioning and progress towards a consent to operate. On our behalf, the Health and Safety Laboratories (HSL) analysed the first set of SL's package monitory results and compared them with SL's Thermal Model predictions. The results appeared to be promising.

2.2.7 Calder Hall

We assessed and gave permission (Licence Instrument 808) for Calder Hall to carry out active commissioning of Reactor 4's fuel discharge route. SL has subsequently commenced its programme to defuel Calder Hall Reactor 4.

We also assessed an application from SL to withdraw Approvals No 6 & 7 issued in 2003 on Operating Rules and on the arrangements to control the Plant Maintenance Schedule. We concluded that, as Calder Hall ceased nuclear generation in 2003, it now presents a much reduced risk. We judged therefore that the approved arrangements were not proportionate and we issued withdrawals (LI 798 & LI 818) under Licence Condition 1(3).

2.2.8 Oxide Strategy

In November 2011, NDA published its revised strategy for oxide fuel within the UK. We have attended meetings and commented on the strategy. We have also attended SL meetings to advise and consult on SL's basis of a safety case paper for the interim storage of oxide fuel following the cessation of reprocessing. This paper is expected to be submitted to us for information in 2012.

Trials to prove the safety and efficacy of nitrate dosing of the THORP Receipt and Storage Pond, in order to prevent fuel corrosion, continued and have been extended. We continued to liaise with SL on progress.

2.3 Waste & Effluent Disposition Directorate

2.3.1 HAL Stocks

HAL stocks continued to be suitably controlled during the period, although problems with WVP during late summer/early autumn did adversely affect the rate of vitrification and, consequently, a temporary slow down in the rate of HAL stock reduction.

2.3.2 Highly Active Liquor Evaporative Capacity

Evaporator A: The unit processed Magnox liquors during the period.

Evaporator B: We have had preliminary discussions with SL regarding work to evaluate the feasibility of engineering options to return the evaporator to duty. This work will continue during 2012.

Evaporator C: During September, the routine endoscopic inspection of the unit's cooling coils was successfully completed without incident and the unit returned to service. SL analysed the inspection data and submitted the required remnant life report to us. We will assess SL's submission during January 2012. During early 2012 we will commence discussions with SL regarding the future permissioning of evaporator C operations.

Evaporator D: The third prefabricated evaporator module is now on site awaiting installation of a vessel and placement in the building.

In maintaining regulatory oversight of the project we inspected activities at SL as well as at the offices of the main design contractor and at a module construction facility. These inspections covered: project delivery timings; design change control; commissioning plans; and quality assurance during engineering and fabrication. No major issues were raised although we have yet to establish full confidence in the project completion date.

2.3.3 Replacement HAL stocks tanks (HASTs)

This period has seen considerable activity on issues associated with HAL storage. We held discussions with SL and the NDA to consider the impact of various reprocessing scenarios on the future requirements for HAL storage. In October, we wrote to SL to emphasise our general expectation that all remediation and decommissioning programmes need to be supported by a demonstration that nuclear and radiological safety will be appropriately managed for the remaining operational lifetimes of facilities. With particular regard to HASTs and other related facilities, an adequate safety case should demonstrate that nuclear safety associated with both HAL storage and associated issues have been recognised and would be managed adequately. The discussions will continue during 2012.

In parallel with the above work, we will continue to provide oversight of the civil engineering design, process design and construction optioneering work for the provision of replacement tanks. Meanwhile, we are seeking assurance that SL has taken on board learning from quality and other problems identified on projects such as Evaporator D.

2.3.4 Waste Vitrification Plant (WVP)

In October we met with SL at our Bootle headquarters to explore the underlying causes of the poor findings from our June 2011 inspection of LC 11 compliance within WVP. We were pleased with SL's analysis and progress with corrective actions. Also, during this meeting, SL presented its response to our May letter in which we had requested a report to demonstrate that suitable work was in progress to assure appropriate future WVP production. We were pleased with the quality of the work that was being carried out.

The performance of WVP improved significantly during the final part of the reporting period, and currently the year to date vitrification throughput provides some confidence that the full year target for hazard reduction may be achieved.

We are currently engaging with SL regarding our permissioning approach for the second phase of the work to improve the safety case for the shield doors on line three.

2.3.5 Residue Export Facility (REF)

The facility has now been included in our programme of routine compliance inspections following its July transition from commissioning to routine operations. We commenced discussions with SL regarding the permissioning of modifications to the plant, to enable the loading of larger transport/storage flasks for returns to European customers.

2.3.6 Effluent & Encapsulation Plants (E&EP) and Solid Waste OU

During this period, planned compliance inspections of E&EP and Solid Waste OUs were undertaken. In addition an inspection against Licence Condition 28 (Examination, Inspection, Maintenance and Testing) was carried out in November which focussed on SL's asset care arrangements. This latter inspection confirmed that SL was making improvements but issues were identified regarding how asset condition of equipment was being established and monitored. It was also confirmed that no meaningful benefits from these improvements would be delivered for some time. SL had targeted areas of specific concern, based upon a prioritisation approach focused upon ensuring security of nuclear safety and support for other site hazard reduction activities.

Concerns were raised over resourcing of enabling activities to support asset care improvement. SL indicated that it was aware of this and it was being addressed through its organisational change and restructuring project and we seek assurance that this is being achieved. Asset care will become a continuing theme of our regulatory activities over the next few years in our dealings with E&EP and Solid Waste OUs.

SL issued its revised Plutonium Contaminated Material (PCM) waste strategy although the required underpinning programme setting out its delivery is still being developed. This situation is disappointing and we have taken action to ensure that an adequate delivery programme is produced to a suitable timescale.

During the period the following Licence Instruments (LI) were issued:

- LI 812 Safe disposal of waste Plutonium (Pu) bearing liquor generated from chemical analysis through the Low Active Drain Segregation Filter House for processing through the Enhanced Actinide Removal Plant.
- LI 821 The modification of historic PCM stores to allow Pu contaminated filters to be repacked and transferred into modern storage facilities.

2.4 Infrastructure Directorate

2.4.1 Level 1 Demonstration Exercises

A team from ONR witnessed exercise "Nightingale" on 1 December. The scenario, which was quite challenging, involved both SL and the Cumbria Fire & Rescue Service. Although there were examples of good performance, some shortcomings at the operational level were evident at the Incident Control Centre and the Access Control Point. SL will develop and embed additional training in these areas, and SL aims to demonstrate the effectiveness of this training, at the next Level 1 Exercise, by utilising the same teams that participated in the December exercise.

2.4.2 Emergency Management Improvement Programme

SL has a site emergency improvement plan in place which covers the next six months in some detail. We will monitor SL delivery against the plan over the forthcoming months.

2.4.3 Licence Instruments

Following consideration and review we issued a Consent under Licence Condition 3 “Restriction on dealing with the site” in relation to the SL submission associated with a lease for PX Ltd to operate, maintain and manage the Fellside Combined Heat and Power plant on the Sellafield site.

2.4.4 Utilities

SL made some progress in the work programmes to improve the asset care and management of the numerous pipebridges, ducts and trenches across the site and the pipework therein. We plan to continue to engage with SL to ensure that this progress is sustained.

3. SITE WIDE THEMES AND INSPECTIONS

3.1 Leadership & Management

We are still not clear on how the Integrated Change Programme (ICP) will fully address all the issues identified in the Leadership and Management for Safety workshop held in March 2011. In February SL will demonstrate to us, for three of our specific issues, how the ICP delivers the required outcomes.

Progress in our areas of focus is given below.

3.1.1 Nuclear Safety Governance

An inspection of SL’s Board activities with respect to nuclear safety was undertaken. This involved discussions with some Executive and Non Executive Board Members, and a review of a sample of relevant Board documentation. We found that the Board allocates substantial time and effort to nuclear safety, and the Non-Executive Directors provide ‘wise counsel’ and effective challenge to the process. The current Board activities are still maturing and SL has plans in hand to improve the process. The inspection indicated that improvements are necessary in: setting high level strategic objectives for nuclear safety; the effectiveness of monitoring nuclear safety performance and the adequacy of the review of nuclear safety performance.

3.1.2 Internal Regulation

We continued to work with SL in this area. SL made good progress in recruiting Independent Inspectors and SL will monitor their effectiveness over the next year. SL is now focusing on the assessment side of internal regulation, and will be utilising benchmarking work undertaken with other licensees to set out the way forward.

3.1.3 Leadership, Management and Supervision

SL made good progress in making Annual Reviews of Safety (AROS) part of routine business. SL intends to hold internal reviews every 4 months to which we are invited to attend. The formal AROS will be held each year with us in December, and this will allow any improvements to be fed into the following year’s improvement plan.

The AROS held in December was significantly better than the AROS last year, with improved focus on important issues of future intent.

3.1.4 Training

The approach taken to develop and implement new arrangements is encouraging and good progress was made in revising the associated arrangements.

The need to re-enforce leadership was recognised by SL, and a comprehensive programme for training managers in leadership expectations is now being rolled out across the site. ONR will be undertaking a site wide coordinated cornerstone inspection on training in the next quarter, and our findings will be reported in future reports.

3.1.5 Organisational Change

We are satisfied with the progress being made with a revised process and set of guidance for managing organisational change. The SL approach to baselines indicates that our regulatory advice has been adopted. We have undertaken a cornerstone inspection on the management of change (LC36) (see Section 3.5) and we will continue to monitor the implementation of the new arrangements.

3.2 Safe Operations

3.2.1 LC 23 (Operating Rules) Guidance

We reached agreement with SL on the new guidance for Operating Rules (ORs), and SL recognised that this will require a formal change to the present arrangements. SL has written setting out a series of milestones, associated with the delivery of ORs that meet our guidance, and we will monitor delivery against the milestones.

3.2.2 Conduct of Operations

We continued to monitor SL's progress in implementing the Disciplined Operations standards. SL proposes to implement the standards via the Integrated Change Programme (ICP) workstreams.

3.2.3 Control of Contractors

SL produced an overall industrial and radiological safety improvement plan that we are currently assessing. We will evaluate whether the safety improvement plan sufficiently addresses issues concerning the control of contractors.

3.3 Engineering, Maintenance/Asset Management

Working together with the Environment Agency (EA), we undertook a team inspection of SL's asset management arrangements across a range of decommissioning and operational plants during this period. Whilst fully recognising the work SL is doing to improve its asset care, the inspection identified a number of shortcomings in SL's current arrangements which SL will address via the Integrated Change Programme. We emphasised the need for SL to improve its understanding of asset/plant condition across the site. SL also needs to improve its internal assurance processes on asset

condition assessments, to ensure that they are consistent and undertaken with a rigour commensurate with nuclear safety significance of the assets. We expect to receive a response from SL to our findings during the next reporting period.

Inspectors will monitor SL's progress in improving Asset Management across the site, as the Integrated Change Programme progresses through 2012 and 2013.

We assessed the adequacy of SL's new construction crane methodology, and found SL had made improvements which offer significant potential to strengthen oversight of construction cranes. However, we also found that the revised procedures did not clearly identify the essential requirements for the production of an adequate construction crane safety case. We expect to receive a response to our findings during the next quarter. In the meantime, proposals to deploy construction cranes adjacent to major nuclear facilities will attract additional attention from our Specialist Inspectors, who will consider each case individually

We provided SL with details of the findings following our site wide inspection of licence condition 22 (Modification or Experiments on Existing Plant) which took place earlier in the year. SL needs to improve compliance in the following areas: managerial oversight; handover of modified plant; training; and arrangements/procedures. We noted that SL had already embarked on improvements in some of these areas via the Integrated Change Programme. We discussed how improvements in the remaining areas might be achieved, and SL agreed to develop proposals to resolve our findings.

3.4 Safety Cases

We shared our safety case related regulatory risks and issues with SL. SL subsequently provided us with its Safety Case Improvement programme to help ensure that we have a consistent approach to resolving the risks and issues. We are satisfied that SL's programme contains sufficient activities and projects that will address our risks and issues. These align with our own scope of intervention work that is related to averting a major nuclear hazard and achieving the following outcomes:

- SL to produce practical and proportionate safety cases that underwrite the safety of its facilities, operations and decommissioning programmes.
- SL to use adequate and fit-for-purpose methodologies to determine the appropriate technical content and coverage of its safety cases.
- SL to use an effective and robust periodic safety review process that ensures timely delivery of high quality safety case reviews.
- SL to ensure that safety cases are being properly implemented, demonstrably complied with, and are updated promptly in the light of relevant operational experience.

We will monitor the timely development of SL's improvements and confirm application of these in mitigating our risks and issues and in reducing overall risks at the SL site. This will be achieved through a range of safety case regulatory intervention projects as

well as safety-case based compliance inspections. In support of ensuring the desired improvements and outcomes are achieved;

The current work on SL safety cases is being benchmarked by SL against our “right first time safety case” expectations. Following this work, we will review SL’s proposals to close the gaps identified and will continue monitoring the application of these enhancements.

SL delivered and implemented its revised human factors substantiation methodology. Initial indications from our assessment of the HALES LTPR is that this is yielding proportionate, targeted and good practice human factors assessment in support of its safety cases and nuclear safety significant operations.

We requested SL clarifies its LTPR recovery programme, to provide a justification of its LTPR scope and to ensure that necessary resources will be in place to deliver this programme. We are awaiting a response from SL. Progress against the LTPR recovery programme and commitments given by SL, including the timely and quality delivery of its LTPRs against its declared programme, will be subject to close regulatory monitoring.

We are conducting an intervention at SL to ensure that its nuclear fire safety cases reflect international relevant good practice. This is being achieved through specialist assessment of SL nuclear fire safety cases and the arrangements for producing them. Our initial opinion is that the SL procedure for producing nuclear fire safety cases broadly reflects good practice expectations, but implementation across the site is inconsistent. Our interactions with SL have reinforced the need to continue to analyse the shortfalls, which we currently believe have origins in SL’s internal challenge of its fire safety cases.

3.5 Site wide coordinated cornerstone inspection

During the period we completed our coordinated cornerstone inspection of licence condition 36: Organisational Change. We are currently assessing our inspection findings and will report our overall judgement in the next report.

4. NON ROUTINE MATTERS

4.1 Mobile Elevating Working Platform (MEWP) Event

The investigation work continues and FOD hopes to complete the investigation report during the next reporting period.

4.2 Hospitalisation of 4 persons

The investigation work continues and FOD hopes to complete the investigation report during the next reporting period.

4.3 Failure to Comply with Operating Instructions on THORP

SL established the root causes and our investigation is consistent with the SL findings. SL addressed the causes of this event by improving the information provided in the handover logs and by providing additional training to improve the questioning attitude of all Thorp operational personnel.

4.4 Magnox Contamination Event

On the 4th October 2011 SL raised an event when the routine 3 monthly urine result for a Windscale suit worker was identified to be positive by their Approved Dosimetry Service (ADS). We undertook a preliminary investigation and were satisfied that SL had carried out a thorough local investigation into the issues and likely causes of this event. SL is making improvements in the control of alpha contamination in the reprocessing plant which are to be co-ordinated via the Contamination Improvements Working Group. We will continue to monitor progress in this area.

4.5 Magnox Medium Active Diverter (MAD) Scrubber Event

On 9th September 2011, a sample was taken of the MAD scrubber liquor prior to discharge. Analysis showed abnormally activity levels. SL's investigation identified the direct cause as a failed solenoid valve (in the open position) on a sample ejector solenoid, but also found weaknesses in the safety culture within Magnox.

We independently investigated the MAD scrubber event. The findings from this investigation support the conclusions of the SL investigation which was found to be of high quality. Both investigations identified significant concerns that require improvements to disciplined operations, human performance, training and the Emergency Instructions processes. SL will present its improvement programme at ONR Bootle headquarters, and this will inform our regulatory action and strategy.

4.6 Light Water Reactor (LWR) Storage Pond Breach of Operating Rule

On 6th October 2011 SL reported that, as part of the assessment of historical Post Irradiation Examination (PIE) cans stored in the LWR Storage Pond, some of the pins within a PIE can (received in December 1980) had a pre irradiation enrichment greater than that required by an Operating Rule. We carried out an initial fact finding inspection and decided not to investigate further as it was a historical breach of a technical nature, from which very little learning could be derived. SL confirmed via calculations that the fuel is safe and the Operating Rule has been amended.

4.7 Japanese Earthquake and Tsunami: Implications for the UK Nuclear Industry – HM Chief Inspector of Nuclear Installations Report

In September the HM Chief Inspector of Nuclear Installations issued a report responding to the request, from the Secretary for State for Energy and Climate Change, to examine the circumstances of the Fukushima accident to see what lessons could be learnt to enhance the safety of the UK Nuclear Industry. SL embarked on programmes of work to address the recommendations of the Chief

Inspectors Report. The outcome of the SL work will be reflected in the ONR Chief Inspectors Implementation Report which will be issued in June 2012.

4.8 Japanese Earthquake and Tsunami: EU “Stress Tests”

SL produced reports, following the Fukushima event, to address the stress tests requirements requested by the Council of the European Union relating to Nuclear Power Plants (NPP). The reports produced by SL relate to the Calder Hall NPP located on the Sellafield Site. The four Calder Hall Magnox reactors are no longer operational and are currently being decommissioned. The final SL report, along with the reports produced by other UK NPP operators, have been reviewed by ONR and an ONR report covering the application of stress test requirements for all UK NPP was issued in December 2011. SL has now commenced work to respond to the recommendations of the ONR report

4.9 Japanese Earthquake and Tsunami – Application of “Stress Tests” to the facilities on the Sellafield Site

SL produced a report, as requested by the ONR Chief Inspector, covering the consideration of the stress test requirements for the various non NPP facilities which are located on the Sellafield Site. The SL report was issued in December 2011 and is being reviewed by ONR Specialist Inspectors. An ONR report covering the review of the submitted report is planned to be issued in Spring 2012. The report produced by SL reflects an extensive review of the resilience of the facilities across the Sellafield Site with respect to major accident scenarios. The SL review work is ongoing and SL plans to produce a further report in June 2012. A number of improvements have been identified and SL is currently developing programmes to implement improvements across the site.

5. REGULATORY ACTIVITY

TABLES 1 and 2 – LICENCE INSTRUMENTS ISSUED

TABLE 1

CONSENTS, APPROVALS AND SPECIFICATIONS ISSUED AND ENFORCEMENT ACTIONS TAKEN BY ONR DURING

1 September 2011 – 31 December 2011

Date	Type	Ref. No.	Description
Sellafield Ltd - Sellafield (and Calder Works) – Nuclear Site Licence no. 31G			
05/10/2011	Approval Withdrawal	LI 798	Application to withdraw Approval No 7 granted under Site Licence No: 31G for the arrangements for controlling EIM&T at Calder Hall.
15/11/2011	Consent	LI 807	LC3 Lease application consent for PX Ltd to operate, maintain and manage the Fellside combined heat and power plant on the SL Site.
05/10/2011	Approval Withdrawal	LI 818	Application to withdraw Approval No 6 granted under Site Licence No: 31G for Calder Hall Operating Rules.
Sellafield Ltd – Windscale – Nuclear Site Licence no. 83			
			None

TABLE 2

AGREEMENTS & ACKNOWLEDGEMENTS ISSUED BY ONR DURING

1 September 2011 – 31 December 2011

Date	Ref. No.	Description
Sellafield Ltd – Sellafield (and Calder Works) – Nuclear Site Licence no. 31 G		
04/10/2011	LI 808	Agreement to commence active commissioning of Reactor 4 Fuel Route and Associated Equipment.
17/10/2011	LI 812	Acknowledgement of Safety Documentation for Modification to Existing Plant.
07/11/2011	LI 816	Agreement to fully implement PMP 0147.
30/09/2011	LI 817	Agreement to fully implement PMP 0146.

19/09/2011	LI 819	Acknowledgement of Receipt of Overarching Strategy Paper for Modifications to an Existing Plant. Fuel Handling Plant and Hardwired Interlock Upgrades.
19/09/2011	LI 820	Application for Agreement to commence the export phase of the PFSP metal fuel project.
31/10/2011	LI 821	Acknowledgement of safety documentation for filter re-packing.
Sellafield Ltd – Windscale – Nuclear Site Licence no. 83.		
		None

Reports detailing the above regulatory decisions can be found on the ONR website (www.hse.gov.uk/nuclear/pars)