

HM NUCLEAR INSTALLATIONS INSPECTORATE
BNFL SELLAFIELD AND DRIGG AND UKAEA WINDSCALE LOCAL LIAISON
COMMITTEE REPORT
QUARTERLY REPORT FOR 1 APRIL TO 30 JUNE 2001

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 Sellafield Local Liaison Committee (LLC) and covers activities associated with the regulation of safety at BNFL Sellafield and Drigg and UKAEA Windscale.

These reports are distributed quarterly and will be available on the Internet. Site Inspectors of HM Nuclear Installations Inspectorate (NII) attend LLC 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"

1 INSPECTIONS

Inspectors from HMNII made a total of 64 visits to the Sellafield, Calder Hall, Windscale and Drigg sites during the quarter. This involved a total of 274 inspector days on site (see table 1 for details).

Visit of Swiss Nuclear Regulators

Members of the Swiss nuclear safety regulators (HSK) held discussions with HMNII's Chief Inspector prior to making a visit to the BNFL Sellafield. The visit was arranged to enable HSK to make judgements on whether to recommend the recommencement of irradiated fuel shipments from Switzerland to Sellafield. HSK inspectors were accompanied by the nominated site inspector during their visits to the THORP storage pond and shear cave areas. The plants dealing with the treatment of the HA and ILW waste stream were also visited in order to illustrate the dependence of the THORP plant on the downstream plants. A meeting with a number of senior managers was held where BNFL's response to the team inspection report was discussed.

Improving Understanding

The Industrial Society facilitated a meeting between BNFL and NII senior managers in May. The meeting's aim was to improve the understanding of the each parties expectations and to identify ways of improving communications. It was agreed that further work was required to obtain a consensus on short, medium and long term strategic objectives and setting of realistic targets. It was also accepted that communication could be clearer and better were targeted. Representatives from both BNFL and NII were tasked with developing action plans to make improvements.

Promoting Health and Safety

Inspectors attended a number of the BNFL Safety Representatives Forums as part routine work. The nominated site inspector met with senior representatives of the workforce to inform them of the findings of recent incident investigations and co-ordinated inspections. The reasons why it was currently not possible for NII to issue the agreement for MDF to restart operations and also the nature of the recent meeting between BNFL and NII senior management on improving understanding were also explained.

Meetings of the three sub committees of the Local Liaison Committee were attended. Inspectors made presentations, provided briefings and answered questions relevant to the matters being considered by the committees.

2 ROUTINE MATTERS

2.1 SITE INSPECTION PROGRAMME

A summary of the work undertaken to meet Site Inspection Programmes (SIP) for the BNFL Sellafield, Drigg and UKAEA sites during the planning year 2001/2 is addressed in this section of the report.

Basic Inspection Programme

The Basic Inspection Programme consists of inspections to verify that BNFL and UKAEA are complying with the conditions attached to their respective licences. The more significant issues identified during these inspections are summarised below.

Inspection of the BNFL arrangements for meeting the requirements of licence condition 36 (Control of Organisational Change) was undertaken in April by a team of 10 inspectors over a period of four days. This identified that there have been significant improvements to the implementation of the systems for the control of organisational change since our earlier inspection reported in the 1999 Team Inspection report. Inspectors were particularly impressed with the widespread knowledge of Management of Change (MoC) arrangements and the understanding of the MoC co-ordinators. As a result of the inspection we concluded that BNFL had implemented sufficient measures to enable Team Inspection recommendation 20 to be closed.

The inspection did identify that further work was still required to be completed in the identification of minimum staff levels and it also re-enforced our concerns with respect to the adequacy of the "baseline" assessments submitted to date. Consequently NII were unable to agree to closure of Team Inspection recommendation 17 & 18. BNFL were provided with advice on where further work was required.

A fire safety inspection of the BNFL Sellafield site was undertaken in May by a team of HSE inspectors. We found that there was a significant variation in the standards being achieved and that these range from excellent to unacceptable. BNFL were required to take immediate action to address the more significant issues identified and to provide a programme of improvements to address the system failings by 1 July 2001.

Inspections continue to identify problems with the suitability and sufficiency of risk assessments and the general provision of a safe system of work. BNFL were required to provide a programme of work by 18 June 2001 to demonstrate that these deficiencies were being addressed. This programme was supplied and is currently being reviewed to determine whether regulatory action is required.

An inspection of sample of the irradiated fuel storage ponds was undertaken during late June by quality assurance specialist inspectors. This confirmed that BNFL had good records of the materials held in the majority of the ponds and work was being undertaken to improve the information relating to one of the older ponds. However, the scope of the maintenance regime for the pond structures was considered to be too restrictive. Inspectors judged that in the case of the newer ponds this did not appear to have resulted in a lowering of safety standards. However, this wasn't the case for one of the older ponds where significant defects to safely related structures had been identified by inspection, but these had not been rectified. NII is currently reviewing the implications of these findings and BNFL's plans to determine whether regulatory action is required.

A joint inspection with the Environment Agency associated with the maintenance of ventilation systems on the UKAEA site was carried out during 3 May 2001. This identified that the condition of ventilation systems were generally satisfactory indicating a high standard of maintenance.

Emergency Exercises and Arrangements

Meetings were held to discuss and agree the scenario for the BNFL site demonstration emergency exercise arranged for 3 July 2001. Owing to the impact of Foot & Mouth disease it was agreed that off site monitoring vehicles would not be deployed for this exercise.

The equipment used for health physics monitoring both on and off-site in the event of an emergency was inspected. Some concerns with the quality and reliability of the equipment were identified and BNFL have provided a programme for its upgrade and/or replacement.

UKAEA have been asked to demonstrate that the Windscale site can support an off-site emergency response by mid 2002. (The off-site arrangements for the BNFL Sellafield site are routinely demonstrated and were last observed by NII during late 2000).

2.2 TEAM INSPECTION OF OPERATIONS AT SELLAFIELD

Work to review and monitor BNFL's actions to respond to the "Team Inspection" report has continued. A summary of NII's work and BNFL's progress was included in the "One Year On" report published in February 2001. A number of co-ordinated inspections have been planned for the next 12 months to verify that improvements have been implemented at the workplace. The first of these was completed in April 2001 and provided the evidence to enable recommendation 20 to be closed (see section 2.1)

BNFL continue to achieve the majority of the work identified as "key deliverables" on programme. However, a review of the outstanding work necessary to respond to the recommendations has been undertaken and BNFL have submitted revised completion dates for some "key deliverables". NII have noted the revised dates and is content that the company continue to give this matter significant attention. BNFL have been asked to submit a programme summarising when each outstanding recommendation is expected to be completed.

2.3 CONTINUED OPERATIONS SAFETY REPORTS (COSR)

BNFL have developed a programme to prepare Continued Operations Safety Reports (COSR) for each plant and service on the site. These documents are submitted to NII in accordance with an agreed programme. In order to provide assurance that the safety case is adequate a selective number of COSRs have been subject to examination and assessment by NII. This work is aimed at providing assurance that the COSRs have been prepared and reviewed in accordance with agreed process and it ensures that an action plan for implementing risk reduction measures has been issued.

As a means of illustrating the value of the COSR process a summary of the safety improvements identified by the COSR for the Special Nuclear Materials Store are included in appendix 1.

3 NON-ROUTINE MATTERS

3.1 GENERAL SITE MATTERS

Licence Administration

There has been no progress on the resolution of the HSE policy matter which has prevented the relicensing of the BNFL and UKAEA sites to accommodate a change to the site boundaries.

The level 2 meeting to review of safety performance at the site was attended. It was agreed that future meetings would be arranged to separate the review of safety performance from strategic and topical matters. In addition both BNFL and NII would provide summary reports reviewing performance at the site level in advance of the future meetings.

Organisational Change to BNFL Sellafield

Agreement to the implementation stage 1 of the organisational change to the BNFL Sellafield site was granted in June 2001 following the submission of a safety case. NII assessment of the safety case concentrated on ensuring that BNFL had sufficient measures in place to monitor whether the proposed organisational changes were adversely effecting safety performance. The findings of the earlier inspection of licence condition 36 (Control of Organisational Change) also influenced the decision.

Under the arrangements for licence condition 36 BNFL are required to obtain NII agreement before the implementation of further stages of the organisational change. NII have provided advice to BNFL on the matters which are expected to be addressed in a subsequent safety case.

Change to NII inspection team

The inspection responsibilities for the NII site inspection team have been reallocated to reflect BNFL's planned organisational changes and the promotion of one of its members. Mrs K McDonald has replaced Mrs S Hutchison in the team and will take up inspection responsibilities for the newly formed Plant and Services Operating Unit. Mr S Graham will replace Mrs S Hutchison as a member of the LLCs Environment and Health sub committee.

Control of Radioactive Material

Meetings have been held to review BNFL's plans to make improvements to the control of radioactive materials within the Separation Area. BNFL appear to have spent significant funds developing a number of proposals and schemes, but as yet few clear "deliverables" or confirmed programmes are available. Whilst NII are content with the company's intentions BNFL have been informed that evidence that this development work will lead to improvements is expected. BNFL have been required to submit details of the various schemes / proposals together with funded programme of work.

Inspection has identified that progress to make improvement to the arrangements for accumulation and storage of radioactive waste in the Separation Area appears to be significantly behind schedule. An Improvement Notice for this work was issued in October 2000 and the date for compliance agreed with BNFL (see 4th quarter report for 2000).

New Electricity Trading Arrangements

The Government's New Electricity Trading Arrangements (NETA) were implemented on 27 March 2001, further liberalising the electricity market. NII has been vigilant for signs of increased pressure on safety. To date, it is satisfied that safety has not been adversely affected.

3.2 INCIDENTS

A number of incidents were investigated by inspectors during the quarter. The details of three events are summarised below and have been reported in the Sellafield Newsletters. Some of these incidents may be included in a future edition of the HSE Quarterly Statement of Incidents.

Dropped Loads

A significant weight was dropped from the top of one of the Calder Hall Cooling Towers during planned repairs. Inspection confirmed that BNFL had established access control arrangements to exclude personnel from vulnerable areas whilst this work was being undertaken. Consequently no person was at risk and NII was satisfied with the control and

supervision arrangements. The event meets the reporting criteria set out in the Reporting of Injuries, Diseases and Dangerous Occurrence Regulations (RIDDOR). BNFL's investigation into the cause of the dropped load will be monitored.

NII were informed by UKAEA that a load had been dropped from the 3 tonne hoist in Windscale Advanced Gas Cooled Reactor (WAGR). As this is part of the remote dismantling machine there were no persons at risk and no injuries were sustained. The event meets the reporting criteria set out in the Reporting of Injuries, Diseases and Dangerous Occurrence Regulations (RIDDOR). NII will follow up the event on completion of UKAEA's investigation.

Release of Carbon Dioxide Gas

Carbon Dioxide gas (CO₂) was released from a refuelling chute on Reactor 4 Pile cap and discharged into the lower floor areas. The release occurred during purging operations whilst the reactor was shutdown for planned maintenance. Inspection has confirmed that whilst purging takes place access to the Pile cap area is restricted. However, there are no restrictions on the lower floor areas and there is the potential for staff to be at risk. In this case no staff were injured and consequently no further action was considered necessary. HSE's Field Operations Division is monitoring BNFL's investigation into incident.

Completed Investigations

Investigations into three incidents (Contamination of Contractor, Loss of Ventilation Systems and Contamination of Glovebox Workers), which were reported in the last LLC report have now been completed. NII is currently considering what regulatory action to take.

3.3 MAGNOX REPROCESSING OPERATIONS

Magnox Reprocessing Operations

NII has noted the resumption of the reprocessing of Magnox fuel after the completion of the street three ventilation modifications. NII is particularly keen to see BNFL make progress in clearing the backlog of older Magnox fuel stored in the Fuel Handling Plant pond.

Storage of Magnox Fuel

NII is encouraged by BNFL's progress in addressing some of the technical issues relating to the handling of leaking fuel in the Fuel Handling Plant. Dose rates in the pond hall appear to be under control and rates of recovery of the leaking fuel have increased.

A licence instrument to enable modifications to software controlling the "Short Cooled Rod" monitor in the Fuel Handling Plant has been issued following examination of the safety case for this work.

3.4 THORP OPERATIONS, INCLUDING MOX PLANTS

Modifications to THORP safety case

Work continues on the assessment of a safety case to enable BNFL to reduce the concentration of neutron absorber material added to the process during the dissolution of irradiated fuel. Implementation of the modification could reduce the volume of High Active Liquor generated by reprocessing. However, the absorber material is necessary to ensure criticality safety and hence NII need to be convinced that sufficient safety margins remain before issuing an agreement to this modification.

NII is still reviewing the safety case to enable reprocessing of increased burn up fuel to be fed to the plant. This work is associated with BNFL's Advance Fuels Trials programme and could lead to higher burn up fuel being reprocessed in THORP.

MOX Demonstration Facility (MDF)

There has been no progress on the resolution of the policy issue which has prevented NII from issuing the agreement to enable BNFL to restart of the plant as a development facility. All issues identified following a readiness inspection have been addressed by BNFL.

MOX Fuel Return

NII have asked BNFL to provide further details of the short and medium term options considered for the handling of MoX fuel from its customers.

3.5 WASTE MANAGEMENT AND EFFLUENT TREATMENT

B215

BNFL submitted a revised safety case for making the connections necessary to enable the Caustic Scrubber system to be made operation; this safety case satisfied the requirements of Direction No. 2 (see sections 3.1 and 4.2 in the report for quarter 1). Detailed assessment and inspection of the revised methods of connecting the new Caustic Scrubber to B215 ventilation system undertaken. A Consent to allow the work to be implemented was issued on 20 April 2001.

BNFL's investigation report into the loss of the B215 ventilation system was submitted to NII. This report, together with another reviewing the adequacy of the management and staffing in the B215 area, were considered sufficient to meet the requirements of Direction No. 3 (see sections 3.1 and 4.2 in the report for quarter 1). NII have required BNFL to review the key findings of these reports to ensure that similar failings do not occur elsewhere on the site. BNFL's programme of work in this area is expected to be submitted during the next quarter.

BNFL have submitted a safety case to amend an existing Operating Rule to enable B215 to receive HA raffinate arising from the reprocessing of higher burn up Magnox fuel. Assessment of this proposal has commenced, but BNFL have been advised that it will also be necessary to the B215 Operating Rule with the B205 safety case, as this currently requires longer cooling times for higher burn-up Magnox fuel

Following the connection to the new Caustic Scrubber ventilation system, the ventilation system has returned to normal operation. Work is ongoing to improve alarm management at the B215 control room. Preparatory work for full implementation of the B215 COSR, (planned for mid July) is nearing completion.

In May BNFL reported a localised elevated temperature in one of the Highly Active Liquor storage tanks. NII are closely monitoring the work being undertaken by BNFL to reduce this elevated temperature. Elevated temperatures give rise to the potential for enhanced corrosion, so the B215 safety case implications are being reviewed. NII is satisfied with the immediate measures and medium term forward programme for control of the anomaly, but has requested regular updates of progress and the safety justification for the continued use of this particular storage tank. Spare storage tank capacity is available.

Windscale Vitrification Plant - Lines One and Two

A Consent to enable both lines 1 and 2 to restart operations was issued on 25th April. These plants had been shutdown in October 2000 to enable connections to the third line to be made. The planned restart had been delayed from January to April due the problems with the B215 ventilation system.

Line 1 has returned to service and achieving its production targets, but line 2 has not restarted operations due to outstanding equipment failures. Plant equipment failures have also substantially diminished the export of solid waste out of the plant to the engineered site store. The poor performance of the plants is of concern to both NII and BNFL since it threatens achievement of the reductions in Highly Active Liquor stock.

Inspection has confirmed that improvements to the shield door hydraulic drive systems are being implemented and this is reducing the risks to operators.

Windscale Vitrification Plant - Line Three

BNFL made an application on 1 June 2001 to enable the start of active commissioning of the plant which will lead to the introduction of Highly Active Liquor. Inspections have identified that a significant amount of operator training remains outstanding and there are a number of technical assessment issues outstanding. Consequently, NII has been unable to grant agreement to the start of active commissioning work.

Vitrified Product Store

Inspection has identified corrosion of steelwork, lifting equipment and electrical switchgear in parts of this store. BNFL have been required to review the adequacy of the current inspection and maintenance for the plant. Inspection also identified problems with the quality of alarm management in the plant which BNFL are currently investigating.

B315

A Licence Instrument acknowledging receipt of the Continued Operations Safety Report (COSR) was issued during June. This will allow BNFL to implement the requirements of the new safety case and make a number of safety improvements.

3.6 WASTE RETRIEVAL AND DECOMMISSIONING ACTIVITIES

B29

NII issued an agreement to enable work to be made to improve the skip handler machine to take place following the submission of the safety case

B30

Following the review of the safety case NII issued an agreement permit the commencement of a project to retrieve lightweight scrap from the plant.

B38

NII asked BNFL to improve the cooling provision for compartment 7 following the elevated temperatures recorded last summer. BNFL have carried out some work to enable the cooling water flow tests to be carried out. In addition the company is carrying out, in parallel, a review of the options for cooling the 1st extension compartments. NII is continuing to monitor the progress with this work.

B41

Inspection has identified that there has been some slippage in the programme to inert the silo with argon. However, BNFL remain confident that it will be completed by the autumn. NII is currently assessing some aspects of the safety case concerned with the removal of the inerting gas and the return to an air atmosphere.

B136

Inspection in response to Improvement Notice (I/2000/NSD/PIB/004) and progress with the decommissioning of this facility has been undertaken. This has shown that there have been some delay with the design of the overbuilding, but preparatory work for the installation is now progressing. BNFL has also undertaken some remote survey work of the building contents

B212 Cs extraction plant

Inspection has identified that there has been a four month slippage in the decommissioning programme, a large part of which is due to the problems with the B215 loss of ventilation systems,. Active commissioning of the equipment is now taking place and BNFL believe that this will be completed by the autumn.

3.7 CALDER HALL OPERATIONS

BNFL identified a lamella tear defect in one of the outlet duct nozzles on Reactor 2 whilst undertaking inspection activities during its statutory maintenance outage. This resulted in a detailed complete inspection of the all outlet duct nozzles in order to gain an understanding of the extent and implication of this defect. A report of these inspections was submitted to NII and our assessment confirmed BNFL's view that the defects were within the tolerance considered by the Reactor Pressure Vessel safety case. Reactor 2 was subsequently granted a Consent to restart operations following the completion of the work required during the maintenance outage.

NII considered that the design of Reactor 1 and Reactor 2 was more susceptible to this type of defect. BNFL took Reactor 1 out of service to enable the inspection of all the outlet duct nozzles; no similar defects were identified. NII is satisfied with BNFL's commitment to fully inspect the other two reactors at Calder Hall, as well as all those at Chapelcross during their next planned outage.

Inspection of the outlet duct nozzles on Reactor 4 has been commenced and this has delayed its expected return to service.

3.8 UKAEA WINDSCALE OPERATIONS

Windscale Annual Review Meeting

NII participated in the Windscale Annual Review Meeting on 27 June. The purpose of the meeting was to review performance in the previous year and to look forward to the main challenges ahead. NII considered this to have been a successful meeting which represented a firm basis from which to develop and improve in the future both at Windscale and other UKAEA sites.

Pile 1 decommissioning

NII is satisfied that safety management improvements which have been or are being implemented provide sufficient confidence for NII to consider Pile 1 decommissioning projects. NII highlighted that UKAEA should pay extra attention to the peer review and scrutiny of these modifications and that NII will monitor these developments closely. The assessment of the

proposal to carry out reactivity measurements has been completed and the Licence Instrument agreeing to this modification was issued in May.

WAGR Waste Boxes

UKAEA have provided information which suggested that it might be possible for caesium to migrate to the surface of some WAGR reinforced concrete waste boxes within on-site storage timescales. This could result in the surface contamination limits set by NIREX being exceeded. UKAEA has undertaken a considerable amount of work to address this complex issue. NII have reviewed this work and consider that that UKAEA has provided an adequate justification for the encapsulation of the six ILW boxes arising from the loop tube campaign. However, NII have asked UKAEA to provide further justification for the encapsulation of ILW generated in later campaigns.

Based on calculations which are believed to be pessimistic, the caesium contamination limit could theoretically be reached for these boxes, but not before contingency arrangements could be implemented. UKAEA is currently considering the options for contingency arrangements to render the boxes fit for transport and disposal in line with NIREX requirements, should this be necessary in the future.

Emergency Arrangements

NII had requested UKAEA to conduct an emergency exercise every year at Windscale to demonstrate compliance with Licence Condition 11. Following discussions it has been agreed that UKAEA Windscale will be the focus of a full-scale site demonstration exercise every four years or so. This was considered to be appropriate in light of the extensive programme of emergency exercises and training across the Sellafield and Windscale sites and UKAEA involvement of the two full-scale site demonstration exercises every year. It was also agreed that NII will observe every year one of the UKAEA's local exercises confined to the Windscale site but which will also exercise the staffing and operation of the Sellafield Site Emergency Control Centre.

Response to HSE's "Dounreay audit" report

An inspection was carried out of Windscale's response to the Dounreay audit; similar inspections were conducted at UKAEA's other sites at Harwell and Winfrith. The objective was to gather information on which to base an input to the HSE/SEPA audit close-out report due later this year. Generally the findings were positive, although NII expressed concern at the slow progress with implementing the revised safety management system and UKAEA agreed to produce an underpinning implementation and resource plan to provide confidence of timely implementation.

4 REGULATORY ACTIVITY

4.1 PROSECUTION

None

4.2 PROHIBITION NOTICES

None

4.3 IMPROVEMENT NOTICES

Satisfactory Discharge of I/2000/NSD/PIB/3 - associated the B235 laundry

BNFL have made an adequate assessment of the risks associated with handling potentially contaminated clothing in the B235 Laundry and implemented measures to ensure that the operator is provided with appropriate protection.

I/2000/NSD/RET/1 associated with compliance with licence conditions 8 & 9

BNFL consider that sufficient measures have been taken to ensure the safe evacuation routes for all buildings on the site have been marked with by suitable and sufficient warning notices. In addition all persons who are authorised to be in these building have been provided with adequate instructions on the meaning of these notices and emergency routes. An inspection to confirm BNFL's views will be completed in the near future.

TABLE 1

**QUARTERLY RETURNS FOR
SELLAFIELD, CALDER HALL, DRIGG AND WINDSCALE**

**DURING THE QUARTER
1 APRIL - 30 JUNE 2001**

	BNFL SELLAFIELD ¹	BNFL CALDER HALL ²	BNFL DRIGG	UKAEA WINDSCALE
NUMBER OF VISITS	55	3	1	5
INSPECTION DAYS ON SITE	235	16	1	22
ENFORCEMENT ACTIONS ³	nil	nil	nil	nil
Incidents in the quarter likely to be published in HSE's quarterly "Statement of Nuclear Incidents at Nuclear Installations"	nil	nil	nil	nil
CONSENTS, APPROVALS	2	2	nil	nil
LICENCE INSTRUMENTS	9	nil	nil	1

¹ The figures shown for BNFL Sellafield are those for BNFL's chemical plants. They do not include figures for the plants within the Electricity Generation Group (see note 2 below)

² The figures shown for BNFL Calder Hall are those for the plants on the Sellafield site operated by (or for) the Electricity Generation group, primarily Calder Hall nuclear power plant.

³ 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****1 APRIL - 30 JUNE 2001**

REF No	DESCRIPTION
BNFL Sellafield - Nuclear Site Licence No. 31F	
72	Consent to restart of operations in WVP lines 1 & 2 following completion of active connections to line 3
73	Approval of Operating Rule 8 for Calder Hall reactors
74	Consent to implement modifications to the B215 ventilation systems associated with the caustic scrubber
75	Consent to restart of operation of Calder Hall Reactor No. 2 following maintenance outage

TABLE 3

LICENCE INSTRUMENTS ISSUED DURING THE QUARTER

1 APRIL - 30 JUNE 2001

REF NO	DESCRIPTION
BNFL Drigg - Nuclear Site Licence No. 29A	
	None
BNFL Sellafield - Nuclear Site Licence No. 31F	
357	Acknowledgement of safety documentation associated with modifications to the B311 "Short Cooled Rod" monitor software
359	Acknowledgement of receipt of COSR safety documentation for B303
361	Acknowledgement of receipt of PCSR for the transfer of scrap from B300 A-Bay
362	Acknowledgement of safety documentation associated with the Sellafield Organisation and agreement to implementation of stage 1
364	Acknowledgement of receipt of safety case for modifications to the B29 skip handler machine
365	Acknowledgement of receipt of safety documentation associated with WVP Cell 1 shield door improvement project
366	Acknowledgement of receipt of safety documentation associated with WVP Cell 2 Shield door improvement project
367	Acknowledgement of receipt of B315 settling tank revised Continued Operations Safety Report
369	Specification for consent to proceed from uranium safety commissioning to plutonium safety commissioning of the Sellafield MOX Plant
UKAEA Windscale - Nuclear Site Licence No. 46A	
57	Pile 1 decommissioning project - Agreement to proceed, regarding a category A modification concerning measurement of the reactivity of the Pile 1

APPENDIX 1

SUMMARY OF SAFETY IMPROVEMENTS IMPLEMENTED OR TO BE IMPLEMENTED IN THE SPECIAL NUCLEAR MATERIALS STORE

This is a purpose-built facility for the storage of special nuclear material in accordance with international treaty requirements. The facility provides both a safe and secure working environment and the inventory is verified by the Euratom / IAEA. In accordance with site licence condition 15 (Periodic Review of Safety Cases) the safety case underwent a thorough review and reissue in 1999-2000. Safety improvements carried out by BNFL stimulated by its own review process include the following:

- A new roof has been fitted and potential leak paths examined. The inside of the storage cells were inspected for possible water ingress (nothing being found) by endoscope and CCTV.
- Some improvements to the seismic resistance of the building structure and equipment within it have been made. A programme of further improvements has been identified. This includes fitting restraints to the ventilation fans and ducting in order to ensure that they remain operational after a seismic event and also improving the bracing between parts of the building structure.
- Additional fire stopping has been provided to all areas within the building which has improved overall fire resistance. In addition improvements have been made to the storage of records.
- A number of procedural or housekeeping improvements have been implemented. Whilst individually minor collectively they have made a considerable if unquantifiable impact.
- Operational Clearance Certificates and Criticality Clearance Certificates have been amended to clearly identify the operational rules, key safety equipment (safety mechanisms) and assumptions. Operator instructions have also been revised to reflect the safety case.
- The Plant Maintenance Schedule has been revised to incorporate all safety-related equipment identified by the COSR process and this is recorded on a separate database.

Improvements influenced by NII include the following:

- Improvements to the systems for the detection of a loss containment of radioactive materials and additional protection to operators from the hazard whilst manually handling of packages.
- Improvements to the design of the equipment by the operators used to transport the special nuclear materials. Lead shielding is to be fitted to the base of the equipment to prevent any direct radiation to the operators' toes.
- Changes to the mode of operation of the ventilation fans, to reduce the potential for a time-related common-cause failure, and the introduction of condition monitoring of this equipment.
- Additional inspections of ventilation ducts to check for the deposition of chlorine.