

Health and Safety Executive

AWE Aldermaston and Burghfield: Quarterly Report for 1 October to 31 December 2007

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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 AWE Local Liaison Committee (LLC) and covers activities associated with the regulation of safety at Aldermaston and Burghfield. These reports are distributed quarterly and are available also from the Internet at <http://www.hse.gov.uk/nuclear/llc/index.htm>. Site Inspectors of HM Nuclear Installations Inspectorate attend LLC meetings and will be happy to respond to any questions raised there by members. Any other person wishing to enquire about matters covered by this report may contact HSE's Nuclear Directorate Information Centre on 0151 951 4103.

Introduction

A total of 20 NII inspectors visited the Aldermaston and Burghfield sites during the quarter. The Chief Inspector NII made his annual familiarisation visit to Aldermaston and Burghfield in November 2007. Also the Deputy Chief Inspector NII, made a routine visit to AWE in October 2007. There were also visits from other HSE inspectors in relation to conventional safety and explosives.

NII inspections were made on the following dates:

October 8-11, 18, 23, 24

November 1-2, 5-9, 19-20, 22-25

December 4, 10-13, 18

Routine matters

Inspections are undertaken for the purpose of monitoring compliance with (i) the conditions attached by HSE to the nuclear site licences, and (ii) other relevant provisions of the Health and Safety at Work etc Act 1974, including the Ionising Radiations Regulations 1999. NII assesses the licensee's compliance by undertaking inspections of its corporate arrangements and the implementation of these across the facilities. The complexity and extent of the arrangements and operations being controlled usually means that only a number of them can be sampled and examined on each occasion. In this period routine planned inspections, against the nuclear site licence conditions, were carried out in a variety of buildings/ facilities, and included:

Incidents on the Site – 10 facility inspections were carried out, of which 9 were considered to be adequate, and 1 had potentially significant improvements identified. An inspection of the corporate arrangements identified potential improvements.

Modification or Experiment on existing plant – of 4 facility inspections, 3 were considered to be adequate, and 1 had potential improvements identified.

Control and Supervision of Operations – a facility inspection was carried out and considered to be adequate.

Operating Rules – of 7 facility inspections carried out, 5 were considered to be adequate, 1 was considered to be of a good standard, and 1 had potential improvements identified.

Operating Instructions – of 5 facility inspections carried out, 4 were considered to be adequate, and 1 was considered to be of a good standard.

Examination, Inspection, Maintenance and Testing – 4 facility inspections were all found to be adequate.

Commissioning – a facility inspection was carried out and considered to be adequate.

Warning Notices - 2 facility inspections were carried out, both identified potential improvements.

Instructions to Persons on the Site - of the 2 facility inspections, 1 was considered to be adequate, and 1 had potential improvements identified.

Emergency Arrangements - of the 4 facility inspections, 3 were considered to be adequate, and 1 had potential improvements identified.

Periodic Review – of the 4 facility inspections, 3 were considered to be adequate, and 1 had potential improvements identified.

Quality Assurance – of the 3 facilities inspected, 2 were considered to be adequate, and 1 had potential improvements identified.

Safety Mechanisms, Devices and Circuits – of the 5 inspections carried out, 1 facility was considered to be adequate, 3 facilities had potential improvements identified, and an inspection of the corporate arrangements identified potential improvements.

Ionising Radiations Regulations – of 7 inspections carried out, 5 facility inspections were considered to be adequate, 1 had potential improvements identified, and an inspection of the corporate arrangements was considered to be adequate.

Where potential improvements were identified, during the above inspections, these were brought to the attention of the licensee and these are now being actively pursued. In some cases discussions with the licensee have been underway for some time.

Visit by HM Chief Inspector, Nuclear Installations.

The Chief Inspector Nuclear Installations, made his routine annual visit to AWE in November 2007.

He visited both the Aldermaston and Burghfield sites and held a useful meetings with the Directors and Safety Representatives

Visit by HM Deputy Chief Inspector, Nuclear Installations.

The Deputy Chief Inspector Nuclear Installations, made a routine visit to AWE in October 2007. He held a useful meeting with the Director of Assurance and inspected two of the Stockpile Management facilities. His general impression was of improvements to the material condition of both facilities, and indications that further improvements were planned by AWE.

Periodic Review of Safety Process (PRS)

NII gave an interim decision on the Burghfield PRS in September 07. Subsequently progress on remediation work is being monitored, in particular those project shortfalls not completed by the PRS decision date. However, AWE has agreed that no live nuclear work will be carried out until the necessary ALARP fixes are in place.

NII has reviewed the adequacy of the VIPER reactor PRS, noting that there is a site wide strategic review of radiation test facilities underway. Until the review is completed the future operational requirements for VIPER remain uncertain, and NII is unable to assess whether the risks are ALARP. NII will not therefore, be able to make a decision on continued future full operation of the Viper facility until the strategic review conclusions are known.

Preliminary Safety Report – replacement facilities

NII has informed AWE of some of its assessment findings of the Hydrus Preliminary Safety Report (PSR). Clarification has been sought and a number of meetings have been held, particularly in relation to containment philosophy. NII is seeking sound engineering concepts and deterministic justifications to minimise the consequences of an accident, irrespective of its probability, and to demonstrate appropriate robustness, defence in depth and that risks are as low as reasonably practicable (ALARP), and less reliance on risk reduction targets and probabilistic arguments.

NII has also provided comments on its review of the Mensa PSR. NII is content that the design philosophy for the project is adequate, but is seeking assurances from AWE that robust engineering design is being used to meet the demands of the safety functional requirements to ensure that the risks associated with the final design are ALARP.

Specification LI 33 – Accumulation of Radioactive Waste

In December 2007 AWE advised NII that they had satisfied the requirements of Specification LI 33 regarding radioactive sludges in that they had now emptied all the old sludge tanks, the sludges being disposed via a cementation process. NII accepted that AWE had met the requirements of the Specification.

LC7 Incidents on the Site

NII has concerns with the adequacy of AWE's LC7 arrangements, in particular reporting of

abnormal events both within the company and to the regulators. Issues related to AWE's corporate documentation are being addressed and a revised version should be rolled-out soon. Additionally, software issues are also being addressed. At the facility level, a number of Assurance Observation Report (AOR) training sessions have been undertaken and that this system was rolled-out in December. NII is also concerned that there is under-reporting of Abnormal Events (AEs). Facility management agreed to circulate a management note reminding all staff of the importance of raising AEs and agreed to raise the issue of AEs at the local Assurance meeting.

LC11 Emergency Arrangements

Following SITEX 2007, AWE was required to carry out a partial repeat demonstration of the Aldermaston Emergency Response Arrangements. NII considered that some aspects of SITEX 2007 had not been adequately demonstrated. The partial repeat had to be carried out in real time outside core working hours to show that staffing levels were sufficient to respond adequately to an event. The exercise was judged to be an adequate demonstration of the arrangements.

LC19 Construction or Installation of New Plant, LC20 Modification to design of Plant under Construction, LC22 Modification or Experiment on Existing Plant

An inspection was undertaken at Burghfield to establish the adequacy of the arrangements relating to construction works. These works are modifications to the existing structures (strengthening of connections), the provision of some new elements of structure (provision of wind posts and foundations). Overall this inspection considered the arrangements to be adequate though the observations relating to Suitably Qualified and Experienced Persons (SQEP) records and Technical Queries should be followed up at a later date, particularly at a corporate level.

Regulatory activity

As part of its regulation under the nuclear site licences NII issues formal regulatory documents called Licence Instruments. These utilise the primary licence condition powers of 'Consent', 'Approval', 'Direction', 'Specification', 'Notification' and 'Agreement' as well as those powers derived from the licensee's arrangements. The following Licence Instruments were issued during the period of this report.

LI507 Agreement to permission deliveries at Burghfield. 05/11/07.

LI508 Specification issued to AWE Burghfield for movements of HASS sources. 29/11/07.

LI512 Specification issued to AWE Aldermaston for movements of HASS sources. 29/11/07.

Note - Specifications have been issued to all nuclear licensees requiring the licensee to provide HSE with records of radioactive material which is subject to the High-Activity Sealed Radioactive Sources and Orphan Sources Regulations 2005 (SI 2005/2686), and which is also radioactive material for which the licensee is exempted by virtue of section 8 of the Radioactive Substances Act 1993 (the 1993 Act) from making an application for registration in accordance with section 7 of the 1993 Act.