

Harwell Site Stakeholder Group

Environment Agency report

April 2019

This report covers the Environment Agency's regulation of the Harwell Nuclear Licensed Site and related issues for the period between December 2018 and March 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 January we issued an update to the site's Compilation of Environment Agency Requirements (CEAR), a document which sits alongside the permit. This has made the CEAR more consistent with other Magnox sites.

The Environment Agencies in England, Scotland and Wales have published new Guidance on Requirements for Release from Radioactive Substances Regulation (GRR) offering extra options in agreeing interim and final end states. The new permit will require submission of plans in order to demonstrate that environmental protection standards are maintained

now and into the future. The Harwell 'nuclear' permit is currently being varied to include these conditions, as are the Environmental Permits for most of the nuclear licensed sites in England and Wales. The new conditions will 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 changes required by the new European Basic Safety Standards Directive.

A non-technical summary of the GRR 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 speak with the Environment Manager frequently to ensure we are kept in touch with any emerging issues at Harwell and with progress on actions.

A new Environment Manager came into the post at the beginning of the year. Throughout January our 'keep in touch' telephone calls were attended by both the incoming and outgoing Environment Managers, enabling us to keep close attention to the transition process. Our experience of the handover has been a positive one. From the Environment Agency point of view the new post holder appears to have been well-supported by the outgoing Environment Manager.

In February we visited the site for a face to face update meeting with the Environment Manager. We also attended the LETP Land Remediation Delicensing Progress Meeting along with Office for Nuclear Regulation and Public Health England. We visited the LETP. Work had ceased for the day, and the area appeared to be well-maintained and in good order.

Both Harwell and Winfrith are managed through a common management system and a shared leadership team. In March we undertook a gaseous discharge inspection. This inspection took place at Winfrith, but documentation relating to gaseous waste is applied at both sites, hence the purpose of a dual inspection. We did not identify any non-compliances associated with the documentation (or with the operational aspects of the gaseous waste management practices inspected at the site).

Also in March we undertook an inspection of environmental capability at the Harwell site. This had been planned at the start of the year, before personnel changes occurred. We were mindful that the Environment Manager is new to the post, but decided to continue with the inspection in order to gauge the strength of current arrangements and plans for the future. We welcome the extra resource being brought in to strengthen the team and to guard against the vulnerability of singleton resource. We were concerned, however, that most of the environment team posts were not appearing on the site baseline. This concern was noted during our closing meeting and is being addressed. We have written to Magnox centrally to request it consider its generic arrangements to ensure the availability of suitably qualified and experienced resources at all sites. We also welcomed a move towards a change in processes which will allow environmental aspects to be more fully considered at an early stage in decision-making processes. We did not identify any non-compliances during the course of the inspection.

Whilst at the site we visited two of the locations where excavated sections of the site's redundant offsite discharge pipeline (ODP) are being kept whilst awaiting characterisation and identification of disposal routes. The waste was all held securely under cover, and looked well ordered.

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

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 2017" (RIFE 2017), is published on the GOV.UK website.

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

This is the 23rd edition of RIFE containing information on radiation exposures (doses) to the public and radioactivity levels in the environment during 2017. 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 2017, the total dose from the Harwell campus to this 'representative person', from all pathways and sources of radiation (liquid & gaseous discharges and direct radiation) was 46 microsieverts (μSv). This is less than 5% of the government public dose limit of 1000 $\mu\text{Sv}/\text{year}$ and less than 2% of the average annual amount of radiation we all receive from natural sources (2700 $\mu\text{Sv}/\text{year}$).

The figure is slightly higher than in 2016, and this is attributed to direct radiation from wastes stored at the LETP during 2017. Magnox reviewed storage arrangements in terms of keeping doses as low as reasonably practicable (ALARP) and the wastes have been moved.

The contribution to the total dose from discharges regulated by the Environment Agency was 5 μSv , unchanged from 2016.

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.

We have taken no enforcement action and noted no non-compliances since we last reported to the SSG. We have been tracking with the site the outcomes of the actions taken to improve arrangements since the waste event which occurred in 2018.

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

Geological disposal

On 19th December 2018, BEIS published the policy paper, [Implementing Geological Disposal: Working with Communities: An updated framework for the long-term management of higher activity radioactive waste](#). This document sets out how the government proposes to manage higher activity radioactive waste using geological disposal, and how it will work with communities to find a location for a geological disposal facility (GDF). Alongside this policy paper, the government also launched a new national consent-based process in England to find a site to host a GDF. Radioactive Waste Management Limited (RWM) is responsible for implementing geological disposal and it will lead the siting process.

The Environment Agency will regulate a GDF jointly with the Office for Nuclear Regulation (ONR). If a GDF were to be located in England, the Environment Agency would be responsible for making sure that the developer and operator met the high standards we have set to protect people and the environment, both now and in the future. Our role is described in more detail at: <https://www.gov.uk/guidance/regulating-the-geological-disposal-of-radioactive-waste-environmental-protection>. The Environment Agency will not be involved in the decision to select a potential site for a GDF. We will, however, be available to provide information and advice to communities on environmental protection.

If you require further information about our role in geological disposal, or if you would like to be on our mailing list, you can contact us by e-mail at nuclear@environment-agency.gov.uk.

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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