



**HM NUCLEAR INSTALLATIONS INSPECTORATE**  
**BNGSL SELLAFIELD, BNGSL DRIGG AND UKAEA WINDSCALE SITES**  
**WEST CUMBRIA SITES STAKEHOLDER GROUP**  
**QUARTERLY REPORT FOR 1 OCTOBER TO 31 DECEMBER 2005**

**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 the BNGSL Sellafield, BNGSL Drigg, and UKAEA Windscale sites.

These reports are distributed quarterly 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.uk/nuclear/llc/index.htm](http://www.hse.gov.uk/nuclear/llc/index.htm) under "Local Liaison Committee Reports"

## **1 INTRODUCTION**

NII Inspectors made a total of 68 visits to the Sellafield, Calder Hall, Windscale and the Low Level Waste Repository (LLWR) sites during the quarter. This involved a total of 209 days on site (see Table 1 for details). The more significant issues identified during these inspections are summarised below.

## **2 BNGSL SELLAFIELD**

### **2.1 GENERAL SITE MATTERS**

#### **2.1.1 Level 2 Meeting**

A routine Level 2 Meeting was held between NSD Senior Management and the BNGSL Executive Management team that was structured to concentrate on strategic issues. BNGSL highlighted the difficult operating period since the last meeting but stressed that improvements were being made particularly in relation to the Site Improvement Plan. NII identified some ongoing concerns in relation to delivery of safety and the potential use of the "leverage" model as a further means of regulatory interactions.

#### **2.1.2 Demonstration Emergency Exercise**

The second Demonstration Emergency Exercise for the year was held on the Sellafield site, based on a release from the High Level Waste Plants. The Exercise was judged to be an adequate demonstration but identified some improvements required to the Access Control Point layout and information management, alerting down wind of the incident plant, re-entry team management and scenario management.

#### **2.1.3 HSE/BNGSL Joint Programme**

Meetings have been held on the development of a HSE/BNGSL Joint Programme to improve the profile of conventional safety issues on the site and to be in line with other HSE wide initiatives and interactions with large employers. These meetings involved not only BNGSL management but also the Safety Representatives. Lead topics were identified for the programme i.e. Falls from Height, Manual Handling, Transport and Slips, Trips and Falls. Discussions will be held in the future on occupational health issues to look at opportunities for aligning HSE's health initiatives with those of BNGSL.

#### **2.1.4 Overarching Site Safety Report (OSSR)**

BNGSL issued its OSSR for the Sellafield site in December 2003. The report supplements the 81 individual plant / topic safety cases, and is subject to review and update as part of the site's ten-year rolling Periodic Safety Review (PSR) programme. The OSSR provided a useful review of the site's safety management processes, but it did not address a number of specific site-wide safety case issues set out in NII's published generic guidance.

Following discussions on these matters in 2004 and early 2005, BNGSL committed to update its report to address NII's concerns. In consequence, NII decided to defer its public report on the Sellafield site PSR until December 2005. Unfortunately, subsequent resourcing problems within both BNGSL and NII caused BNGSL's OSSR work to be delayed and thus the NII is still not in a position to prepare its report.

At a meeting in January 2006, BNGSL and NII agreed to prioritise resource to this area and to re-plan its OSSR work so that NII will be in a position to publish its report

in December 2006. In the meanwhile, NII will monitor progress in this area to ensure that there are no further delays.

### **2.1.5 Sellafield Integrated Waste Strategy**

Following encouragement by NII and EA, BNGSL has set up an Executive led Integrated Waste Strategy Steering Group to implement the output from the first integrated waste strategy analysis. NII and EA will be observers at the initial set of meetings to ensure that the work of the group matches the purpose for which it was created.

An Integrated Waste Strategy (IWS) draws together all the waste challenges (active and inactive), the aims and objectives for improvements and rationalises the interactions for a complex site such as Sellafield.

## **2.2 INCIDENTS**

### **2.2.1 High radiation levels, Highly Active Liquor Evaporation and Storage (HALES) facility.**

High levels of radiation were detected in some outcell areas of the Highly Active Liquor Evaporation and Storage (HALES) facility during routine operations to sample highly active liquor on 4 December 2005.

The operation was stopped and operators evacuated the building safely and quickly in accordance with instructions. There was no loss of containment and no environmental effects were found inside or external to the building. Restrictions were placed on the use of an adjacent building but these have since been removed. Recovery actions have been completed successfully restoring normal operating conditions except to areas local to the bulge where access restrictions remain.

Three operators carried out the sampling operation. One received a radiation dose of approximately 350 micro Sieverts, the other two less than 110 micro-Sieverts. These doses are well within the legal limit of 20 milli-Sieverts (mSv) but are nevertheless considered to be of regulatory interest.

NII has conducted a preliminary investigation. While the root cause has not yet been established, the BNGSL investigation is ongoing. As part of this investigation, BNGSL recognised the need to improve its approach to learning from experience in HALES. NII will await completion of BNGSL's investigation before deciding whether enforcement action is warranted.

BNGSL identified a need to carry out further sampling urgently and did so after consultation with NII. The work was completed successfully and without incident. NII will seek engineered improvements to ensure the safety of future sampling operations.

### **2.2.2 Aerial Discharge, High Level Waste Plants**

There was an activity release from the Highly Active Liquor Evaporation & Storage plant at Sellafield via the cell extract ventilation system on the 25 August 2005. The activity was only just above the normal background radiation levels and did not exceed any statutory limits. The discharge was just detectable by the Site Perimeter Monitoring System.

NII closely monitored BNGSL's actions in recovering the situation, in determining the causes and carried out a joint investigation into this event with the Environment

Agency. The recovery actions taken by BNGSL at the time of the incident were appropriate. The root cause of the event has not yet been determined but restrictions have been placed on plant operations until the final plant inspections, which are technically challenging, have been completed. NII will have further discussions with BNGSL and decide whether or not further regulatory action is warranted once the inspection results are available.

### **2.2.3 Potential overexposure**

On 31<sup>st</sup> October, two contract joiners were working in one of the laboratories to install new doors. During removal of part of the skirting board, the two installed air samplers in the laboratory went into alarm with high alpha activity. All the workers (5 in total) evacuated the area, and full personnel checks were carried out, including nose blows, and these were found to be clear. The laboratory was barriered off, cleaned and re-surveyed, found to be clear of contamination and normal working was resumed in the laboratory.

On 29<sup>th</sup> November, the Sellafield Approved Dosimetry Services (ADS) completed the assessment of urine samples given by the 5 people who were working in the laboratory. The provisional dose assessment for one of the contractors was 18.4 mSv, which would give a cumulative year to date dose (YTD) of 19.4 mSv, which would not include November's film badge result. The two contractors were restricted from active area working pending the analysis of other urine samples. Isotopic analysis of the material is also being carried out.

The laboratory was used to handle plutonium until the early 1990s. Post Operational Clean Out (POCO) was carried out, the original equipment was removed, and the laboratory was completely refurbished. New equipment has recently been installed, and the door replacement was one of the final tasks to be completed. The NII carried out information gathering including a visit to the laboratory, had discussions on work control with the Superintending Officer (SO) and work supervisors, and had discussions with the Radiation Protection Advisor (RPA). BNGSL has convened a Board of Inquiry, and the NII will continue its investigation into this event.

### **2.2.4 Pipebreak**

On 29 Nov 2005 BNGSL discovered a broken pipe on the pipebridge between Discharge Pond No.2 and the Settling Tank. The pipe in question was a 6" diameter, unused empty cast iron Wastewater pipe. Failure of the pipe had resulted from failure of the pipe hangers. The damaged pipe threatened other services on the pipebridge, including air and steam supplies to the Solid Waste Storage Facility, as well as being a risk to Discharge Pond No.2 pipework and safety systems below. BNGSL undertook immediate remedial measures to secure the pipe, followed up by more substantial supporting measures using a load bearing scaffold and chain blocks. An internal investigation is underway which will be reviewed by NII.

## **2.3 MAGNOX REPROCESSING OPERATIONS**

### **2.3.1 Reprocessing Operations**

The reprocessing plant periodic shutdown commenced on 1 April 2005 in accordance with the requirements of the plant maintenance schedule. The main purpose of the shutdown was to carry out a full plant washout, to perform planned maintenance and inspections that could not be undertaken whilst the plant was operating and to undertake a number of improvement projects. One of the main projects completed was the refurbishment of one of the dissolver charge machines.

Due to delays in starting up Product Finishing and Storage Plants, the shutdown was extended beyond the period originally programmed. After consideration of the restart safety issues NII gave BNGSL Consent to Operate the plant at the end of October.

Following the resolution of a number of operational problems the plant is moving towards steady operation.

### **2.3.2 Fuel Handling Plant (FHP) and Pond Conditions**

Fuel decanning operations restarted following the NII issuing the Consent to restart reprocessing operations in the Magnox Reprocessing Plant. The pond water radioactivity contamination level remains in the 2000 to 2500 Bq/ml range.

### **2.3.3 Magnox Product Finishing and Storage Facility (Magnox PF&S)**

On the 10<sup>th</sup> October 2005 NII issued BNGSL with Consent under Licence Condition 31 (2) to restart feeds to the conditioning vessels of Finishing Line 5 at Sellafield.

Over the previous four months BNGSL had undertaken a significant amount of work to address NII's concerns related to the original Direction to halt feeds to the Finishing Line. The work included: a comprehensive review and reassessment of safety, a review of the need for a material accountancy system, a review of resources, a review of training, the provision and implementation of a glovebox standard, a review of alarm response instructions, a review of contingency arrangements and a workforce workshop to capture their safety concerns.

BNGSL's work resulted in improvements in its arrangements to reduce the risks associated with plant operations, notably: provision of a neutron monitoring system, provision of a material accountancy system and improved glovebox standards. The first of these is essential to ensure plant risks are tolerable and ALARP with respect to fissile powder and liquor accumulations.

## **2.4 THORP OPERATIONS**

### **2.4.1 THORP - Feed Clarification Cell Leak Investigation**

NII's investigation report has still to be finalised at the end of this period. The findings from this report will be communicated to BNGSL via letter in order to give them as much notice as possible of HSE recommendations and requirements to further inform the Company's thinking prior to restart. Consideration is being given to further regulatory action.

## **2.5 HIGH ACTIVE LIQUOR WASTE PLANTS**

### **2.5.1 Emergency arrangements**

NII observed an emergency exercise centred on the HLWP in November. NII commented that HLWP staff responded well to the exercise. In particular there was a good sense of realism and urgency plus effective command and control. However a training exercise undertaken earlier resulted in a less than satisfactory performance during which NII observed a lack of focus on managing the simulated incident. NII intends to carry out inspection activities to determine that BNGSL can deliver an adequate response to emergencies at all times in this facility.

On 4 December BNGSL invoked part of its emergency arrangements when high levels of radiation were detected during routine operations to sample highly active liquor, reported above. NII noted that BNGSL's immediate response to and subsequent management of the incident were to a high standard.

The generic Sellafield aspects of the November emergency exercise are covered elsewhere in this report.

### **2.5.2 Highly Active Liquor (HAL) Stocks**

BNGSL continues to provide NII with monthly reports summarising the quantities of HAL contained in the highly active storage tanks (HASTs). This information is used by NII to judge whether BNGSL continues to meet the HAL Specification issued in 2000, which provides a limit on the amount of HAL that can be stored at any time and promotes HAL stocks reduction. Despite performance problems at WVP during 2005, the extended outage at THORP has meant that HAL stocks are currently at their lowest levels since the Specification was issued. Consequently NII is content that BNGSL has kept within the requirements of the Specification.

NII will review the Specification during 2006 and, if it appears necessary in the interests of safety, we will change it in the light of five years' experience.

### **2.5.3 Highly Active Storage Tanks (HAST)**

Discussions continued on the integrity of HAST 13. NII has informed BNGSL that HAST 13 should be considered as having a proven leak in its primary containment and should be withdrawn from routine service. BNGSL has confirmed that there are no current plans to refill the tank routinely. Future use of the tank is not precluded subject to an adequate safety case and BNGSL has agreed to consult NII before HAST 13 is refilled. The issue has potentially significant long-term implications but, because of available spare tanks and ullage (capacity in the used tanks), can be managed in the short term.

There are similar risks from HAST 12 though they are currently small and NII consider it is justified to retain this tank in service at the present time. The situation remains under review.

### **2.5.4 HAL Operations**

Evaporator A has returned to service and will be used to support Magnox reprocessing. BNGSL continues to develop and deploy inspection techniques on the heating/cooling components of all three evaporators to inform predictions of evaporator lifetime.

### **2.5.5 Windscale Vitrification Plant (WVP)**

The rate of vitrified container production has been lower than planned because of a need to alter how the plant is operated following the activity discharge event in April, other operational difficulties and the need to implement plant modifications to improve throughput. However at the end of the quarter WVP began a period of full operation of all three vitrification lines and the rate of container production has increased.

BNGSL is actively pursuing further improvements in throughput and discussions are continuing on proposed improvements to the container production processes. Subject to the provision of an adequate safety case, these improvements are likely to lead to HAL stocks being reduced more quickly and so will be in the best interests of safety.

### **2.5.6 Residue Export Facility**

This project is progressing well with inactive commissioning due to start on time early in 2006. Discussions on outstanding regulatory issues are planned for January 2006 with a view to resolving these issues before the start of active commissioning early in 2007. Standards of housekeeping and health and safety are generally good. Efforts continue to be made by BNGSL to learn from a number of minor conventional safety incidents and to improve safety awareness.

## **2.6 MOX OPERATIONS**

### **2.6.1 Sellafield MOX Plant (SMP) Commissioning and Operation**

SMP continued MOX commissioning operations along the full line, whilst continuing to manufacture the next 12 fuel assemblies. Safety performance has remained generally good. Plant inspection was again limited due to NII priorities elsewhere on site, but review of safety performance and progress of the Consent to Operate Safety case continued at quarterly project meetings.

The date for application by BNGSL for Consent to Operate (CTO) has now been revised, so that submission of the request for CTO will be early in the 2006-07 financial year. This will have no impact on plant operations or manufacturing programmes, as the plant will continue in the MOX commissioning phase, gaining further operating experience, until CTO is granted by HSE/NII. In the meantime, the safety case is being reviewed for each area of the plant using commissioning information from fuel produced to date. Each reviewed safety case is being implemented on plant on a rolling basis. NII is content with this position and is monitoring delivery of the work in support of the CTO, in close liaison with the Environment Agency.

Several 'readiness for Consent to Operate' inspections have been scheduled, to cover a range of topics. For example, an NII 'Management of Safety' Inspection was completed in October 2005 with a satisfactory outcome. A joint Inspection by the NII and Environment Agency Inspectors is planned for March 2006.

## **2.7 WASTE TREATMENT & DECOMMISSIONING**

### **2.7.1 Contaminated Land / Groundwater**

During 2005 NII has been encouraging BNGSL to address NII's long standing concerns over the ongoing management of contaminated land and groundwater at Sellafield. BNGSL established a project board to respond, and has developed a programme of activities that extend over the next few years. Changes to the site management team have established a manager with site wide responsibilities in these areas, and an organisational structure to support this post. This should provide better focus for the future.

The programme of work is wide ranging, and considers the need for early remediation activities as well as longer term issues. Monitoring of historical disposals and leaks, and underpinning scientific modelling to allow sensible decision making are also addressed in the work programme. NII will monitor this work in conjunction with the Environment Agency. Structures are being set up, such as a cross agency project, and regular meetings with BNGSL, to provide appropriate monitoring.

### **2.7.2 Waste Treatment Complex (WTC)**

BNGSL is now expected to request the move to Phase 3 commissioning towards the end of the next period, with a request for full operations to follow later in 2006.

### **2.7.3 Engineered Drum Store**

This new drum store, EDS3, has successfully completed inactive commissioning and has received permission from NII to move into active commissioning. Progress to full operations is anticipated in 2006.

### **2.7.4 Decommissioning and Demolition**

Decommissioning work in one of the North Group Compound plants has been progressing well under an Improvement Notice. The decommissioning team successfully completed this work during the last period, to satisfactory address the requirements of the Improvement Notice. This was a significant achievement.

Several decommissioning projects took place and/or started during the last period. Demolition of the Reprocessing Store has progressed and will be completed early in the next period. A minor incident with no injuries occurred early in the project, which identified issues with the demolition method being used. The working arrangements were modified and there have been no repeat incidents.

Preparation for demolition of the Uranium Purification Plant is now well advanced. It is anticipated that demolition work will commence during the next period.

## **2.8 LEGACY PONDS & SILOS**

### **2.8.1 Legacy Silos**

At the beginning of the financial year there was funding uncertainty for Silos projects. BNGSL and NDA have addressed this issue, and have made significant progress via their Change Control Process. BNGSL is now able to argue that the current rate of progress reflects a programme unconstrained by consideration of costs, and determined by other factors including the time taken to engineer appropriate options.

On the Wet Silos the work has included the installation of a new crane within the building to replace a redundant crane. BNGSL carried out the work effectively, but with some learning points for BNGSL. The crane is now undergoing setting to work and commissioning. Other "enabling works" for retrievals are successfully reducing the radiation levels at the operating floor and clearing redundant equipment to make space for the new retrieval machines. Work is proceeding on the retrievals machines, on the design of the treatment plant and on the treatment process and waste product to be adopted. NII is monitoring all of these activities, some of which will require formal regulatory agreement to proceed.

At the Dry Silos, a revised "Baseline Safety Case" has been implemented which includes changes following a periodic review of the safety case. Structural improvements are being made (replacing a scaffold ladder with more permanent steelwork) and the project to provide an additional (seismically qualified) argon supply is making good progress. Over the last few months, NII has been presented with a new concept for retrieving the waste and is discussing with BNGSL an appropriate regulatory strategy for the safety case submissions. As with the Wet Silos Project, discussions are continuing on the choice of waste product and storage options for the retrieved material.

### **2.8.2 Piles Fuels Storage Pond and Magnox Storage Pond**

BNGSL successfully retrieved a skip of fuel from the Discharge Pond and transported it to Fuel Handling Plant to begin the characterisation process. This process should determine if fuel from the pond can be reprocessed or alternative means of dealing with it need to be established.

Good progress is being made in demolition works adjacent to the Discharge Pond to provide space for construction of some of the plant needed to safely remove sludge from the pond.

BNGSL has taken prompt remedial action to secure a damaged pipe on a pipe bridge in the vicinity of the Discharge Pond and is undertaking a review aimed at learning lessons for the future.

The movement of skips of fuel from the Piles Storage Pond is being prevented by the continued unavailability of the receipt plant. BNGSL has now submitted a safety case to move skips within the pond to create space for other activities aimed at eventual retrievals.

## **2.9 SITE & PLANT SERVICES, INCLUDING RESEARCH & DEVELOPMENT**

### **2.9.1 Site Services**

A meeting was held with representatives from QA and Procurement regarding defective flanges that had been discovered on various compressed air, nitrogen and LP steam systems. The certification for the flanges was checked when they were delivered to site, but the BNGSL system was reliant only on certification checks along the supply chain, back to the manufacturers in China. BNGSL is looking at ways to diversify sampling along the supply chain. The BNGSL investigation report into the flanges event identifies that improvements should be made to the QA and Procurement processes. A further meeting with QA and Procurement is planned to follow up the issues arising from the meeting and the investigation report.

An audit by inspectors from the Department for Transport (DfT) on the quality assurance arrangements for RAM transport was observed. The areas covered included the management systems used by the Site Movements Liaison Officer (SMLO), and the consignment and receipt arrangements, used by the Waste Compaction Plant. A new Site Procedure on the movement of materials on site is being written, and is due to be issued in the spring of 2006.

### **2.9.2 BNFL Technology Centre (BTC)**

The progress of BTC active commissioning was discussed with BNGSL, Nexia and NDA. The latest summary and detailed programmes were reviewed, and each of commissioning phases 1, 2, and 3 were discussed. There is to be transfer of both work and staff from other buildings to BTC in Spring 2006. A handover point needed to be defined to enable adequate consideration of training, and command and control arrangements. Nexia will produce a programme of work and priorities that will be fed into the active commissioning programme.

### **2.9.3 Analytical Services**

The Nexia paper that details a justification to continue operations in leased laboratories in the Analytical Services Building was discussed. Nexia proposes to continue working in existing laboratories until March 2007 because of the delays to BTC active commissioning. NII has requested further justification for continued Nexia working in the leased laboratories, and has asked for a meeting to discuss the proposals.

### **2.9.4 Utilities**

An area of leakage has been discovered on one of the pipebridges that crosses into Separation Area. Analysis of liquid samples and swabs of the area have confirmed that there is no contamination present, and hence it is believed that the leakage is due to rainwater ingress. The leakage is from a redundant chamber in the pipebridge, and investigations are in progress to identify the source of the ingress. A programme of increased surveying of samples from the area has also been initiated.

The recent Sealine 3 leakage events were discussed with the Head of Utilities. There are two damage sites, temporary clamps had been fitted to both damage areas. During the monthly pressure test, it was found that one of the sites was leaking, so a new temporary clamp was fitted which passed a subsequent pressure test. The damage to the sealine is due to be permanently repaired during Spring 2006.

## **2.10 EFFLUENT & ENCAPSULATION**

### **2.10.1 B241**

Floc retrieval operations remain suspended due to engineering problems. BNGSL propose to seek agreement from NII to resume extended active commissioning in B241 within the next month.

### **2.10.2 ILW Storage Strategy**

In response to a request from NII, BNGSL has written a letter confirming the strategy for storage of future arisings of Intermediate Level Waste (ILW) from operational facilities (Magnox and Thorp) post 2008. Current projections show Encapsulation Product Store 2 (EPS2) being full around this date. BNGSL's letter reaffirms its commitment to maintain a programme for EPS3 availability by 2010 and its expectation to rely on filling of the transport aisles to enhance current storage capacity within EPS2 whilst the EPS3 project progresses.

A meeting between BNGSL, NDA and NII will be arranged to discuss the totality of the waste storage strategy further and to ensure that adequate funding is made available to realise the delivery of the new store.

## **3 CALDER HALL**

### **3.1 ROUTINE MATTERS**

#### **3.1.1 Fuel Route Transition Project**

NII has continued to maintain interest in this large project. Currently, Calder Hall is in the process of implementing modifications to plant and equipment, and two specialist inspectors have undertaken an inspection to examine the management of this work to gain confidence that the modification will be implemented correctly. NII has also concerns about the training of operators, and has engaged the services of experts from the Health and Safety Laboratory (HSL) to assist with our assessment. NII was also made aware that Calder Hall was having to deal with issues associated with the commercial side of the project, and was concerned that these might delay defuelling and therefore, delay removal of the main hazard on the site. NII was assured by BNGSL that there would be little or no impact on the defuelling programme.

#### **3.1.2 Annual Review Meeting**

The Annual Review Meeting between Calder Hall and NII was held, and both the EA and NDA attended. The aims of these meetings are to review past performance, to consider future work on the site and its regulation. It was a useful meeting and NII was satisfied that Calder Hall was orientating itself to safely manage decommissioning work. However, NII reiterated one of the key findings from an enhanced inspection carried out in September (described in the previous WCSSG report) that the main management focus at Calder Hall needs to continue to be on the management of the fuel still in the reactor cores and its safe defuelling to remove the major nuclear hazard.

## **4 UKAEA WINDSCALE**

### **4.1 Improvement Notices**

The two Improvement Notices that were served on UKAEA and Nexia Solutions for operations in B13 had a scheduled date for compliance of 30<sup>th</sup> November. The key conclusions from the investigation were: -

- The document system in B13 is complicated, places too much reliance on generic documents and does not clearly pick out the essential requirements needed on a day-to-day basis to ensure safe working.
- The level of supervision in the facility by both UKAEA and Nexia Solutions Ltd was not adequate to ensure compliance with the written instructions.

Both companies have made good progress with developing improved systems. The Site Inspector had agreed with both companies that he would give favourable consideration to an extension of the date for compliance if they had made sufficient progress with:

- A properly costed and resourced plan
- Sufficient competent supervision for all tasks being performed in the facility
- Evidence of a new work control system being rolled out.

Evidence of progress in these three areas was presented towards the end of November. An integrated plan has been produced that takes account of all work in the facility, including the Improvement Notices, and the resource required for delivery. A fundamental review of what work is done in the facility and how it should be supervised has produced a hierarchy of requirements, risk assessments and controls based on hazard. There was early evidence of these new requirements being used on the plant with enthusiasm from the workforce using them. They were happy that they were better able to understand the safety measures that apply.

Both Notices have been extended from 30<sup>th</sup> November 2005 to 1<sup>st</sup> September 2006, in response to requests from both companies.

#### **4.1.2 Operational Safety Case**

NII reported previous of its concern at the range of weaknesses that are in the B13 Operational Safety Case, and therefore issued a Specification under Licence Condition 13, Licence Instrument 512, that requires UKAEA to seek advice from its Southern Nuclear Safety Committee on

- The adequacy of UKAEA's procedures for the production and assessment of safety cases, and
- The adequacy of the endorsement of the Safety Report that describes the B13 safety case taking into account the range and importance of the issues raised by NII.

The Safety Committee has advised UKAEA of a number of improvements that it should make to its process for producing safety cases. UKAEA has committed to complete these improvements by April 2006. The advice on the second topic is awaiting some changes to the integrated work plan for the facility. NII is content that the NSC has taken this matter seriously and that it is providing sound advice to UKAEA.

#### **4.2 Pile 1**

NII has made an initial assessment of the new Operational Safety Case (OSC) for Pile 1 but does not agree with the proposals in the OSC for removal of features such as temperature monitoring and fire fighting capability. Discussions continue.

NII was pleased to be informed that planning work has started to look at the effects of removing a period of interim care and maintenance from the Piles decommissioning plan thereby accelerating total removal of the hazard.

#### **4.3 Safety Cases**

UKAEA continues to have problems resourcing safety case work at Windscale. The current Operational Safety Case for B14 was prepared in 1995, and had its validity extended in 2001 to December 2003. This was extended a second time at the end of 2003 for a further two years. Delivery of the replacement safety case that will lead to decommissioning of the facility has slipped further and is not now expected until summer 2006. UKAEA has, at NII request, put in place a justification for care and maintenance operations in the facility.

#### **4.4 Emergency Exercises**

No exercises were observed at Windscale this quarter.

#### **4.5 Life Cycle Baseline/Near Term Work Plan (LCBL/NTWP)**

NII is pleased that the third LCBL is a significant improvement on previous versions, and recognises that this has been a challenging task for the site. Navigating around the document is a huge improvement over earlier submissions. The Inspectorate does still have a number of concerns that means full regulatory support to the proposals in LCBL3 is not yet possible. NII's primary concerns are:

- The proposed strategy for the Piles, particularly that for Pile 1. There is still not support within NII for the proposed deferral strategy, but note the comments above for Pile 1.
- The absence of relevant information regarding Nexia POCO, waste management, disposal and withdrawal. This remains a problem area but there are signs of progress.

NII acknowledges that the very recent work to produce an integrated plan for the whole of B12/13/14, described above, is likely to address both the above problem and also the longstanding NII/NDA concerns that the NTWP does not currently have adequate detail for B13.

#### **4.6 Leases**

Work is continuing to tidy the leasing of buildings on Windscale site that were overlooked when the legal transfers required by the formation of NDA were implemented.

Building B1, occupied by BIL Solutions Ltd. This was thought to have been dealt with under the transfer scheme, but on closer examination the legal teams had reassigned the wrong lease. The building has now been handed back to UKAEA; no further work under Licence Condition 3 is required.

Building B25. This new area has been requested by BNGSL to enable access for construction work in connection with B29. This is now progressing well after initial differences of opinion over what was allowable under the contracts that UKAEA and BNGSL have with NDA. NII is content that work has progressed on the site under direct UKAEA supervision. Once the LC3 Consent has been signed by NII, BNGSL will be able to work under its own supervision.

Building B546.1 occupied by the BNGSL demolition group. This was overlooked during the implementation of the transfer schemes. A new agreement is being developed along the same lines as the B25 agreement. NII and EA have identified some areas of management and recording of waste that require enhancing to comply with the new EA discharge authorisations.

#### **4.7 Windscale AGR**

NII is satisfied with decommissioning the Windscale AGR, which continues to progress well, although it has been recently slowed by problems with the ventilation system during cutting of the reactor vessel. The problem is one of poor efficiency in the pre-filters at removing small particulate matter that is resulting in excessive changes of the final HEPA filters. This does not affect discharges, but does create more filter waste than had been planned.

### **5 BNGSL DRIGG**

#### **5.1 Low Level Waste Repository (LLWR) at Drigg**

BNGSL has made good progress in bringing the emergency arrangements at the LLWR in to line with those at Sellafield. The new Incident Control Centre and Access Control Point were successfully tested in a recent exercise. The exercise usefully revealed a number of areas where further improvements can be made.

In line with NDA's draft strategy to compete the LLWR, BNGSL has begun the process of defining the requirements for a Site Licence Company for the LLWR that is separate from the Sellafield organisation. NII has been engaged with this process.

## HM NUCLEAR INSTALLATIONS INSPECTORATE

**TABLE 1**

**QUARTERLY RETURNS FOR  
SELLAFIELD, CALDER HALL, LLWR (DRIGG) AND WINDSCALE**

**DURING THE QUARTER**

**1 OCTOBER TO 31 DECEMBER 2005**

	BNGSL SELLAFIELD <sup>1</sup>	BNGSL CALDER HALL <sup>2</sup>	BNGSL DRIGG	UKAEA WINDSCALE
NUMBER OF VISITS	52	7	0	9
INSPECTION DAYS ON SITE	178	8	0	23
ENFORCEMENT ACTIONS <sup>3</sup>	0	0	0	0
Incidents in the quarter likely to be published in HSE's quarterly "Statement of Nuclear Incidents at Nuclear Installations"	0	0	0	0
CONSENTS, APPROVALS	1	0	0	0
LICENCE INSTRUMENTS	7	0	0	0

<sup>1</sup> The figures shown for BNGSL Sellafield are those for BNGSL's chemical plants.

<sup>2</sup> The figures shown for BNGSL Calder Hall are for the plants on the Sellafield site previously called the Calder Hall nuclear power plant.

<sup>3</sup> An enforcement action may be a Direction issued by HSE under the nuclear site licence, an Improvement Notice, or a Prohibition Notice, or the laying of information in pursuit of a prosecution.

**TABLE 2**

**APPROVALS, CONSENTS, DIRECTIONS AND WITHDRAWALS  
ISSUED DURING THE QUARTER**

**1 OCTOBER TO 31 DECEMBER 2005**

<b>Date</b>	<b>Type</b>	<b>Ref. No.</b>	<b>Description</b>
<b>BNGSL DRIGG Nuclear Site Licence no. 29A</b>			
<b>BNGSL Sellafield (and Calder Works) – Nuclear Site Licence no. 31G</b>			
24/10/05	<b>Consent</b>	549	Consent to resume irradiated fuel feed to the Magnox Reprocessing Plant dissolver
<b>UKAEA Windscale – Nuclear Site Licence no. 46B</b>			

**TABLE 3****LICENCE INSTRUMENTS ISSUED DURING THE QUARTER****1 OCTOBER TO 31 DECEMBER 2005**

<b>Date</b>	<b>Type</b>	<b>Ref. No.</b>	<b>Description</b>
<b>BNGSL DRIGG Nuclear Site Licence no. 29A</b>			
<b>BNGSL Sellafield (and Calder Works) – Nuclear Site Licence no. 31G</b>			
29/11/05	<b>Acknowledgement</b>	553	Request for acknowledgement of receipt of safety documentation for the redundant effluent sludge pipework systems (resps) as described under a plant modification proposal.
07/12/05	<b>Acknowledgement</b>	556	ACKNOWLEDGEMENT OF PMP HALES REVISION 0
07/11/05	<b>Notification</b>	557	Notification to submit safety commissioning document
16/12/05	<b>Acknowledgement</b>	559	Acknowledgement of safety documentation for the D Bay small scale transfer trial - task 3
08/12/05	<b>Specification</b>	560	Specification to halt the commencement of specified THORP operations without consent of the Executive
08/12/05	<b>Acknowledgement</b>	562	Acknowledgement of receipt of safety documentation: Thorp head end overarching safety case strategy paper, and notification of intention to examine cell 220 low pressure cooling water system modifications
09/12/05	<b>Acknowledgement</b>	564	Pipebridge short term remedial actions
<b>UKAEA WINDSCALE – Nuclear Site Licence no. 46B</b>			