

# Environment Agency report

## Harwell Site Stakeholder Group

October 2022

This report covers the Environment Agency's regulation of the Harwell Nuclear Licensed Site and related issues for the period between March 2022 and October 2022.

### Radioactive substances regulation

We regulate radioactive waste disposals to the environment. We do this through environmental permits that contain limits and conditions aimed at minimising wastes and protecting the environment. We check compliance with the permits by making regular inspections at Harwell.

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 available to the public on request.

### Permitting

Magnox holds two permits under the Environmental Permitting Regulations (EPR) at the Harwell site: one covers the nuclear licensed site (PB3598DX, the 'nuclear' EPR permit); the second covers smaller areas outside the nuclear licensed site boundary (PB3198DJ, the 'non-nuclear' EPR permit).

No changes have been made to either permit since the last SSG meeting, however, we are providing regulatory advice and guidance to Magnox on our requirements for both permits to support their plans to apply for partial surrender when work at the LETP is concluded.

### Compliance activities

We check compliance with the permit by making regular inspections at Harwell. We issue RASCARs for all inspections to summarise the inspection, including any identified non-compliances, actions, recommendations and observations of good practice.

We receive and assess a range of monthly reports from the site. We maintain regular dialogue with the operator to ensure we are kept in touch with any emerging issues at Harwell and with progress on actions.

We are continuing to hold weekly meetings with the Environment Manager, who has kept us informed of activities at the site and, in September, we met with the site leadership team for an annual performance review.

In March we undertook an inspection of the site's arrangements for managing their radioactive liquid discharges. We also undertook an inspection of the radioactive effluent treatment plant on site. The inspection's scope included the underpinning best available techniques justification for the site's approach to managing radioactive liquids, and how these were minimised. We reviewed site procedures for assessing the discharges and the reporting procedures. We met plant operators and inspected the condition of the discharge equipment.

The arrangements for managing radioactive liquid discharges appear to demonstrate good practice. The staff we met with were knowledgeable and committed to permit compliance.

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We gave general advice and guidance to Magnox, and recommendations and observations in relation to good practice. These will be followed up as part of routine regulatory business for the site. We did not identify any non-compliances with the permit.

On the 5th of October we undertook a joint Harwell and Winfrith inspection to assess the status of the sites' asset management systems. Due to the closeness of the SSG meeting, output of this inspection will be included in our next report.

### **Environmental impact**

The site environmental permit requires Magnox to monitor and assess the impact of discharges on the environment. This monitoring demonstrates that the impact of the site on the environment is low.

The Environment Agencies and Food Standards Agency also carry out independent environmental monitoring around nuclear sites. These monitoring programmes support our regulatory function and provide reassurance that public radiation exposures are 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.

#### [Radioactivity in food and the environment \(RIFE\) reports - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

This is the 26th edition of RIFE containing information on radiation exposures (doses) to the public and radioactivity levels in the environment during 2020. It covers locations near to nuclear licensed sites, industrial and landfill sites, and non-nuclear sites. It also reports on regional monitoring away from these sites, which provides data on background radiation levels.

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'). For the Harwell site, the representative person in 2020 was an adult living near the site, which is the same potential exposure pathway as identified in previous years. The primary source for the attributed dose is from direct shine radiation. In 2020, the attributed total dose to the representative person from all pathways and sources of radiation from the Harwell site was 8 microsieverts which is less than 1% 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). The RIFE report notes that the attributed total dose remains broadly similar to that for previous years.

### **Incidents and enforcement**

We have previously reported to the SSG an event from the 11 June 2021 where the site had been unable to make a record of an aqueous discharge within the timescales specified in the site's EPR 16 Permit (PB3198DJ). We noted that the event was part of a wider issue identified at Magnox associated with difficulties in their supply chain. We have discussed this event with Magnox at a corporate level and we have agreed with them a set of actions aimed at reducing the risk of future non-compliances; we will continue to monitor completion of these actions through our regular interactions.

The Environment Agency monitors breaches of permit conditions using the Compliance Classification Scheme (CCS). This ranks non-compliances on a 1-4 scale, with category 1 being the most serious. Category 4 non-compliances are considered to be events

requiring little or no additional regulatory resources beyond those given in our routine engagement with the site.

We categorised this event as two category 4 non-compliances with the permit: one for not making the discharge record in the time required; the second for insufficient procedures for managing contractors.

The site reported one further non-compliance with the permit in April 2022, when they identified that a duplicate sample had not been taken in November 2021 in line with permit requirements. When a compliance sample is taken for analysis, a duplicate or spare sample is also taken and stored for 6 months. In this event, the compliance sample was taken and sent for analysis as required, however the duplicate sample was not taken and stored as required. The site reported this event to us and carried out an investigation, which we reviewed and identified 3 further actions to be completed. There was no environmental impact from this event.

We categorised this event as two category 4 non-compliances with the permit: one for failing to retain the required sample and the second because although procedures were in place, they were not adequate to ensure compliance with this requirement.

### **Discharge reports**

The site's environmental permit requires Magnox to use the best available techniques (BAT) to produce the minimum amount of radioactive waste and minimise disposals into the environment. Disposal of wastes – as solids, liquid or gases can only be made via permitted routes or to permitted sites. The site is required to report liquid and gaseous discharges to the environment to us on a regular basis. We examine these reports and produce a RASCAR for them. Copies of the discharge reports and the RASCARs are available on request. See the 'further information' section at the end of this document to find out how to request them.

### **Change of lead nuclear regulator**

The Environment Agency's Nuclear Regulator for Harwell will be changing. The responsibilities for the regulation of Harwell Nuclear Licensed Site will be passed from Matthew Castle to Rebecca Cleverley. The formal handover of responsibilities will take place on 1st October 2022.

### **Further information**

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 publicly 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>

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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>

The Environment Agency's lead nuclear regulator for the Harwell site and its tenants is Matthew Castle. Matthew is part of the national Nuclear Regulation Group (South) (NRG (South)) which is based at the Environment Agency's Wallingford office in Oxfordshire. As noted above, from 1st October 2022 the lead regulator will be Rebecca Cleverley. Rebecca has regulated Harwell previously and will receive a comprehensive handover.

NRG (South) undertakes environmental regulation of radioactive substances on nuclear licensed sites in southern England. It works closely with the local Environment Agency teams in those areas as well as external bodies such as the Office for Nuclear Regulation.

Members of the local Environment Agency team cover the site for general (non-radioactive substances) environment protection matters such as regulation of groundwater, contaminated land, waste management and water abstraction.

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