

# Environment Agency Report

## Berkeley Site Stakeholder Group

May 2021

This report covers our regulation of Magnox Ltd. at Berkeley Site and related issues, including the Coronavirus pandemic, over the period January to May 2021.

## Coronavirus: Nuclear site regulation operational update

The Environment Agency's priority remains to protect people and the environment. We have set out how we are doing this across the many areas we regulate, advise or interact with the public, for example, flood defence, flood warning, environmental sampling, permitting, angling and fisheries, waterways management and billing (see [GOV.UK](https://www.gov.uk)).

In brief:

- We are fully operational, with the majority of our staff working from home in accordance with government guidelines.
- Our frontline staff have returned to near normal regulatory work including physical inspections.
- Please see our published statement for further information at <https://www.gov.uk/government/news/coronavirus-environment-agency-update>.

Magnox's objective is to continue to report in accordance with the requirements of its Permits. The Environment Agency continues to offer the option of using temporary [regulatory position statements \(RPSs\)](#) until June 2021, however, Magnox's intention is only to these in the event that Covid-19 causes business interruptions that prevents it from meeting its obligations.

## 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.

## Permitting

Magnox holds a radioactive substances activity permit under the Environmental Permitting Regulations (EPR) at the Berkeley site (EPR/ZP3893SG). Since the last SSG meeting we have updated and issued the permit variation Magnox requested to add two new approved gaseous discharge outlets and increase the annual limit for gaseous discharges for tritium (tritium is a radioactive isotope of hydrogen) up to 1 terabecquerel (TBq) a year from the current discharge limit of 0.02 TBq. This is to allow Magnox to process their higher activity wastes into long-term waste packages suitable for the Geological Disposal Facility (GDF). Their plans for processing these wastes will lead to an increase in discharges of gaseous tritium, although the limit remains below the level set for the Berkeley site when it was operating.

We have also updated and re-issued the Compilation of Environment Agency Requirements, (CEAR). The CEAR is used to specify further detailed requirements, approvals, or agreements where this is enabled by the permit (for example, conditions containing "if required by the Agency" or "or otherwise agreed in writing by the Environment Agency"). These matters of detail are clearly linked to the permit condition from which they arise, to limit the possibility of introducing entirely new requirements (which would not be enforceable) in the CEAR.

The reasons for the changes to the CEAR are shown below.

- To add the two new gaseous discharge point requested as a part of the permit variation.
- To introduce the date when Magnox needs to supply us with a Site Wide Environmental Safety Case and Waste Management plan (by 31 December 2022 for the Berkeley site). These documents are required to support any decisions made by Magnox in relation to the final stages of decommissioning and necessary to underpin a determination of the permit to facilitate this.
- To clarify the witness sampling procedure in the event of the Environment Agency contactor not being available when the witness samples are due.

We have provided a copy of the permit, CEAR and decision document to the SSG with this report for information and following comments received.

## Compliance activities

We are in regular contact with the Head of Radiological Protection and Environment to ensure that we are kept in touch with 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 the routine tripartite (Magnox, EA and ONR) updates. We will continue to check compliance with the permit by undertaking inspections. Under the current circumstances, we will, where possible, undertake the main part of these inspections remotely. If necessary, we will then arrange shorter 'in-person' follow-up visits to the site, in line with government guidelines.

We have undertaken two remote inspections for Berkeley since the last SSG:

- A desk based intervention to review the operator's covid-19 arrangements to provide assurance that nuclear operators responded appropriately to the coronavirus pandemic to maintain compliance with their permits and the RPS. This was conducted as a themed inspection across most of the nuclear licenced sites that we regulate.
- An inspection to review the operator's higher activity waste management practices and arrangements. This was conducted jointly with the Office for Nuclear Regulation.

In advance of the inspections we were provided with company and site documentation relating to the inspection topic. For the HAW inspection we were able to speak to the Magnox staff with key responsibilities in the areas of inspection. The staff we spoke to appeared knowledgeable and committed to permit compliance. We found no non-compliances with the environmental permit. We made a number of recommendations which are being addressed by Magnox.

We have one inspection planned for Berkeley in the second quarter of 2021, and will report on any findings to the SSG meeting.

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

## 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 2019" (RIFE 25), is published on the GOV.UK website.

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

The report for 2019 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.

The RIFE report presents a yearly assessment of 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 2019, 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. This is less than 0.5% of the UK National dose limit of 1000 microsieverts and less than 1% of the average annual amount of radiation we all receive from natural sources (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 Q1 (Jan-Mar) 2021. Liquid discharges are currently around 0.05% of

the annual limit. Gaseous discharges are also within permitted limits. Tritium is currently 22% of the annual limit, carbon-14 is 9% and other beta discharges are 1.6% of the site annual gaseous discharges.

## **Enforcement**

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

## **Business planning**

We have completed our structured business planning process for the year. This site-based review provided a retrospective look at our activities on site during the 2020/21 year, as have been reported to previous SSG meetings. The review has enabled us to make a judgement on where our efforts need to be focussed in the coming year. We plan to undertake 4 inspections at the Berkeley site in the coming year looking at: The MILWEP and R4 projects, low level waste management; environmental monitoring and asset management and decommissioning.

## **Sustainable Development**

We have initiated discussion with Magnox on the development of the Magnox sustainability strategy. This has included a joint exchange of approaches using our own experience of implementing sustainable development goals into our business, which includes flood and coastal risk management capital works. Over the coming months, we will be discussing opportunities to benefit the environment throughout the decommissioning process at Berkeley.

## **Environment Bill**

Following an announcement in the Queen's Speech that the Environment Bill would form part of the government's legislative programme, the government has recently announced that the delayed Environment Bill is expected to return to Parliament on 26 May for a final commons debate. Whilst this will not fundamentally affect the Environment Agency's regulation of nuclear sites, the passage of the Environment Bill will provide enabling measures that may offer opportunities to simplify and enhance the regulatory framework for UK regulated industry. We will report on the implications of this Bill in subsequent SSG's.

## **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.

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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](mailto: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:

<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>