HM NUCLEAR INSTALLATIONS INSPECTORATE

SELLAFIELD, CALDER HALL AND WINDSCALE

WEST CUMBRIA SITES STAKEHOLDER GROUP

REPORT FOR THE PERIOD 1 APRIL – 31 AUGUST 2010

FOREWORD

This report is issued as part of the Health and Safety Executive's commitment to make information about inspection and regulatory activities relating to the above sites available to the public. It is for distribution to members of the West Cumbria Sites Stakeholder Group (WCSSG) and covers activities associated with the regulation of safety at Sellafield Ltd, Calder Hall and Windscale.

These reports are distributed and will be available on the Internet. Site Inspectors of HM Nuclear Installations Inspectorate (NII) attend WCSSG meetings and will be happy to respond to any questions raised there. Any other person wishing to inquire about matters covered by this report should contact HSE, Nuclear Safety Directorate Information Centre on 0151 951 4103.

This report will be put onto the HSE Website at http://www.hse.gov/nsd/nsdhome.htm under “Local Liaison Committee Reports”

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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 Proposed Changes to HSE's Nuclear Directorate

Transforming our business

Although the previous Government's proposals to establish a separate Office for Nuclear Regulation is still with Ministers for consideration, the challenges of interacting with and regulating the nuclear industry in the UK remain. As a response to this HSE's Nuclear Directorate (ND) has established a change programme focusing on improved ways of working and improved engagement with Stakeholders, this programme also reflects the organisation's aim to be recognised as a world-class regulator.

While ND is committed to rising to the challenge of implementing major organisational and operational change, it will not be distracted from taking forward its ongoing high priority work to secure the protection of people and society from the hazards of the nuclear industry.

ND is committed that throughout this process of transformation its Stakeholders are kept fully informed of the changes and any decisions that are made regarding the future structure of the Regulator, this will be achieved through reports such as the Stakeholder Group Reports on the HSE Website.

1.2 Changes to Reporting Periods

The ND procedures have been amended to enable WCSSG quarterly reports to be provided 2 working weeks before a WCSSG meeting (previously the procedures required the reports to be written within 8 weeks after the meetings). The introduction of these new procedures means that this report will cover a period of 5, rather than 3, months, however subsequent reports will cover 3 months. The HSE website has been amended accordingly.

1.3 INSPECTIONS

NII Inspectors made a total of **93** visits to the Sellafield, Calder Hall and Windscale sites during this period. This involves around **442** person days on site. Issues arising from these and previous inspections will be progressed by NII. The more significant issues identified during these inspections are summarised below.

2 ROUTINE MATTERS

2.1 Nuclear Decommissioning

2.1.1 Legacy Ponds & Silos (LP&S) Operational Nuclear Safety

We have continued with our programme of planned inspection to gain assurance of Sellafield Ltd's compliance with licence conditions and key plant specific improvements. No significant concerns were raised following our inspection of Emergency Arrangements for legacy facilities and Operating Rules for the Pile Fuel Cladding Storage Silo. An inspection of decision-making processes revealed a number of inconsistencies with respect to procedural adherence. Sellafield Ltd has accepted our findings and responded with an improvement programme for decision-making processes across the Decommissioning Directorate.

2.1.2 Legacy Silos Projects

We continue to monitor progress made by Sellafield Ltd towards retrieval of the inventory from these facilities.

Of note is the active commissioning of the 3rd Extension Liquor Activity Reduction project in the Magnox Swarf Storage Silo (MSSS). This is an important hazard reduction project and contributes to the work to prepare the plant for retrieval of the radioactive inventory. This work was finally permissioned in July Licence Instrument (LI) No 781. As previously reported this project had for a number of reasons failed to meet programme dates, with initial progress being slow, due to Sellafield Ltd encountering some technical problems. However, a number of successful batch transfers have now been completed but we will continue to monitor the safety and the progress of this important hazard reduction project.

We are working with EA and Sellafield Ltd on the development of a robust leak containment strategy for MSSS.

Also of note is the active commissioning of a new argon passive off-gas system in the Pile Fuel Clad Storage Silo (PFCS). Inactive commissioning was successfully completed, and LI 785 was issued in August to permit start of active commissioning.

A key focus for us has been on ensuring through inspection and assessment that Sellafield Ltd has adequate arrangements for its interaction with us on the future permissioning of a number of activities. A disadvantage with Sellafield Ltd's current arrangements is that the retrieval projects require significant permissioning activities to allow the granting of LIs. In order to allow us to focus on the more safety significant activities we are currently trialling the use of a more flexible approach, termed flexible permissioning, for a number of such activities.

Under this trial, we have discussed with Sellafield Ltd the justification to use the MSSS building crane for lifts greater than 10.5 tonne (currently this is restricted to 2.5 tonne). This work has now been successfully completed and Sellafield Ltd is utilising the crane for lifts greater than 10.5 tonne.

2.1.3 Legacy Ponds Projects

We continued to challenge Sellafield Ltd on ensuring full availability of the emergency pumping system in the First Generation Magnox Storage Pond (FGMSP). We have been disappointed with the repeated project delays in achieving full availability of this system. However, full availability has now been achieved.

We continued to monitor Sellafield Ltd's progress in meeting the short term milestones, covering the Pile Fuel Storage Pond, put in place in August 2009 and referred to in previous reports. Five out of the six milestones were successfully completed but difficulties were encountered with the bulk desludging of an area of pond floor under the east washdown area. The work, undertaken before the milestone date of 31 March, involved using a remote operated vehicle (ROV) to remove the sludge. After the first pass of the ROV camera, inspections showed that very little sludge had actually been moved. This has resulted in Sellafield Ltd having to carry out significant modification work to the ROV, which will therefore be out of service until later in the year. We will continue to monitor progress in this area. Milestones and targets for the next year are to be agreed in line with the revised Licence Condition (LC) 35 arrangements recently put in place by Sellafield Ltd.

As noted in the last report, Sellafield Ltd has failed to meet the Intermediate Level Waste (ILW) Specification, part 325 (b) which requires at least 90% of the total volume of potentially mobile ILW accumulated as sludge in the FGMSP to be stored in modern stainless steel containment by the 1 August 2010. Sellafield Ltd has made some limited progress towards meeting the requirements of the Specification. We are currently determining whether Sellafield Ltd has done everything so far as is reasonably practicable to satisfy the Specification and our deliberations will inform the decision on whether there is a need for further enforcement action, as guided by HSE's Enforcement Policy Statement and Enforcement Management Model. We will consider the nature of the challenge and the inherent uncertainties associated with remediating a legacy facility such as the FGMSP. Sellafield Ltd has stated that it is committed to meeting the scope of the Specification as soon as is reasonably practicable and we are satisfied that major hazard and risk reduction is the main focus of Sellafield Ltd's activities, with some progress being made in a number of areas in preparation for hazard reduction.

2.1.4 Decommissioning Zones 2&3

Sellafield Ltd has met a significant regulatory requirement prior to its due date of 1 August 2010, by complying with Specification No 324(c), relating to Medium Active Solid Waste Storage Cells. This Specification was issued under LC 32(5) and specifies that the licensee shall not accumulate radioactive wastes except in a place and manner approved by the Executive. It was one of number issued in 2000 as a result of regulatory concerns regarding the storage of Intermediate Level Waste (ILW) in facilities on the site, with the aim of seeking improvements to the management of the waste by specified dates.

We are satisfied that Sellafield Ltd has made continual progress with Medium Active Solid Waste Storage Cells since 2000. The work has involved removal of waste that could be removed, the carrying out of various modifications to improve and modernise the waste storage, and provision of a new facility for retrieval of the remaining waste that is now stored safely. This aligns with NII's strategy for Sellafield Ltd to continue to reduce hazards and risks on the site. The licensee has provided a programme for the retrieval of the remaining waste, including steps to reduce the amount that will have to be categorised as Intermediate Level Waste (ILW). We expect Sellafield Ltd to deliver this programme and we will monitor its progress against this.

NII issued LI No 784 in August 2010, to allow Sellafield Ltd to begin decommissioning a redundant ventilation system in the Product Finishing Plant within the Separation Area. Good work was undertaken by Sellafield Ltd's project team to reduce the risk to workers in accordance with the ALARP principles.

NII issued LI No 777 in July to allow Sellafield Ltd to place a redundant Product Finishing Line into a new care and maintenance regime and to allow the transfer of some residue bottles between floors.

2.1.5 Windscale

Sellafield Ltd has informed us that some of the Windscale decommissioning projects will stop owing to the current site funding limits. We have written requesting a justification for the deferral - particularly for Pile 1 decommissioning, and to demonstrate that its decision-making fully considered both the short and long term safety implications. Also, we have advised that it is important that Sellafield Ltd captures and retains the knowledge of the project teams before they are dispersed.

2.1.6 Separation Area Ventilation Project

We are satisfied with Sellafield Ltd's progress towards replacing the old Separation Area ventilation system with a modern system. This is an enabling project, as the new system will allow other planned decommissioning projects to commence when it is complete. Progress in construction of the main elements has continued and in past months a new substation has been completed and foundations for the main plant room have been cast. Work has been brought forward in relation to the new reinforced concrete stack and installation of foundation piles has commenced.

2.1.7 Calder Hall

The Magnox Operating Programme has been revised, and requires Calder Hall defueling to be brought forward. Consequently, Calder Hall has resumed its programme to begin defueling, initially of one reactor, and defueling will commence after a period of active commissioning. In 2007, when the programme was deferred, we wrote to Calder Hall advising it of our expectations for its resumption. One issue raised was that of providing assurance on asset condition. We carried out an inspection in August and were satisfied that Calder Hall had implemented an adequate and successful asset management programme. This provided confidence that the fuel route is in good condition. Particularly, we welcomed the close cooperation and sharing of learning with Chapelcross, which has a similar fuel route.

2.2 SITE WIDE MATTERS

2.2.1 Lifecycle Baseline

The Lifecycle Baseline is the plan of work underpinning the contract between Sellafield Ltd and NDA to run the Sellafield Ltd, Windscale and Capenhurst sites.

Alongside the Office of Civil Nuclear Security (OCNS) and the Environment Agency (EA), we have maintained oversight of the development of the Lifecycle Baseline to ensure that health, safety, security, environmental protection and risk management are appropriately considered at an early stage. However, it is not our role to agree or endorse such plans. As we have reported in the past, we have advised the licensee that some of the Lifecycle Baseline dates are unacceptable to us. We are concerned about certain programme delays, as we believe the revised timescales do not represent what can be achieved so far as is reasonably practicable.

We support the licensee's initiative to develop a Performance Plan from the Lifecycle Baseline that we hope will provide programme acceleration and performance improvements, and deliver remediation in more appropriate timescales. However, the reduced Annual Site Funding Limit for the site has confined this acceleration to the 5 high hazard areas (the 4 LP&S facilities and HLWPs) and the current indicated accelerations will not re-establish the remediation timescales indicated in the earlier LTPs. The Performance Plan will be the focus of the regulators' efforts in the immediate future.

We have noted that some of the medium term performance targets, recently identified by the NDA for programme delivery at Sellafield Ltd, are less demanding than the Specification dates set by NII (the Specifications referred to are legal instruments, which seek improvements in the storage of ILW currently held in legacy plants and facilities). We will be discussing this with the NDA.

We have continued to engage with Sellafield Ltd on the development of improved arrangements for LC 35. This Condition requires a licensee to make and implement adequate arrangements for decommissioning plants and facilities that could affect nuclear safety, and to produce and implement decommissioning programmes.

Sellafield Ltd has begun to roll out its new, improved arrangements, but there is still a significant amount of work to do. This is partly because of the need for its arrangements to reflect the large scope and complexity of decommissioning work, as decommissioning is now one of the main operational activities on the Sellafield Ltd site. However, we are satisfied with the progress being made to date.

2.2.2 Voluntary Severance Programme (VSP)

Following the announcement of the VSP we asked Sellafield Ltd to revise their nuclear safety baseline as a basis for effectively managing the human resource changes arising from the programme. Sellafield Ltd swiftly produced a revised nuclear baseline, though we considered this was not fully in line with good practice. By the end of this reporting period we had agreed to work with Sellafield Ltd to further develop the baseline over the coming weeks.

In August we received the management of change submissions setting out the staff reductions proposed as part of the VSP and the plans to ensure the changes were effectively managed so as to avoid any adverse impact on nuclear safety. The submissions were undergoing assessment at the end of the reporting period.

2.2.3 Integrated Change Programme (ICP)

The ICP work streams will form an integral part of Sellafield Ltd's Performance Plan and we have continued to monitor this. The separate programmes of work under the ICP will involve substantial changes and effort by the licensee and will require commensurate attention and commitment by ourselves to achieve the necessary regulatory assurance.

However, we have advised Sellafield Ltd that we are currently concerned about the lack of robust underpinning of how ICP performance improvements will be delivered and that we have still to see real evidence of change on the ground. Sellafield Ltd is looking to provide this evidence and the necessary underpinning. All the regulators are monitoring this situation closely and we have advised the licensee that, if there is little evidence of improvement by the end of the current planning year, we will consider the need for further regulatory action in line with our respective enforcement policies

2.2.4 Leadership and Management Intervention

In the reporting period we conducted an inspection of the nuclear safety leadership and management practices at director and senior manager level. Although there is considerable activity as part of the ICP and other projects to improve the leadership and management practices across the Sellafield Ltd site, the current activities are not fully in line with good health and safety practice. Sellafield Ltd responded positively to the intervention and feedback and we are now considering the detail of their response. This will form the basis of further dialogue over the coming weeks.

2.2.5 Emergency Arrangements

2.2.5.1 Sellafield Ltd & Windscale Licensed Sites Merger of Emergency Plans

Currently the Windscale site operates under a separate site licence with separate licence compliance arrangements to the main Sellafield Ltd site. In the longer term, Sellafield Ltd (the licensee for both the main Sellafield Ltd site and the Windscale site) plans to re-licence the site to fully incorporate the Windscale site. However, we requested Sellafield Ltd to integrate the emergency arrangements on both sites in advance of the planned full integration.

Sellafield Ltd submitted to NII a combined Sellafield & Windscale Emergency Plan for Approval. Since the submission, we have undertaken a series of discussions with Sellafield Ltd on the proposals to integrate the emergency arrangements on the Windscale site into the main Sellafield Ltd site arrangements. We have also undertaken various discussions with Sellafield Ltd on revisions to the Emergency Handbook and associated documentation which underpin the Plan.

In March we observed an emergency exercise where the scenario involved an incident on one of the Windscale facilities. We concentrated on the interactions between Sellafield Ltd and Windscale staff, which we found to be satisfactory.

In July NII issued two Approvals for the combined arrangements (LI No 780 for the Sellafield site and LI No 520 for the Windscale site).

2.2.5.2 Sellafield Ltd Site Sirens

The introduction of eight new siren masts was a welcome improvement, and the new sirens were commissioned in time for the Level 1 Emergency Exercise in May.

2.2.5.3 Level 1 Demonstration Exercises

The Level 1 Demonstration Exercise "Linnet" was witnessed in May by a team from NII. This was a challenging exercise and the team concluded that the exercise was an adequate demonstration of the emergency arrangements. We commended Sellafield Ltd on its performance, particularly on command and control where weaknesses had been identified in the past, and we expressed our wish to see this improvement in command and control sustained across the site.

Some areas for improvement were identified and the way forward in dealing with these matters was discussed at the Emergency Exercise Review Group in June. The Group also discussed ways to improve learning from emergency exercises and results from joint safety & security exercises. The scenario for the next Level 1 Demonstration Exercise in November was also agreed in principle.

2.2.5.4 Emergency Management Improvement Programme

Sellafield Ltd has drawn up a programme to improve their arrangements for managing emergencies. The programme includes the provision of improved Severe Accident Management Strategies (SAMs), analyses of severe accidents to improve the underpinning of the SAMs, and improvements to the way Hazard Identification & Risk Evaluation (HIRE) reports are reviewed in accordance with the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPIR).

Progress with the programme will be regularly reviewed by us at the Emergency Exercise Review Group.

2.2.5.5 Licence Condition 11 (Emergency Arrangements) Site Wide Inspection

During April to June, we carried out one in a series of planned coordinated site wide inspections associated with key licence conditions. The main aim of these inspections is to gain an understanding of how the licensee is performing across the site in complying with these licence conditions.

The inspections indicated that practices varied across the site. One site-wide finding was the lack of nuclear controls, specifically put in place by Sellafield Ltd to address relevant licence conditions, on both the availability and the maintenance, inspection & testing of equipment needed for nuclear emergencies. This matter, and other site-wide findings that arose, will be progressed by Sellafield Ltd via the Emergency Management Improvement Programme. As mentioned above, we will regularly review Sellafield Ltd's progress against this programme.

Certain facility specific matters arose and these are being progressed by the NII Inspectors who regulate the facilities. One area of concern was the Waste Vitrification Plant (WVP), where shortfalls in management/supervision, training and alarm response documentation were evident. These issues have been accepted by Sellafield Ltd, and are being progressed on an urgent basis with the relevant Director.

2.2.6 Maintenance Intervention

We continue to monitor Sellafield Ltd's delivery of its Maintenance Re-engineering Programme (MRP). The MRP is a Sellafield Ltd initiative aimed at improving the maintenance and asset care of Sellafield facilities. Where appropriate we expect the MRP to address further areas for improvement identified by the LC 28 cornerstone inspections mentioned in Section 2.3.2 THORP. While we have yet to receive a programme for implementation of the Maintenance Re-engineering Programme as a whole, some features of the MRP have been reviewed by us and reasonable progress is being made. This is evident from Sellafield Ltd's publication of a new Disciplined Maintenance Manual.

2.2.7 Disciplined Operations

Sellafield Ltd is implementing a new standard for Disciplined Operations across the site and is about to create a new programme of work / observations to assess the progress of implementation. We continue to monitor Sellafield Ltd's progress in improving the safety of how operations are conducted and will carry out inspections to assess the impact of implementation later in the year.

2.2.8 Alarm Management

Sellafield Ltd is making timely progress with implementing NII's alarm management recommendations and associated actions. These recommendations and actions are required across the site and relate to the licensee embedding and sustaining manageable alarm systems at Sellafield Ltd.

2.2.9 Joint NII/EA LLW Inspection

During July a joint NII/EA inspection took place of areas across the Sellafield Ltd site that generated, managed and disposed of Low Level Waste. This was part of a four phase inspection of the solid waste management of the Sellafield Ltd site that is to take place during 2010-11. Some excellent examples of good practice were found and some areas for improvement were identified.

2.2.10 Sellafield Ltd Waste Strategies

We received copies of the current Integrated Waste Strategy and ILW Strategy for the Sellafield Ltd Site and have commented on them. We await a response on these comments and have requested a regular interface meeting to discuss the development of optimum strategies for the site, the strategies to deliver minimised accumulations of waste and optimal long term management of ILW until the disposal route is available.

2.2.11 Sellafield Ltd Contaminated Land & Ground Management

The NII and EA continue to work closely with Sellafield Ltd in ensuring that its contaminated land and groundwater management programme progresses satisfactorily. Sellafield Ltd has provided an update on the current status of this work and will be providing a range of reports for comment to the NII and EA during September 2010. Sellafield Ltd has stated that there are no plans for further characterisation or remediation of the trenches in the short to medium term and both the NII and EA have requested justification for this. The trenches were used for waste

storage in the early days of the site, and as such fall well below modern standards for waste storage. Sellafield Ltd is making good progress with its borehole (monitoring well) maintenance and redevelopment programme. We are monitoring this programme to ensure that Sellafield Ltd has an adequate network of boreholes.

As part of the Land Quality Safety Case review, Sellafield Ltd has produced a document 'The Principles and Guidance Manual' and we intend to provide feedback on this. Additionally, we also intend to provide input into an update on the short term contaminated land and groundwater strategy that Sellafield Ltd is producing this year.

2.2.12 Baseline Surveys of Contamination

We continue to be supportive of Sellafield Ltd's Baseline Survey initiative. These surveys are intended to identify and catalogue leakages of radioactive material outside buildings on the site. Improvements to LC 34, which requires that radioactive materials and wastes be controlled, contained and monitored to prevent leakage and escape, have resulted in good engagement between the site and regulators. Sellafield Ltd has provided a draft programme that it has populated with milestones to enable monitoring of its implementation.

2.2.13 Annual Review of Safety (AROS)

As part of Sellafield Ltd's arrangements that underpin LC 15, Annual Reviews of Safety are held with Sellafield Ltd. The purpose of these reviews is to give NII confidence that the site has been managed safely over the past year, and will be managed safely in the forthcoming year. At our instigation, this year a single AROS covering the whole of Sellafield Ltd was held, rather than several individual AROS meetings at Operation Unit level. This was to encourage consistency and Director engagement. The AROS, which was held in July, was disappointing. Whilst we were pleased that most of the relevant Directors attended, the written reports were not consistent, were generally not good quality and contained few key performance indicators associated with nuclear safety. Sellafield Ltd has accepted that improvements are needed and they will be working with us to ensure that next year expectations are met.

2.2.14 HSE Inspection on LOLER (Lifting Operations & Lifting Equipment Regulations)

During June a joint inspection was undertaken by HSE's Field Operations Directorate & NII on LOLER. HSE recognised that improvements had been made to the management of lifting operations on the site since the serious accident on THORP in April 2008, and further improvements were planned. Sellafield Ltd recognised that more work still needed to be done.

2.3 OPERATIONS

2.3.1 Magnox Operations

General

Decanning and reprocessing of Magnox fuel did not take place for about half the reporting period. Partly this was because of low rates of fuel delivery to Sellafield Ltd.

The NDA has published Revision 2 to the Magnox Operating Plan, which takes account of the various causes of delay since Version 8 was published in February 2008. We were invited to comment on a draft of this, and we were satisfied that our comments had been taken into account.

We made two principal inspections in the Magnox plants during the period. In the first, we judged the licensee's compliance with LC 11, entitled Emergency Arrangements. We chose to concentrate on the licensee's arrangements for dealing with accidents or emergencies arising on the Plutonium Finishing and Storage Plants. In the second, we judged the licensee's compliance with LC 28, entitled Examination, Inspection, Maintenance and Testing, concentrating on the Fuel Handling Plant and the Magnox Reprocessing Plant. In both inspections no matters of concern arose.

2.3.1.1 Magnox East River

The licensee has submitted a review of the safety systems in the Fuel Handling Plant that prevent exposure of workers to high dose rates. This has allowed the licensee and ourselves to be more certain that sufficient extra measures are in place to ensure safety while some engineered improvements are made.

2.3.1.2 Reprocessing Operations

Magnox plants shut down periodically to allow extensive programmes of inspection and maintenance, the modification or replacement of equipment, and the removal of accumulated waste. We consent to their restarting when we are satisfied that the plants are able to safely fulfil their task of completing the reprocessing of the UK's Magnox fuel safely. During this reporting period we have discussed the licensee's plans for the timing and work content of future outages, with the aim of ensuring they are arranged, in the interests of safety, to allow the soonest end of reprocessing.

We have written to the licensee requiring an improvement to the safety case for the systems that prevent exposure of workers to high doses when the main crane in the Magnox Reprocessing Plant lifts flasks of fuel.

2.3.1.3 Plutonium Finishing and Storage

We have continued our assessment of Sellafield Ltd's last review of the safety case for the plutonium finishing plant. Permanent neutron monitoring systems have been installed to reduce the potential doses to workers, but also to protect against the chronic build-up of material within gloveboxes. Sellafield Ltd has revised and simplified the current safety case for chronic leaks in gloveboxes, to include the implementation of these new neutron monitoring systems. We have assessed Sellafield Ltd's proposal to implement the revised safety case for chronic leaks in gloveboxes, and have issued LI No 773 giving permission for the implementation of the proposal.

2.3.2 THORP (Thermal Oxide Reprocessing Plant) Operations

During this reporting period, routine inspections have been undertaken on the systems used for the training and assessment of personnel and plant start-up procedures.

Safety case based inspections have been undertaken on the dissolver and chemical plants HA cycle in relation to criticality safety.

Discussions also took place prior to a caustic wash of a pulsed column, required to remove debris, confirming that Sellafield Ltd was following due process.

As part of the site wide co-ordinated inspections the emergency arrangements used within THORP were inspected and a maintenance systems inspection was started. Problems were found with the access control point within the THORP Receipt and Storage Pond building with no control evident for the inventory. Sellafield Ltd is addressing the issue.

No other significant issues were found during the inspections although some recommendations have been made that Sellafield Ltd is addressing.

We have started a series of inspections aimed at establishing if the asset risk management processes used are robust, so that resources are used efficiently thus minimising safety risks and risks to AGR receipts. This work continues.

Sellafield Ltd has continued to make progress in addressing the nuclear fire safety issues raised by us over 18 months ago.

Trials to prove the safety and efficacy of nitrate dosing of the THORP Receipt and Storage Pond in order to prevent fuel corrosion have started. We continue to liaise with Sellafield Ltd to monitor the progress of these trials.

We have received a safety case for the sluice gates in the THORP Receipt & Storage Pond. This was identified as a gap within the existing safety case over 2 years ago. The case is currently being assessed.

We continue to track progress of the THORP Long Term Periodic Review against the Improvement Notice issued in August 2008 and this remained on programme to deliver within the timescale of December 2010. We have also had meetings with Sellafield Ltd to discuss the delivery and content of the Long Term Periodic Reviews for the Wet Inlet Facility and the Light Water Reactor (LWR) storage pond. These are anticipated to be completed in 2011.

2.3.3 High Level Waste Plants Operations

2.3.3.1 Highly Active Liquor Evaporative Capacity

- **Evaporators A and B**: Following the discovery of the leaks from pipe work described in the previous report, Sellafield Ltd has carried out extensive in-cell camera surveys of each evaporator to determine whether any further leaks or damaged pipe work/structures are present. We expect to receive a submission from Sellafield Ltd in the autumn detailing their proposal for returning one of the evaporators to duty.
- **Evaporator C**: The evaporator has operated successfully throughout the period on Oxide and Magnox duty.

2.3.3.2 HAL Stocks

We have continued to work with Sellafield Ltd on revisions to the HAL Stock Specification No 679. Before the end of 2010, we expect to issue a new Specification set in terms of a more meaningful measure of the potential hazard, rather than volume of HAL. The new measure will be derived from the mass of fuel (teU) from which the HAL was originally derived. In addition, the post 2015 steady state position will be based upon an improved assessment of what is reasonably practicable and will be underpinned by Operating Rules.

2.3.3.3 Waste Vitrification Plant (WVP)

The production of containers from WVP during this period has been less than expected. After a promising start to the financial year Line 1 suffered a series of engineering issues and has not operated consistently since mid July. Line 2 has been undergoing engineering refurbishment since the start of this period.

The interim safety case for line 3 expired at the end of March and with it production operations ceased. An appropriate overarching safety case has now been received for the shield door programme of work and LI No 774 was issued in August acknowledging its receipt and identifying a series of permissioning hold points for the work. Phase 1 of the work has now commenced.

2.3.3.4 Residue Export Facility (REF)

During this period, two LIs (Nos 783 and 779) have been issued to enable the export of three loaded vitrified residue flasks from the Residue Export Facility for the second tranche of returns to Japan. As part of the process to permission the transition from commissioning to routine operations, we notified Sellafield Ltd of the requirement to submit an appropriate safety case prior to the commencement of routine operation in REF.

2.3.4 SMP Operations (Sellafield Mox Plant)

Inspections were undertaken throughout the reporting period and no significant matters arose.

2.3.5 Infrastructure Operations

Various inspections were undertaken during the reporting period, and in particular work associated with the continued operations safety case for the Analytical Services Building. We concluded that there were no issues which precluded the issue of an LI to permit the implementation of Phase 2 of the continued operations safety case which covers ventilation systems. LI No 776 was therefore issued in May.

2.4 MAJOR PROJECTS

2.4.1 Sellafield Product & Residue Store (SPRS)

Sellafield Ltd has reported that inactive commissioning is complete. We expect to receive an application from Sellafield Ltd in the next reporting period to commence Active Commissioning and we are planning to carry out a joint readiness inspection in conjunction with other regulators.

Over the period, our Inspectors have assessed safety documentation produced by Sellafield Ltd to resolve issues identified during the Pre-Inactive Commissioning Safety Report. We consider that Sellafield Ltd has made substantial progress, however, there remain some issues to be resolved prior to the start of active commissioning.

2.4.2 The Stores Inventory Retrieval Project

The Stores Inventory Retrieval Project (SIRP) covers the relocation of cans of product to stores which are considered to meet modern standards. Sellafield Ltd successfully completed the most recent phase of the work to move a large number of cans between stores in August. We did not identify any significant issues that would require SIRP operations to be delayed and the next phase of can transfers is programmed to begin in September.

3.0 NON ROUTINE MATTERS

3.1 Highly Active Liquor Evaporation and Storage (HALES) Disruption of Cooling Water Supply 22nd January 2010

We continued our investigation to fully understand the issues underlying this event. Once these had been completed and documented, we reviewed Sellafield Ltd's findings from their Board of Inquiry (BOI). We came to the opinion that Sellafield Ltd had failed to put in place arrangements that will provide systems of work covering the process plant and equipment isolation work in HALES that are, so far as reasonably practicable, safe and without risks to health. Such a failing is in contravention of Section 2(1) of the Health and Safety at Work etc Act. In June, following a consideration of the findings from its own investigation and Sellafield Ltd's BOI report, NII issued a second Improvement Notice (reference NH002/2010) requiring Sellafield Ltd to remedy the contraventions by January 2011.

3.2 Magnox Swarf Storage Silo (MSSS)

Sellafield Ltd reported two events to us which occurred on the Magnox Swarf Storage Silo (MSSS). Both events involved safety mechanisms which were not properly connected and in service. One safety mechanism is associated with preventing the build up of pressure within a silo, and the other with the monitoring of hydrogen within a silo. We are reviewing Sellafield Ltd's response to these events and are considering the need for formal enforcement action. Our enforcement decisions will be based on guidance set down in the HSE's Enforcement Policy Statement and Enforcement Management Model.

3.3 Accumulation of Uranium Trioxide Powder

Sellafield Ltd reported the accumulation of uranium trioxide in the ductwork of the Magnox Uranium Finishing Plant. The uranium trioxide has since been removed and we are working with EA and Sellafield Ltd on the implications of this event.

4.0 REGULATORY ACTIVITY

See Table 1 and 2

TABLE 1

CONSENTS, APPROVALS, SPECIFICATIONS AND ENFORCEMENT ACTIONS ISSUED BY NII DURING

1 April 2010 to 30 August 2010

Date	Type	Ref. No.	Description
Sellafield Ltd - Sellafield (and Calder Works) – Nuclear Site Licence no. 31G			
25/06/2010	Improvement Notice	NH002 /2010	Interruption of Cooling Water in Hales Plant.
08/07/2010	Consent	756	Consent to lease of first floor of building to NDA.
30/07/2010	Consent	775	LC 3 Application for consent to a Licence to occupy for "Everything Everywhere Ltd (EEL)" to install, maintain and operate equipment on a mast at the South of Sellafield site.
06/07/2010	Approval	780	Sellafield Site Emergency plan – (Sellafield & Windscale) – Approval of combined emergency plan for the Sellafield & Windscale Site.
30/07/2010	Consent	783	Notification of Requirement for Consent to Operate for the residue Export Facility.
Sellafield Ltd – Windscale – Nuclear Site Licence no. 83			
06/07/2010	Approval	520	Approval of combined emergency plan for the Sellafield Ltd & Windscale site.

TABLE 2

AGREEMENTS & ACKNOWLEDGEMENTS ISSUED BY NII DURING

1 April 2010 to 30 August 2010

Date	Ref. No.	Description
Sellafield Ltd – Sellafield (and Calder Works) – Nuclear Site Licence no. 31 G		
07/07/2010	773	**Agreement** – to proceed with modification to existing plant via PFS/0455.
06/05/2010	774	**Acknowledgement** – of receipt of Overarching Strategy Paper of Phase 1 & Phase 2 Permanent Modifications to the WVP Line Shield and Trap Doors, Rev1 / Issue 2
21/05/2010	776	**Acknowledgement** – under arrangements made under condition 22 – Modification to an existing plant - Implementation of phase 2 of continued operations of the safety case covering ventilation systems.
12/07/2010	777	**Acknowledgement** – (Under LC 22 Arrangements), for an update to a new Care and Maintenance Safety Case and for the Transfer and Continued Storage of Residue Bottles from First Floor to Ground Floor Storage Arrays.
05/07/2010	779	**Acknowledgement** – of receipt of safety documentation-overarching strategy paper for residue export facility buffer store entry.
16/07/2010	781	**Agreement** – to the Active Commissioning of the 3rd Extension Liquor Activity Reduction (L.A.R) Project.
30/07/2010	782	**Agreement** – to commence the export of three loaded VR waste flasks from the Residue Export Facility for the second Japanese return.
23/08/2010	784	**Acknowledgement** – The Safety Documentation for Phase 3A (Removal Redundant Ventilation System).
06/08/2010	785	**Agreement** – to the Active Commissioning and Operations of the off Gas System (PMP Silos/0420).
Sellafield Ltd – Windscale – Nuclear Site Licence no. 83.		