

Environment Agency Report to Berkeley Site Stakeholder Group

For SSG Meeting 25 October 2017 - This report covers our regulation of Berkeley Nuclear Licensed site.

Radioactive substances

We check compliance with the permit by undertaking inspections at the site and review of submissions made by the operator. We prepare Radioactive Substances Compliance Assessment Reports (RASCARs), detailing our inspections and any non-compliances identified. These reports are placed on our public register. In addition to our own inspection activities we also routinely review Magnox reports of events and incidents occurring on site and follow these up where appropriate.

Site Regulation

In September, we carried out a joint inspection with the Magnox Internal Assurance team. The inspection looked at Berkeley's compliance with Best Available Techniques (BAT) and arrangements in relation to the Intermediate Level Waste (ILW) vault retrievals. The inspection looked at both the role of the assurance team and the sites operational arrangements. We found that the role and approach taken by the Magnox assurance process was thorough. The process identified some areas for improvement to strengthen the development of BAT assessments. However the advice and guidance issued through the assurance process appeared well placed and well received.

We attended Magnox's Annual Regional Review of (Leadership and Management for) Safety, Security and Environment, which covered the period April through June 2017. We noted and welcome the work being done to improve management efficiency across both Oldbury and Berkeley sites.

Other Work

We continue to work with site to:

- Ensure that the site develop an appropriate Materials Management Plan to manage the generation and storage of construction and

demolition wastes derived from the removal of buildings on the site (as part of an overall decommissioning plan).

- Ensure the operator develops a programme and estimate of planned gaseous emissions from decommissioning of the whole site, to meet requirements for Article 37 of the Euratom Treaty
- *Consider progress on the operators future application of Robust Concrete Boxes (RCB's) as a potential replacement for Ductile Cast Iron Containers for ILW storage within the Intermediate Storage facility (ISF)*

Discharge Reports

Berkeley site is required to report their radioactive liquid and gaseous discharges at quarterly intervals.

We have reviewed the data submitted to us by Magnox for the site for the periods April-June and July-September 2017.

Discharge trends are consistent with previous years and continue to remain within permitted limits. However, we have requested that Berkeley site reviews predicted gaseous emissions and trends during subsequent decommissioning work, to consider future permitting requirements.

Site Permit Compliance

In October we issued a breach of permit notification to site to cover the inappropriate disposal of water that had accumulated within a manhole void on the site, following wet weather. The water was removed and stored in portable liquid containers before being discharged onto land within the permitted site. In addition to its disposal in an unsuitable location, we also considered the management of the containers and associated controls to be inappropriate for the nature of the operation. We have accepted the site assessment that there was no radiological consequence. However, we consider the process to not be

in keeping with the requirement to assess operations of this nature according to Best Available Techniques. Under the Environment Agency Compliance Classification Scheme (CCS), we identified three breaches of permit. The operator has undertaken a review of learning from these and implemented changes to the management of portable liquid containers. Whilst we are disappointed with the nature of the event, we believe that this will not require significant further regulatory intervention. We are satisfied that this work will limit the potential for further events of this type.

Permit Variations

There have been no recent variations to the permit. We will shortly be issuing a revised Compilation of Environment Agency Requirements (CEAR) to reflect the most current template for this document.

Environmental reporting

The environmental reporting from site and corroborated evidence through our independent monitoring, indicates that the dose to individuals and members of the public from discharges from the site continue to remain very low. Total dose from all pathways approximate to levels less than 1 % of the national dose limits set to protect members of the public¹.

In October, we received a notification from Magnox that slightly elevated levels of iodine-131 were detected in a sample of seaweed taken as part of the Oldbury-Berkeley environmental monitoring programme at a location to the south of the Severn Bridge (M4) crossing.

Elevated levels of this radionuclide have previously been detected in samples at this location.

Iodine-131 is a common product of the process of nuclear fission, but is also used in medical applications. Iodine-131 has not been produced at either Berkeley or

Oldbury Site since power generation ceased. The radionuclide has a half-life of around 8 days and since a number of years have passed since Oldbury and Berkeley would have been able to generate this radionuclide, we are satisfied that its presence in the environment could not be attributed to operations at these sites.

ILW Management

Intermediate Level Waste (ILW) retrieval and conditioning work is progressing after some delays due to equipment outage.

Although this work will significantly de-risk and address legacy hazards, the retrievals project represents a difficult logistical challenge-very much a lead and learn process for the remainder of the Magnox fleet. We are working very closely with the Office for Nuclear Regulation (ONR) to assess the retrieval and conditioning work to ensure this work is appropriate and that best available techniques (BAT) are used to minimise discharges and impact to the environment.

Further Information

Further information on our role in regulating the use of radioactive substances and related activities on nuclear licensed sites can be found on the Environment Agency page in the UK government website².

Nuclear Regulators

Adam Davis is the Environment Agency Lead Site Regulator for the Berkeley site.

Adam's office address is:

Address: Environment Agency, Red Kite House, Howbery Park, Wallingford, Oxfordshire, OX10 8BD.

Email: adam.davis@environment-agency.gov.uk
Adam's office telephone number is 01258 483418.

¹https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/563010/RIFE21.pdf

²<https://www.gov.uk/government/organisations/environment-agency>