

Environment Agency report

Harwell Site Stakeholder Group

March 2021

This report covers the Environment Agency's regulation of the Harwell Nuclear Licensed Site and related issues for the period between October and March 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 on 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.
- Our frontline staff have returned to near normal regulatory work including physical inspections.
- We have published a series of temporary [regulatory position statements \(RPSs\)](#). RPSs are national arrangements that allow for limited relaxations of regulatory requirements provided certain circumstances and conditions are met. They clearly set out the standards that must be adhered to. The RPSs issued at the beginning of the pandemic have and will continue to be reviewed, and extended or withdrawn as necessary.

Please see our published statement for further information:

<https://www.gov.uk/government/news/coronavirus-environment-agency-update>

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 made 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 advising Magnox on our requirements for both permits in relation to applications for partial surrender that are likely to arise when work at the LETP is concluded.

Compliance activities

We check compliance with the permit by making regular inspections at Harwell. For all inspections we issue RASCARs. These reports summarise the inspection we carried out, describe any non-compliances found, and include 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.

At Harwell, during the initial lockdown in March, Magnox used the regulatory position statements RPS C7, RPS C10 and RPS C13 as described above. Currently Harwell is not using any RPSs, however, these remain available should they be required.

We are continuing to hold weekly meetings with the EHSSQ Manager, who has kept us informed of activities and the impact of covid-19 at the site throughout the recent lockdown.

In light of the covid-19 pandemic and response, we revisited our programme of regulatory activities which we set out at the start of the regulatory year (April 2020). We advised Magnox of our priorities for the remainder of 2020-21 and provided an updated inspection plan. We carried out 2 inspections identified in our plan and have a 3rd inspection scheduled for the end of March.

In November we undertook a remote inspection of the Quality Plan used by Magnox at Harwell to return the Site to operation from the shutdown. During the initial lockdown in March, we looked at all the environmental aspects of Magnox's quality plan and asked for more information and progress updates at the weekly keep in touch (KIT) meetings.

We used the inspection to check that the actions listed in the quality plan had been completed by Magnox; we wanted to make sure that environmental compliance systems had been returned to operation, maintenance completed and the environmental monitoring programme had been re-started. We also asked Magnox how they were ensuring they had sufficient people to support environmental compliance during the pandemic and how they were preparing for further lockdowns. Magnox showed us how they were learning from the lockdown and how this learning was being captured both locally and across the Magnox fleet.

We assessed the information Magnox provided us and where needed, requested further information; the evidence Magnox provided gave us confidence that the Quality Plan actions had been completed. The staff we spoke with were helpful and understood the compliance requirements. We provided feedback to Magnox on what we have seen, identified some good practice and made recommendations which we will follow up as part of routine regulatory business for the site.

In February we completed the second of our planned inspections which assessed the arrangements for disposals of higher activity solid radioactive wastes from the site. The Environment Agency's NWAT (Nuclear Waste Assessment Team) Assessor for the site took part in the inspection. NWAT provides specialist technical support to assess proposals and safety cases for radioactive waste disposal facilities and for managing higher activity radioactive wastes.

During the inspection we assessed Magnox's approach to managing and disposing of Intermediate Level Waste (ILW) which is detailed in the Radioactive Waste Management

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Case (RWMC). We also assessed the BAT assessments that set out the disposal route, Magnox has identified for the waste. Magnox provided us with information on the progress with the project to remove waste from the storage tubes, and the nuclear materials transport project; we asked questions on the arrangements and carried out a Covid- 19 secure walk-down of the HIBS and B462 facilities. During our inspection, we were able to seek further information and clarifications; overall our conclusion was that the arrangements for management of ILW appear to demonstrate good practice. The staff we met with were knowledgeable and demonstrated a good waste culture. We gave Magnox advice and made recommendations to help improve their current processes. These will be followed up as part of routine regulatory business for the site.

We are currently looking at inspection priorities for the 2020/21 regulatory year and will update the SSG on this at the next meeting.

Environmental impact

The site environmental permit requires the operator 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 2019" (RIFE 25), is published on the GOV.UK website.

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

This is the 25th edition of RIFE containing information on radiation exposures (doses) to the public and radioactivity levels in the environment during 2019. 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 2019 was an adult living near the site, which is the same as previous years. The primary source for the attributed dose is from direct shine radiation. In 2019, the total dose to the representative person from all pathways and sources of radiation from the Harwell site was 10 microsieverts which is 0.1% 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 total dose remains broadly similar to those from previous years.

Incidents and enforcement

On the 3rd December 2020, we were informed of a non-compliance with Magnox's non-radioactive Water Discharge Permit (CNTM.1277). This permit allows trade effluent to be discharged to the Lydebank Brook via a flume outside the nuclear licensed site.

Magnox reported that a sheen of diesel and an associated odour had been identified at the outfall of the flume and that they had put oil absorbent booms in place to capture the

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diesel. On the 4th of December 2020, Environment Agency Area and Nuclear Officers attended site to assess the impact. Magnox reported that they had investigated the source of the spill and did not believe it had originated on the Magnox site; it should be noted that the discharge routes serves the wider Harwell Science Campus as well as the Magnox Site.

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 3 and 4 non-compliances are both considered 'minor', with Category 4 non-compliances having no associated potential environmental impact and considered to be events requiring little or no additional regulatory resources beyond that given in routine engagement with the site to bring them back into compliance.

Based on Magnox's effective response and the minor impact to the environment from the diesel spill, the event was classified as a Category 3 (minor) breach of permit condition 6, which states that "...in any event shall not cause any visible trace of oil or grease to appear on the surface of the Lydebank Brook." We also required that the causes of the original loss of diesel should be investigated, to mitigate against a reoccurrence.

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.

The site was able to supply its discharge data to us in compliance with the regulatory position statement and from September 2020, has supplied discharge data in compliance with the permit. We have assessed these and completed a RASCAR. We are able to report that liquid and gaseous discharges from Harwell continue to be at levels well within permitted limits.

Change of lead nuclear regulator

The Environment Agency's Nuclear Regulation Group (NRG) has a policy that site nuclear regulators are regularly rotated. The responsibilities for the regulation of Harwell Nuclear Licensed Site have been transferred from Rebecca Cleverley to Matthew Castle; the formal handover of responsibilities occurred on 01 November 2020.

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

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:

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<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>

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.

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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