

Harwell Site Stakeholder Group

Environment Agency report

October 2019

This report covers the Environment Agency's regulation of the Harwell Nuclear Licensed Site and related issues for the period between April and October 2019.

Our 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).

In June 2019 we issued a new permit to Magnox for the nuclear licensed site. The Environment Agencies in England, Scotland and Wales have published new Guidance on Requirements for Release from Radioactive Substances Regulation (GRR). The guidance sets out the principles nuclear sites should assess when considering options for management of the site during the final stages of decommissioning.

The new permit for Harwell will require submission of plans in order to demonstrate that environmental protection standards are maintained now and into the future. The new conditions require Magnox to develop

and maintain a Waste Management Plan (WMP) and a Site Wide Environmental Safety Case (SWESC) in line with the GRR guidance. The new permit template has also been updated to reflect some minor changes required by the new European Basic Safety Standards Directive.

A non-technical summary of the GRR guidance can be downloaded from the internet.

www.sepa.org.uk/media/365894/grr-non-technical-summary.pdf

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.

In June we undertook a joint inspection with Office for Nuclear Regulation, of waste arrangements at the site. We did not identify any non-compliances with the permit. However, we observed the lack of a coherent 'golden thread' to link top level documentation with procedures for the site. We made recommendations for this to be remedied.

In October we undertook an inspection of arrangements for liquid radioactive discharges from the site. We inspected the facilities used to treat liquid effluent prior to its discharge to the Thames Water sewerage system. We did not identify any non-compliances with the permit. As noted below, liquid discharges from the site are well below the permitted limit.

General advice and guidance was given to the operator at both inspections, and a number of additional actions, recommendations and good practices were noted and detailed in the RASCARs. These will be

followed up as part of routine regulatory business for the site.

We also visited the site to inspect the location where a track has been resurfaced using waste from road maintenance which had been designated as hazardous waste. See the incidents and enforcement section below for more details.

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 2018" (RIFE 2018), is published on the GOV.UK website.

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

This is the 24th edition of RIFE containing information on radiation exposures (doses) to the public and radioactivity levels in the environment during 2018. 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.

In 2018, the contribution to the total dose from the liquid and gaseous discharges regulated by the Environment Agency was 5 microsieverts, unchanged from 2017. This is less than 1% of the average annual amount of radiation we all receive from natural sources (2700 microsieverts/year).

Incidents and enforcement

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.

Since we last reported to the SSG Magnox has reported two events to us involving waste shipments from LETP with incorrect paperwork. One of these was related to

waste which was out of scope of the regulations and the other to very low level waste (VLLW). Despite the irregularities in the paperwork, in both instances, the waste was disposed of to its intended destination with no adverse impact on the environment. We are now considering our enforcement response and will provide an update to the next meeting of the SSG.

Magnox reported to us that an event had taken place, involving the resurfacing of a track using waste from road maintenance which had been designated as hazardous waste. The waste is not radioactive.

We visited the site to inspect the location where the waste has been reused, and spoke to representatives of the Magnox Property, Waste and Environment teams as part of our investigation. Our area Environment Management waste team is considering its response to this event. The findings will be reported back to the next Site Stakeholder Group.

We will ensure that Magnox meets its deadline for the removal of the waste material from the site. We will also track the outcomes of the actions that Magnox is undertaking to its non-radioactive waste arrangements and requirements.

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 release as little as possible 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.

Liquid and gaseous discharges from Harwell continue to be at levels well within permitted limits.

Other news

Our Executive Director's Team and our Board have now agreed ambitious targets for the Environment Agency to aim to become a 'net zero' organisation by 2030. This means that by 2030, we will aim to balance the carbon emissions we produce with those we take out of the atmosphere so that we are no longer contributing to climate change.

This will be a huge challenge. Success will require wholesale change across the organisation in how we do things, and in how we work with others. It will require hard choices: we may need to stop doing some

things, or do them very differently. It will require innovation, because some of the technologies we'll need do not yet exist. It will require sustained focus on our goal, and ensuring that all our future decisions support it.

We have already taken significant action to reduce our own carbon footprint, lower resource consumption and reduce emissions by nearly 50 per cent since 2006.

We will continue to work closely with our suppliers and partners to help them reduce their own carbon footprints and harness new and emerging technology to help us achieve our goal.

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:

<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 Rebecca Cleverley. Rebecca is part of the national Nuclear Regulation Group (South) (NRG(S)) which is based at the Environment Agency's Wallingford office in Oxfordshire.

NRG(S) 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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