



HM NUCLEAR INSTALLATIONS INSPECTORATE

Dounreay Site Restoration Limited

Quarterly report for 1 April to 30 June 2010

Foreword

This report is issued as part of the Health and Safety Executive's commitment to make information about inspection and regulatory activities relating to the above site available to the public. It is for distribution to members of the Dounreay Site Stakeholder Group (DSSG) and covers activities associated with the regulation of safety at Dounreay. These reports are distributed quarterly. Site Inspectors of HM Nuclear Installations Inspectorate normally attend Dounreay SSG meetings and will be happy to respond to questions raised there or subsequently by members of the Dounreay SSG. Any other person wishing to inquire about matters covered by this report should contact the HSE, Nuclear Directorate Information Centre on 0151 951 3484/3290.

This report will be put on the HSE Website at
<http://www.hse.gov.uk/nuclear/llc/2010/index.htm>

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Inspections

NII Site Inspectors and Specialist Inspectors visited Dounreay on the following dates:-

- 12th – 15th April
- 19th – 21st April
- 26th – 29th April
- 11th - 14th May
- 14th - 17th June
- 28th – 30th June

Routine matters

Site inspection activities

Compliance inspections were undertaken against the following Licence Conditions

- 7 Incidents
- 10 Training
- 11 Emergency arrangements
- 12 Duly Authorised and Suitably Qualified and Experienced Persons
- 13 Nuclear Safety Committee
- 14 Safety documentation
- 17 Quality Assurance
- 21 Commissioning
- 23 Operating rules
- 24 Operating instructions
- 25 Operational records
- 26 Control and Supervision of operations
- 32 Accumulation of radioactive waste
- 35 Leakage and escape of radioactive material and radioactive waste
- 36 Control of organisational change

No major issues were identified.

Non routine matters

Transfer of mixer breeder sections from PFR

NII considered a proposed modification to move irradiated oxide fuel and mixer breeder sections from the PFR Irradiated Fuel Buffer Store (IFBS) to a dry storage area within PFR, for eventual transfer to an on-site interim store. This transfer constitutes an important step towards ultimate decommissioning of the IFBS. DSRL demonstrated that the receipt facilities are capable of receiving the fuel. NII's inspection challenged inventory management, training and competence and these were found to be satisfactory. NII also

challenged the readiness of the IFBS to start fuel moves and noted areas for improvement. Having received appropriate reassurances NII confirmed to DSRL that that we had no objections to the commencement of the modification. Since then a number of mixer breeder sections have been moved successfully from the IFBS to the dry storage area.

Revised proposals and alternatives to D3200 and D3900 projects

DSRL had planned to construct D3200 to process radioactive waste arising from the shaft and silo, and D3900 to manage reprocessing arisings. Both projects have been deferred because of changes to Dounreay's Decommissioning Strategy to reflect reduced funding resulting from Government's Public Value Programme. NII met DSRL to discuss the implications of these changes. It remains the DSRL baseline that the waste is to be removed from the shaft and silo and improvements to the shaft and silo safety cases are being considered. The scope of the D3900 project has been reviewed to attempt to identify less costly options which would arrive at the same end point. Discussions will continue.

Strategy for decommissioning PFR and DFR

NII and DSRL discussed revised proposals for decommissioning PFR and DFR, in particular the options for managing the hazards arising from processing items contaminated with alkali metal residues. DSRL recognises that there are risks associated with passivating these residues. The proposals for the management of waste arising from the decommissioning of DFR and PFR appear to be satisfactory, although are subject to development. A series of Level 4 meetings is planned to explore DSRL's proposals in detail.

Storage of fuel in the Fuel Cycle Area (FCA)

NII carried out an inspection of fuel storage arrangements in the FCA. We considered the adequacy of the safety case, storage arrangements and records, and implementation through staff competence and control and supervision. NII found that facility safety cases are in place and implemented and that there is a coherent link from the safety case to the conditions and limits implemented on the plant. The means by which DSRL confirms compliance with the conditions and limits was generally adequate, although NII commented that improvements could be made to the standard of record keeping and the reliability of the methods used for compliance checking. NII will follow up these findings.

Inspection for compliance with LC12 and LC26

NII carried out an inspection of site arrangements for compliance with Licence Condition 12 (Duly Authorised and other Suitably Qualified and Experienced Persons (SQEP)), and Licence Condition

26 (Control and Supervision of Operations). NII concluded that the DSRL arrangements for LC12 and LC26 were generally found to meet with relevant good practice expectations. SQEP roles and competence requirements are identified for normal operations duties that may affect safety and from Safety Related Posts. This process is informed using the safety case, legal requirements and a comprehensive review of all jobs and activities carried out on the site. Documented criteria exist for the need for and appointment of SQEPs and DAPs. However, the requirement for whether a SQEP or DAP is needed for control and supervision of a particular operation that may affect safety is not made clear in the safety cases. NII will follow up these findings.

Non routine matters

Intermediate Level Waste Flask Event

As previously reported, NII was informed of an incident in which operating staff moving a flask containing Intermediate Level Waste received elevated radiation doses (albeit within statutory limits). We undertook an investigation into the incident to seek to establish the cause, consider future preventative measures and identify any regulatory breaches. We will report the findings of our investigation to the Procurator Fiscal.

PFR incident 28 May 2010

NII was informed of an incident at PFR on 28 May 2010 involving a small fire associated with bags of sodium residues arising from decommissioning work. No personnel were injured. The radiological aspects were not significant: the licensee has confirmed that there was no radiation dose uptake for the personnel responding to the incident and that the assessed environmental discharge (tritium) was less than 0.01% of the PFR authorised discharge limit. The fire damage was limited to the immediate tenting enclosure and its contents.

NII carried out an initial investigation in June. The cause of the fire is unclear but it most likely arose from a combination of poor housekeeping coupled with poor segregation of materials. The extent of the fire was minimised by the detection systems in place and the prompt actions of the site Fire Brigade. NII is satisfied that the licensee responded positively to the incident and has carried out a thorough investigation with appropriate actions to prevent a recurrence.

PFR Management of Change submission: Cessation of shift work

NII completed its review of a licensee proposal to replace PFR shift staff (supplied under contract by Nuvia) with surveillance

visits carried out by licensee staff. NII confirmed that the progress with completing the work necessary to give effect to management of change proposal, including closing out and verifying the related actions, was satisfactory.

New funding spending cap

DSRL has been informed by the Nuclear Decommissioning Authority that there will be a spending cap on decommissioning activity of up to 150 million pounds in each of the forthcoming years. This will affect decommissioning plans at Dounreay. NII reminded DSRL that DSRL must follow its due process when considering changes to the lifetime plan. This will affect regulatory milestones, which will need to be revised because of the new spending profile. Any revisions must also follow DSRL due process. NII will take an active interest in these processes.

Regulatory activity

NII has powers under the Licence to issue Consents, Approvals and Directions. In addition, NII uses Licence Instruments to issue