

Environment Agency Report to the Hinkley Point Site Stakeholder Group

25th October 2019

Introduction

This report covers the Environment Agency's regulation of the Hinkley Point A & B nuclear sites and related issues for the period June to September 2019.

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 also check compliance with these permits by making regular inspections at Hinkley Point A & B.

Radioactive Substances Compliance Assessment Reports (RASCAR) detailing our inspections and any non-compliances found, are available on the Public Register^[1].

We maintain regular contact with the sites by telephone and e-mail in addition to our formal correspondence and visits to the sites.

Hinkley Point A

Our work at Hinkley Point A (HPA) has been focussed on the following themes and issues in the last three months:

- An updated site permit has been issued to Hinkley Point A to introduce conditions into the permit that require an operator to develop and maintain a Waste Management Plan (WMP) and a Site Wide Environmental Safety Case (SWESC), in line with the joint

environment agencies' guidance document 'Management of radioactive waste from the decommissioning of nuclear sites: guidance on the requirements for release from radioactive substances regulation' (known as the GRR). The consolidated permit also includes changes arising from the Environmental Permitting (England and Wales) (Amendment) (No. 2) Regulations (for implementation of the Basic Safety Standards Directive 2013/59/Euratom) and other minor updates.

- Magnox requested the inclusion of two new gaseous disposal outlets for the new Modular Intermediate Level Waste Encapsulation Plant (MILWEP) and building B124 (concrete box loading facility) on the list of approved gaseous disposal outlets.

No change to the gaseous limits set out in the permit were requested. However, although there is no change to the limits we asked Magnox to provide assessments to support the inclusion of the two new discharge routes into the permit. Magnox provided suitable information to us including assessments of environmental discharges and options assessments for the new processes. We have undertaken a review of the information provided and are satisfied that Magnox can continue to comply with the conditions of this permit, which includes conditions to use the Best Available Techniques in its operations.

- In July we undertook an inspection of the site's gaseous discharges. This comprised a walkthrough of their ventilation systems, a

^[1] <https://www.gov.uk/access-the-public-register-for-environmental-information>

review of the sampling and characterisation of the discharges and a review of their management system. We found that they were compliant with their permit. However we raised some recommendations in relation to the inspection of the ventilation system, and review of the monitoring information collected.

- In September we undertook an inspection of the site's aqueous discharges. Again we found that they were compliant with their permit. We have yet to publish the RASCAR for this inspection as we are still collating our findings. We will update the SSG at the next meeting.

During both inspections at the site demonstrated good practice in their asset management process to identify areas of plant and equipment that can be maintained and replaced during the initiating of new decommissioning projects and in the non-active commissioning of the Modular Aqueous Effluent Treatment Plant (MAETP).

Hinkley Point B

Our work at Hinkley Point B (HPB) has been focussed on the following themes and issues in the last three months:

- In May we undertook an inspection looking at the Environmental Monitoring Programme (EMP) undertaken in the Environment surrounding the HPB power station. We also reviewed solid radioactive wastes produced as part of the reactor outage. Overall, we found that the station was compliant with its environmental permit in these areas. We raised an observation that in the management system documentation that we reviewed the Environmental Support Group Head (ESGH) responsibilities did not include ensuring compliance with the Environmental Permit. We found that the solid radioactive waste seemed well managed as part of the outage.
- In July we carried out an inspection on liquid discharges from HPB. This included both radiological discharges and non-

radiological discharges (trade effluent) to the Environment. We reviewed the company's management system and undertook a comprehensive walk down of the stations Active Effluent Treatment Plant (AETP) (Radiological) and the site drains and oil interceptor (non-radiological). We found that the site was compliant with its environmental permits, with no actions or recommendations made. We found some examples of good practice, which included investment, both in trying to build up a baseline picture of the condition of some major assets, such as the drains in radiological controlled areas, whilst also looking to make improvements in the management and reduction of liquid wastes.

- In September we undertook an inspection focussing on radioactive gaseous discharges released from HPB. On this inspection we raised one action, which was for the station to reduce an error trap on their stack flow rate meters. There was also one recommendation, which related to undertaking a proactive assessment of potential environmental consequences from a major reactor blow down for fault sequences.
- We completed the EA initiated variation to the site permit as a result of our new Guidance on Requirements for Release from Radioactive Substances Regulation (GRR) which sets out our requirements with regard to interim and final end states. These include submission of plans in order to demonstrate that environmental protection standards are maintained now and into the future. Unlike HPA, no other changes were made to the permit as part of this variation.

Events and enforcement

Hinkley Point A

We have received and assessed an investigation report from Hinkley Point A relating to the analyses of samples collected during the discharge of the Final Monitoring Delay Tanks. This investigation covered two events resulting in the volume of liquid

discharged being incorrectly recorded and secondly data being incorrectly transcribed. This caused errors in the activity of liquid discharges being recorded and subsequently the returns sent to the Environment Agency. Magnox undertook a root cause analysis of this event and found that it resulted from human error in the case of the transcribed volume reading and a lack of training in the case of the recording of the incorrect volume. We have raised one CCS4 (the lowest level) non-compliance as a result and are following up on why there was a lack of training and why the results had not been verified.

Hinkley Point B

We gave Hinkley Point B two CCS4 non-compliance scores (the lowest level) for a mis-consignment of a waste drum which was sent to the Hythe Incinerator, run by Tradebe Inutec. The drum contained some desiccant samples that were undergoing analysis and were inadvertently placed in an active waste stream. HPB informed both the EA and Tradebe Inutec immediately once they discovered the error. The consigned drum did not breach the Hythe incinerator Waste Conditions of Acceptance (WAC) and they were still able to incinerate the drum as planned. The non-compliances against the permit relate to breach of the management system arrangements (c.1.1.1 (a)) and a breach of a condition (c.3.6.1 (a) (i) relating to the correct information being on the consignment note for radioactive waste disposals. We have categorised as level 4 breaches as there was no environmental impact as a result of this event.

HPB have undertaken a number of actions to prevent a re-occurrence, which we will follow up as part of our routine regulatory regime.

On the 4th September we were informed that some of the pond water at HPB had been inadvertently transferred to the AETP receiving tanks. The pond water is part of a closed system, so this is not routine occurrence. Environmental Support calculated that the radioactive liquid discharge was still within normal station discharging parameters and well

below the permit limits. We are currently investigating this event and will report back with any enforcement action we undertake at the next SSG.

Discharge reports

The operators at Hinkley Point A and B are required to report liquid and gaseous discharges to the environment to us on a regular basis. We assess these to check compliance with the site permits. The site discharge reports and our assessments are placed on the public register.

Liquid and gaseous discharges from Hinkley Point A (see events and enforcement) and B were within the permitted limits and notification levels during this period.

Environmental impact

Nuclear sites are required to carry out a rigorous environmental monitoring programme that requires the operator to monitor and assess the impact of their discharges on the environment.

Additionally, the Environment Agencies and Food Standards Agency carry out independent environmental monitoring around nuclear sites. The results of this work are published in our annual Radioactivity in Food and the Environment (RIFE) report^[2].

Guidance on Requirements for Release from Radioactive Substances Regulation (GRR)

What is 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.

^[2] <https://www.gov.uk/monitoring-radioactivity>

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>

Further information

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 section^[3] of the GOV.UK website.

The Environment Agency's Lead Regulator for the Hinkley Point A site is Tracy Braithwaite. The Environment Agency's Lead Regulator for the Hinkley Point B site is Victoria Thomas.

Tracy and Victoria are Nuclear Regulators and part of the national Nuclear Regulation Group (South) which is based at the Environment Agency's Wallingford office in Oxfordshire.

The EA's Nuclear Regulators undertake environmental regulation of radioactive substances on nuclear licensed sites in southern England. They work closely with the local Environment Agency teams in those areas as well as external bodies such as the Office for Nuclear Regulation.

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^[3] <https://www.gov.uk/government/publications/nuclear-regulation-in-the-environment-agency>