

NUCLEAR SAFETY



newsletter

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CONTENTS

British Energy
Safety management audit
Cross-licensee working

UKAEA
Contamination incident at Dounreay:
Solid intermediate-level waste handling
facility D2001

Aldermaston

**NSD stakeholder engagement
project**

**Imperial College CONSORT
reactor: Periodic safety review**

Devonport

BNFL

International

USNRC regulatory information
conference
Joint convention
Information exchange arrangement with
Ireland

Nuclear inspectors

NSD home page reorganisation

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Editorial

I am very pleased to provide another insight into the working of HSE's Nuclear Safety Directorate. Since my last report in February much has happened and we continue to face significant challenges. This newsletter reports on some of the key issues and events we have been dealing with.



British Energy (BE) has been making steady progress in closing out the findings of our 1999 audit into their corporate systems. Their progress has enabled us to agree to BE's two generating companies (the nuclear licensees) to work much more closely by sharing resources. This is being done as part of a longer-term relicensing project that will see the current two licensees merging into one licensee. BNFL has also achieved a significant milestone by the close-out of the 28 recommendations we made following our audit of control and supervision at Sellafield.

We have also been working closely with DTI on the development of the Nuclear Decommissioning Authority. I am very supportive of this initiative, as I believe the successful management of our nuclear legacy is essential if we are to ensure the safe recovery of hazardous radioactive wastes and their conversion into passively safe waste for long-term storage or disposal. We all have an interest in ensuring that our nuclear sites are decommissioned and restored to make them safe for future generations. The success of the NDA will depend upon the 'golden triangle', ie the vitally important relationship between the NDA, the safety, security and environmental regulators, and the nuclear licensees. Put simply, the NDA controls the money with a responsibility to the taxpayer to ensure value for money; the regulators have a responsibility to ensure public and worker safety and the protection of the environment; and the licensees have the technical know-how to deliver the task. The setting of priorities and the establishment of programmes will require inputs from all three and hence the dynamics of the process will require new ways of working. We in NSD are actively developing this new approach with DTI and our licensees. In earlier newsletters I have indicated that NSD is not resourced to deal with the increased regulatory activity that will be needed to deliver the success of the programme. We have put in a bid for additional resources and this is being considered by HSE and Treasury.

We have put a great deal of effort into improving our planning and reporting systems over the course of the year so that we can ensure resources are properly targeted. In particular, we have reviewed our output performance measures so that they are fit for purpose and help drive our effort. These measures not only include activity indicators but also outcome measures in support of our seven strategic goals. More work is being done in this area and a number of projects have been set up to develop systems to measure the degree to which we are progressing towards these goals. All of these measures and goals will be set out in our new three-year strategic plan which I hope will be available shortly on our website.

We have just completed our assessment of our performance for 2002/03 and this shows that once again we have achieved most of our targets. In the case of inspection we set a target that our inspectors should spend 80% of their time on regulatory activity. Last year we managed to achieve 87%. We planned to undertake 611 inspections in the year but achieved nearly 900 and covered 100% of our sites with 96% having over 90% of their inspection plans completed. We did not do quite so well in relation to the assessment of licensees' safety submissions. We set a target of 82% of submissions being completed to time; however, because of resource constraints we were unable to achieve this. We did however prioritise effort on key assessment activities with assessors spending 71% of their time on site-specific assessments against a target of 60%. We hit our target of 5% of effort spent on international work and the same on continuous improvement. Of our international contracts 100% were completed to plan. Once again, we were able to manage our finances and stay within our budget, with 98% of our £18 million budget used.

As you know, we in NSD strive to deliver regulatory excellence through continuous improvement and for many years we have been using the European Foundation for Quality Management (Excellence Model) (EFQM EM) as the vehicle. I am delighted to report that our 2003 reassessment against the EFQM EM has shown a significant increase in our total score. Our score has risen progressively from 230 in 1999 and 275 in 2001, to 380 in 2003. To put this in context, a score of between 350 and 400 indicates that we are among the top 25% of organisations in Europe. This success is entirely due to the hard work of my staff and the impact of our continuous improvement programme.

Of course the main purpose of the reassessment is not simply to score ourselves, but to determine our strengths and our areas for improvement. To make further progress with the EFQM EM it is clear that we need to concentrate more on results. Our initiative to develop indicators to more effectively measure our impact on nuclear safety and hopefully improved stakeholder satisfaction, will add significantly to achieving our goal of being a truly world-class nuclear regulator.

A significant change since the last Newsletter has been the staffing levels in NSD. My original recruitment target was 179 nuclear inspectors, excluding the additional resources required for NDA work. I currently have 169 inspectors in post and their costs are mostly recovered from industry; however, HSE's financial regime not only controls costs, it also limits the income that can be used to offset these costs. This limit has now been reached and as HSE has to prioritise those aspects of its work for which it can charge, I no longer have the ability to undertake any extra work. However, discussions are now in train with Treasury that will hopefully increase HSE's flexibility to use income to offset additional work. Until these discussions are completed, I am not able to take on the extra staff to enable me to do additional work.

I believe we are doing the right things, and doing them right; however, we are not complacent. We know we need to do more and your views are very important to us. If you have any comments or suggestions on what we do please don't hesitate to write to me; it is through feedback that we improve.

Laurence Williams
*Director of Nuclear Safety and
HM Chief Inspector of Nuclear Installations*

British Energy (BE)

Safety management audit

Over the last few months our inspections and assessments of BE's audit responses have enabled us to close out, either fully or provisionally, all except one of the audit recommendations. The clearance has been on the basis of evidence of successful change. Around 25% of the responses have provisional close out and we will be seeking confirmatory evidence of success over the next year.

BE's response to the audit has led it to develop improved and transparent processes for the management of work, of contractors and of change, and which ensure that all work affecting nuclear safety is undertaken by personnel who are suitably qualified and experienced. NII will monitor these processes as they become embedded into BE's routine business and are developed as part of that same routine business.

Cross-licensee working

BE has applied for the re-licensing of Hunterston B and Torness to bring all of its nuclear sites under a single licensee, as this will simplify its internal operations. As part of this process, which will take some time, BE has proposed and implemented with NII agreement the reorganisation of some of its central support functions under a unified management structure. This will result in some cross-licensee working, for which formal arrangements are in place, to ensure that each licensee continues to take proper responsibility for nuclear safety.

A key factor in NII's agreement to cross-licensee working was the progress made by BE in response to audit recommendations and the application of the improved processes to the change.

UKAEA

Contamination incident at Dounreay; Solid intermediate-level waste (ILW) handling facility D2001

On 12 November 2002 NII was informed of an incident in D2001 ILW processing facility at Dounreay. Some contamination had been discovered on workers' shoes, and two people were sent to the Occupational Health Department for decontamination. While the actual doses received were later confirmed to be very low, NII considered this to be a potentially serious event and initiated an investigation to establish the root cause and to determine if regulatory action was required. UKAEA also initiated its own internal investigation. NII's investigation began on 13 November 2002 and later concluded that the source of the contamination was from a small quantity of contaminated zinc bromide liquid, which had leaked from an internal transport flask. The flask and associated waste container and bagging system was not designed to provide containment of free liquids and hence the zinc bromide found a leak path to the working area. As a result of this investigation, and in line with HSE's enforcement policy, an Improvement Notice was served on UKAEA under the Ionising Radiations Regulations 1999, requiring improvements to be made to the flasking design and operations.

Aldermaston

AWEML have had their management contract extended from ten to 25 years. Our inspectors have been monitoring the safety performance of the licensee AWE plc and are satisfied that safety standards continue to be acceptable. Jim Furness, Deputy Chief Inspector, welcomed the stability that the extension will bring in dealing with legacy issues. Two new directors have been introduced onto the AWE plc Board, both of whom are existing AWE employees. As they already have a detailed knowledge of the way the licensee works, we do not anticipate any fall-off in safety performance while they become familiar with the full range of their responsibilities.

NSD stakeholder engagement project

In April, the NSD Senior Management Group (SMG) approved the way forward for this project. The first phase will involve gathering information from internal and external stakeholders about the effectiveness and efficiency of current engagement activities, and ways of improving them. To minimise the resource implications, SMG have agreed that the majority of this work will be co-ordinated through already established channels of communication with internal and external stakeholders. This information will then be mapped and analysed, with a view to implementing the most effective and efficient engagement activities across NSD.

The next phase of the project will involve drawing up a pilot stakeholder engagement strategy. This will form a major part of NSD's continuous improvement programme and will provide NSD with a set of performance measures by which NSD can monitor and improve on its performance. Information about this project will soon be available on the NSD website and we would encourage all stakeholders to review this page regularly.

Imperial College CONSORT reactor: Periodic safety review

A report of the first periodic safety review for the CONSORT reactor at Imperial College, Silwood Park, Ascot, was published in January. Licence Condition 15 requires licensees to undertake periodic and systematic reviews and to carry out reassessment of the safety case. This involves updating the safety case documentation, comparing the safety case against modern standards, analysing ageing and life-limiting features and justifying adequacy of safety for a future period of operation.

NII was satisfied that Imperial College had conducted a wide-ranging and satisfactory review. It concluded the licensee had:

- extended the general applicability of the existing safety case for a further ten years;
- identified, and is implementing, reasonably practicable improvements to plant and procedures;
- carried out a systematic review of age-related degradation phenomena and ensured that suitable monitoring and surveillance schemes were in place; and
- reviewed the safety case, reflecting the current plant configuration, and made arrangements to present a newly documented and updated safety case.

Since the review the licensee has identified modifications, procedural changes, inspection and additional analysis to further enhance the safety of the reactor. Programmes of work are underway to implement these improvements and NII is monitoring progress.

The full report of NII's conclusions can be found on the HSE website at <http://www.hse.gov.uk/nsd/impcol.pdf>

Devonport

All inspectors have continued to work on permissioning the construction, commissioning and operation of the facilities and activities at Devonport needed to support and maintain the programme for HMS Vanguard's refit and refuel. Permission has now been given for refuelling activities to be undertaken.

BNFL

Sellafield: 1999 control and supervision (team inspection) report

It has been three years since BNFL published its response to the 28 recommendations contained in NII's report on the control and safety of operations at Sellafield. During that time we have monitored BNFL's efforts and closed out recommendations as and when we deemed they had made sufficient progress.

BNFL have devoted substantial effort and resources to resolving the causes behind the issues we identified, which has resulted in a step change to the Sellafield working environment and culture. Notable changes include:

- a major change to the BNFL organisation, from Board-level down, providing clear lines of accountability;
- the creation of a single management system at Sellafield, with roles and responsibilities clearly identified;
- a substantial increase in personnel resources available on site;
- focused training to enhance behavioural skills and standards, and to ensure everyone has the skills and experience which are appropriate to the jobs they do;
- implementation of independent audit and review arrangements, and the establishment of Corporate Independent Inspectors and Independent Compliance Advisors;
- a recognition that the company's primary objective is now to deliver the decommissioning and clean-up of legacy operations, supported by commercial activities.

We are content with the priority that BNFL has given, and is still giving, to the project. However, despite this good work, there remains a significant task for BNFL to complete over the next year or two in order to be certain that the improvements have become part of normal business and are sustainable. Although the team inspection is now formally closed, we will continue to monitor BNFL's progress, and to assist us we have issued a legal Direction to BNFL to provide NII with six-monthly progress reports on a key aspect of control and supervision. This will ensure personnel remain suitably qualified and experienced and, if necessary, are duly authorised to carry out certain safety-related functions.

International

USNRC Regulatory

Information Conference

As part of NSD's active engagement in international activities of significance Laurence Williams attended the Nuclear Regulatory Commission's (NRC's) Annual Regulatory Information Conference (RIC) in Washington and made a presentation on nuclear regulatory challenges. At the conference the opportunity was taken to renew acquaintances with Nils Diaz, the new chairman of NRC, and other NRC commissioners including The Honourable Greta Dicus, pictured below with Laurence.

These meetings built significantly on the information exchange and dialogue that took place last year and the address to the senior executives' seminar of the US Department of Energy (DoE). During that seminar contact was made with Admiral Bowman, the US Director of Naval Nuclear Propulsion, and arrangements were made for a more detailed exchange. This took place immediately before the RIC conference and involved Admiral Bowman and his senior staff, Jim Furness and Robbie Gray of NII, as well as Commodore Peter Hurford, the Chairman of the Naval Nuclear Regulatory Panel (CNNRP). NII and MoD were greatly impressed by the degree of influence that the US Nuclear Navy has within government circles. The results, in terms of the substantial funding, the seniority and collective experience held within the US Navy's programme, the technical and scientific backing available and the very close control of



The Honourable Greta Dicus enjoying discussions with Laurence at the USNRC Regulatory Information Conference

personnel selection and training, all contribute to a very effective capability. The NII and MoD were struck with the strong US commitment to safety culture.

In turn, Laurence provided an outline of the way in which the Royal Navy's Nuclear Propulsion Programme is regulated, explaining that NII and the CNNRP have joint but separate areas of responsibility stemming from current legislation and amplified in a memorandum of understanding. At the meeting with Admiral Bowman's staff, there was an open approach to ideas on how to improve regulation and practices and maintain or improve the high levels of safety currently achieved.

Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

At the organisational meeting of contracting parties held at IAEA headquarters, Vienna, in April 2003, Laurence Williams was elected President of the First Review Meeting.

Information exchange arrangement

NII and The Radiological Protection Institute of Ireland (RPII) have regular dialogue and an annual senior-level meeting takes place to review key events and to facilitate the exchange of information. A new formal exchange arrangement has now been signed. This arrangement was signed by Laurence Williams and Ann McGarry (Chief Executive of RPII) on 14 May in Dublin. This further cements the relationship between both organisations and reaffirms their commitment to the sharing of relevant information on safety.

Nuclear inspectors

The number of nuclear inspectors in post on 1 April 2003 is 169. This figure is likely to remain fairly constant over the next few months.

NSD home page reorganisation

Recent visitors to our home page on the HSE website <http://www.hse.gov.uk/nsd> may have noticed that it has changed, hopefully for the better. We have placed information on the Internet for some years and it has become standard practice to add any new public-interest material to the home page when it is published. Because of the ever-increasing volume of material it was decided to reorganise the information so that it would be easier for outside users to find.

On the reorganised page, the information is divided into four main categories and subdivided as below:

A. Reports on our work

- Nuclear safety newsletter
- Local liaison committee reports
- Consultations

B. Reports on our licensees' activities

- Atomic Weapons Establishment
- British Energy reports
- British Nuclear Fuels Ltd (BNFL) reports, including Magnox
- UKAEA reports
- Other licensees

C. Key themes of our work

- Decommissioning and radioactive waste management/quinquennial review
- Standards and guidance
- Nuclear safety research
- Nuclear education

D. Our legal framework and our relationship with other government departments and regulators

- Statement of ministerial accountability
- International conventions
- Relationships with other government departments (OGDs) and regulators
- Internal framework

We have also added a date to the link for each report so that it is easier to distinguish between current and historical information.

This reorganisation of the current website will be followed by a more comprehensive redesign in line with the rest of the HSE website.

Any comments or suggestions on the website are very welcome.

Further information

HSE priced and free publications are available by mail order from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA, Tel: 01787 881165, Fax: 01787 313995, Website: <http://www.hsebooks.co.uk> (HSE priced publications are also available from bookshops and free leaflets can be downloaded from HSE's website: <http://www.hse.gov.uk>).

For information about health and safety ring HSE's InfoLine, Tel: 08701 545500, Fax: 02920 859260, e-mail: hseinformationservices@natbrit.com or write to HSE's Information Services, Caerphilly Business Park, Caerphilly, CF83 3GG.

Further copies of this newsletter are available from our home page at <http://www.hse.gov.uk/nsd>. Printed copies are available from John Hicks, 9NW Rose Court, 2 Southwark Bridge, London SE1 9HS, e-mail: john.hicks@hse.gsi.gov.uk

Single copies of HSE's *Quarterly statement of nuclear incidents at nuclear installations* can be obtained free from the NII Information Centre, HSE, Room 004, St Peter's House, Stanley Precinct, Bootle L20 3LZ, Tel: 0151 951 4103.

Your views

The Editor welcomes your views about the newsletter or the work of NSD. While we do not undertake to publish individual letters, comments about the scope and depth of coverage will help us in assessing the impact of the newsletter and to ensure that it remains relevant and informative. Please send any comments you may have to John Hicks, 9NW Rose Court, 2 Southwark Bridge, London SE1 9HS, e-mail: john.hicks@hse.gsi.gov.uk.

Recent reports on the NSD website

Report of the conclusions of the NII review of the first periodic safety review for the Imperial College CONSORT reactor	January 2003
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Technical assessment guide on periodic safety reviews	July 2002
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Technical assessment guide on the purpose, scope and content of nuclear safety cases	July 2002
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Technical assessment guide on the demonstration of ALARP	July 2002
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NSD has been placing reports of its work on its home page for some time. The following reports were published on the dates shown but continue to be frequently accessed:

The findings of NII's assessment of Amersham plc's 'site' periodic safety review	April 2002
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Investigation into a dropped fuel element incident at Chapelcross Nuclear Power Station	February 2002
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A review by HM Nuclear Installations Inspectorate of Magnox Electric plc's strategy for decommissioning its nuclear licensed sites	February 2002
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Dounreay audit final report	December 2001
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Report on Heysham 2 and Torness periodic safety review	February 2001
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Report on BNFL high level waste at Sellafield	February 2000
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Report on Heysham 1 and Hartlepool periodic safety review	November 1999
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British Energy audit report	1999
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Intermediate-level waste report	November 1998
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Report on Hinkley Point B and Hunterston B periodic safety review	June 1997
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