

Environment Agency Report

Berkeley Site Stakeholder Group

October 2022

This report covers our regulation of Magnox Ltd. at Berkeley Site and related issues over the period August 2022 to October 2022.

Radioactive substances regulation

We regulate radioactive waste disposals and discharges to the environment. We do this by placing limits and conditions in environmental permits, which helps us to ensure that radioactive waste discharges are minimised and that the environment is protected. We carry out regular checks of Magnox's compliance with our regulatory requirements.

We also regulate and control other activities through our environmental permits, including surface water discharges to surrounding water bodies and emissions to air.

Radioactive Substances Compliance Assessment Reports (RASCARs) summarising our inspections, and any non-compliances found, are made available to the public on request.

Permitting

Magnox holds a radioactive substances activity permit under the Environmental Permitting Regulations (EPR) at the Berkeley site (EPR/ZP3893SG). No changes have been made to the permit since the last SSG meeting.

Compliance activities

We are in regular contact with the Head of Radiological Protection and Environment to ensure we are aware of progress on decommissioning, progress on actions and recommendations and any emerging issues at the site.

We continue to have regular engagement with the site, including remote meetings and updates. We will continue to check compliance with the permit by undertaking inspections. In the coming year we intend to inspect:

- Solid radioactive waste disposals
- BAT & Decision making

In addition to our own inspection activities we also review, on a weekly basis, Magnox reports of operational events and incidents that have occurred on site. We follow up on these where appropriate. There have been no events or incidents of significant concern to us in the period since the last SSG.

Since the last SSG we carried out a decommissioning strategy inspection aimed to understand the how the decommissioning strategy informs the plan of work for the site and how this links with the waste management strategy for the site. This was a joint inspection with Oldbury carried out as a hybrid meeting, coupled with a site visit where we carried out a walk down of the shielded area. We were provided with relevant documentation in advance of the inspection and given comprehensive presentations on the day. The staff we spoke to during both parts of the inspection were knowledgeable, open to questioning and committed to compliance. We identified no non-compliances with the site permit.

In September we visited the site for the Annual Review of Safety Security and Environment for Oldbury, Berkeley and Hinkley Point A. The content was wide-ranging and comprehensive. We made a number of recommendations to ensure the meeting is more useful in future years.

Environmental impact

The site environmental permit requires the operator to monitor and assess the impact of discharges on the environment.

The results of Magnox's environmental monitoring programme continue to be consistent with our independent programme, and do not indicate any results of concern or significant change from previous years.

The Environment Agencies and Food Standards Agency carry out independent environmental monitoring around nuclear sites. These monitoring programmes support our regulatory function and provide reassurance that public radiation exposures are low and within legal limits. The results of this work are published annually and the latest report, "Radioactivity in Food and the Environment 2020" (RIFE 26), is published on the GOV.UK website.

<https://www.gov.uk/government/publications/radioactivity-in-food-and-the-environment-rife-reports>

The report for 2020 continues to show that total doses to the public, from permitted discharges and direct radiation around nuclear sites, remained below the legal limit. Radioactivity from natural background, rather than nuclear sites, continues to be the more significant source of exposure to communities in all areas of the UK. Anthropogenic radioactivity in the environment, from the nuclear industry and from past testing of nuclear weapons, accounted for less than 0.2% of the exposure to the UK population. Berkeley and Oldbury sites are considered together for the purposes of RIFE because the effects from both sites contribute to the same area.

The RIFE report presents an assessment of annual radiological dose to individuals in the local population who are most exposed to radiation from each nuclear licensed site (known as the 'representative person'). In 2020, the total dose to the representative person from all pathways and sources of radiation from the Oldbury and Berkeley sites combined was less than 5 microsieverts, unchanged from 2018 and 2019. This is less than 0.5% of the UK National dose limit of 1000 microsieverts and less than 0.2% of the average annual radiation dose received in the UK from all sources including natural sources of radiation (2700 microsieverts/year).

Discharges from site

The site's environmental permit requires Magnox to use best available techniques (BAT) to manage its operations, and ensure their impacts on the public and wider environment are minimised. Disposal of wastes – as solids, liquid or gases can only be made via permitted routes or by transfer to permitted sites. Magnox must also carry out a programme of environmental monitoring. A report of the liquid and gaseous discharges to the environment, and the results of the environmental monitoring programme must be submitted to us on a periodic basis. We examine these reports and report on their performance through a RASCAR.

Both liquid and gaseous discharges from Berkeley continue to be at levels well within permitted limits for Q2 (April - June) 2022. Liquid discharges are currently at 0.18% for Caesium-137, 0.01% for tritium and other radionuclides are at 0.1% of the annual limits. Gaseous discharges are also within permitted limits. Tritium discharges currently correspond to around 0.5% of the annual limit, carbon-14 discharges around 9% and other beta discharges are around 2% of the site annual gaseous discharges.

Enforcement

We have not taken any enforcement actions at Berkeley in the period since the previous SSG meeting.

Sustainable Development

We are supporting Magnox with the development of their Magnox sustainability strategy. We have provided technical advice and shared our learning from our own experience of implementing sustainable development goals into our business, which includes flood and coastal risk management capital works. In particular, we shared our experience of working on the Oxford-Cambridge (OxCam) Local Natural Capital Plan. Over the coming months, we will continue to support Berkeley in developing its thinking in this area and broader opportunities for improving environmental performance and outcomes throughout the decommissioning process at Berkeley.

Further information

The Environment Agency's Lead Regulator for Berkeley Site is Sophie Gallagher, based in the Environment Agency's Nuclear Regulation Group (South) (NRG(S)).

NRG(S) is responsible for the environmental regulation of radioactive waste disposals on or from nuclear licensed sites in southern England (and in south Wales, on behalf of Natural Resources Wales). We also work closely with the local Environment Agency teams in Wessex Area in relation to other Environment Agency roles and responsibilities.

Address Environment Agency, Nuclear Regulation Group, Red Kite House, Howbery Park, Wallingford, Oxfordshire, OX10 8BD

Regulator Email sophie.gallagher@environment-agency.gov.uk

A public register service is available on the GOV.UK website at:

<https://environment.data.gov.uk/public-register/view/index>

Alternatively you can request access to public documents directly by contacting the Customers and Engagement Team in the Wallingford office. Please email WTenquiries@environment-agency.gov.uk

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 pages of the Gov.UK website at:

customer service line 03708 506 506

incident hotline 0800 80 70 60

floodline 03459 88 11 88

Page 3 of 4

<https://www.gov.uk/government/publications/nuclear-regulation-in-the-environment-agency>

Our enforcement and sanctions policy is publically available on the GOV.UK website at <https://www.gov.uk/government/publications/environment-agency-enforcement-and-sanctions-policy/environment-agency-enforcement-and-sanctions-policy>

Public Health England has placed guidance on ionising radiation dose comparisons on the GOV.UK at:

<https://www.gov.uk/government/publications/ionising-radiation-dose-comparisons>