

Oldbury Site SSG Report

7th August 2019 meeting

This report covers our regulation of Oldbury Site and related issues over the period May to August 2019

Radioactive Substances Regulation

We regulate radioactive waste disposals 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.

Site Regulation

We check compliance with the permit by undertaking inspections at the site. We prepare Radioactive Substances Compliance Assessment Reports (RASCARs), detailing our inspections and any non-compliances identified. These reports are placed on our public register. In addition to our own inspection activities we routinely review Magnox's reports of events and incidents occurring on site and follow-up on these where appropriate.

We have carried out one site inspection at Oldbury since our last report to the SSG. The inspection covered competence and resource at Oldbury. We looked at how the baseline level of resource and competence is defined, set and maintained, and whether it is sufficient to ensure compliance with the permit. We saw examples of long-term and proactive resource and competence management, and met the regional HR business partner to discuss how resource is managed at a site and a regional level. We see this regional oversight as an improvement, and will look to engage regionally with Magnox over resource and competence going forwards. No non-compliances were identified as part of the inspection. The RASCAR associated with this inspection is currently being drafted.

Enforcement

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

Environmental Permitting

Following the publication of the Guidance on Requirements for Release of nuclear sites from radioactive substances regulation (GRR), we have now completed the process of varying Magnox's environmental permit for Oldbury Site. This implements the changes associated with the guidance. More information on these changes can be found on the next page of this report.

Separately, Magnox submitted an application to vary their permit to remove a discharge outlet associated with the Centre Block Contamination Ventilation system. This outlet is no longer in use and has been blanked. We assessed and accepted this change, and incorporated it into the permit variation. The varied permit came into effective on 1st July 2019.

Discharge Reports & Environmental Monitoring

Nuclear sites are required to routinely report to us their liquid and gaseous radioactive waste discharges to the environment. We review these reports for compliance and this work is detailed in a RASCAR, which is placed on our public register.

SSG members will be aware from previous meetings, that in the six month period between November 2018 and April 2019, discharges from Oldbury Site were elevated when compared to normal low levels. These discharges, which remained well within permit limits, were planned and were a result of work that Magnox had undertaken to drain the site's fuel pond, an essential part of the decommissioning activities on the site. In a previous report, we said that we would calculate the public radiation dose associated with these discharges.

Magnox's Environmental Permit for the Oldbury Site requires it to use techniques to minimise discharges to the environment, and to measure radioactivity in its discharges that we have specified. The radioactivity Magnox measured in the discharges for the six month period, above the normal low levels was:

- 173 Giga Becquerel of tritium
- 53 Giga Becquerel of caesium-137
- 62 Giga Becquerel of 'other radionuclides'⁽¹⁾

When we assess the radiological impact of radioactive discharges, we calculate radiation doses for generalised groups of people whose way of life might make them more affected by radioactivity in the environment. We then present a worst case by reporting the dose from the most affected group. In the case of these particular discharges from Oldbury, we calculated that fishermen would have received an estimated additional radiation dose of 2.8 micro Sievert per year. This is roughly 0.1% of the UK average annual radiation dose of 2700 micro Sievert per year.

We carry out an independent environmental monitoring programme, in association with the Food Standards Agency. The results of this work, and the work of other environment agencies are published in the annual Radioactivity in Food and the Environment (RIFE) report. In the [most recent report](#), for 2017, the total dose for the representative person for Berkeley and Oldbury was < 5 micro Sievert per year.

In parallel to this programme, Magnox is required by their permit to carry out its own programme of environmental monitoring and to submit the results of this programme to us on a periodic basis. Results of both programmes are consistent and indicate levels of radioactivity found in the environment remain low and close to background levels.

Since April 2019, liquid discharges have returned to low levels seen before the pond drain. Gaseous discharges have remained stable, with activity well below the relevant annual discharge limits.

⁽¹⁾ 'Other radionuclides' is a limit we set in our Environmental Permits which is for all types of radioactivity that don't have individual limits in the permit.

Management of radioactive waste from decommissioning of nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation (GRR)

What is the GRR?

The GRR is new guidance published by the environment agencies in July 2018 (Scottish Environmental Protection Agency, Environment Agency, and Natural Resources Wales).

The guidance is for operators of all nuclear sites, whether or not they have already begun decommissioning and clean-up.

The guidance describes what operators need to do when they are planning and carrying out their work to decommission and clean-up their sites. It sets out clear criteria that operators need to meet throughout the lifecycle of their site in order to be released from radioactive substance regulation (in other words, to surrender their permit) after the conclusion of all activities on the site.

What does the GRR do?

It sets standards for public and environmental protection that are consistent with international and domestic law, guidelines and policies. These standards limit the:

- level (dose) of radiation people and the environment are exposed to whilst the site is being regulated
- risk of exposures to radioactive substances dispersed through the environment after the site is released from regulation
- level (dose) of radiation people are exposed to from local concentrations of radioactive substances after the site is released from regulation

Operators must keep the risks of radiation exposure to people as low as reasonably achievable, taking account of economic and social factors. This is called optimisation. It is a basic principle of the international system to protect people from radiation and it is central to the GRR.

What does this mean for nuclear sites?

The guidance requires operators to:

- produce a waste management plan
- produce a site-wide environmental safety case that demonstrates the environmental safety of the nuclear site as a whole
- make sure the condition of their site meets standards for protection of people and the environment, now and into the future

We are introducing conditions to each nuclear site permit during 2019, which reflect the requirements of the GRR. Operators will then work on developing their Waste Management Plans and Site Wide Environmental Safety Cases over the following few years. The environment agencies will monitor how operators are progressing to ensure the permit requirements are met by the agreed dates.

Optimising waste management

The operator's waste management plan must strike the best overall (optimal) balance between:

- the safety of the public, workers and the environment
- other factors such as costs, potential future uses of the site, or the impacts of transport of waste and materials

Waste management plans must be optimised to each site's individual circumstances. This means that at different nuclear sites it might be optimal to use either one of the approaches below or a mix of both:

- remove all radioactive waste and contamination from that site and transport it for disposal or treatment at some other suitable site(s)
- dispose of all radioactive waste and leave all radioactive contamination on that site

We will only authorise disposal of radioactive waste on a site when we are satisfied the operator has developed an optimal waste management plan, and has satisfied us that the final condition of the site, and the work to be done to reach that condition, are safe for people and the environment. The operator must do this by meeting all the requirements in the GRR.

Stakeholder engagement

The GRR requires the operator to engage widely when developing their developing Waste Management Plan and Site Wide Environmental Safety Case. Local communities, the planning authority and regulators all have an important role in such discussions.

We have engaged with the Office for Nuclear Regulation during the development of the GRR and will continue to ensure joined-up regulation during the implementation phase.

Where can I get more information?

There is a summary and link to the full guidance at:

<https://www.gov.uk/government/publications/decommissioning-of-nuclear-sites-and-release-from-regulation>

You can also speak to the Environment Agency site regulator.

The Environment Agency's Lead Regulator for Oldbury Site is Alex Lord, 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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