

# Environment Agency report to the Hinkley Point Site Stakeholder Group,

February 2020

## Introduction

This report covers the Environment Agency's regulation of the Hinkley Point A & B nuclear sites and related issues for the period October 2019 to February 2020.

## 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) in the last three months has been focussed on updating the site permit and undertaking waste inspections.

As advised in our last report, an updated site permit has been issued to Hinkley Point A to introduce conditions 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. Under the current programme, the SWESC and WMP are not required to be completed until December 2023. Hinkley Point A are expected to submit their SWESC and WMP close to this date.

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

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

Magnox can continue to comply with the conditions of this permit, which includes conditions to use the Best Available Techniques in its operations.

We have undertaken 2 waste inspections during the last 3 months and carried out a Keeping in Touch (KIT) meeting with the new Head of Radiological Protection and Environment. At the KIT meetings we discuss recommendations from previous inspections, events that might have a potential to effect the permit and on this occasion we consulted HPA on the inspection plan for the next year.

The first inspection was carried out jointly with the ONR and we focused on the management, retrieval and storage of High Activity Waste. Whilst we have not yet issued the RASCAR for this inspection we did not find any breaches of the environmental permit. We have raised a concern regarding the environmental awareness of the programme staff (not the waste operators) and will be undertaking a further inspection of this aspect early in the new financial year. HPA are currently retrieving Fuel Element Debris (FED) from vaults and after sorting, are transferring the FED to drums. These drums are currently being stored in a ventilated building prior to compaction and containment in concrete boxes, once these facilities are available. HPA plan to vary the sorting operation and we have requested a further BAT assessment to justify this.

We also carried out an inspection of the management and disposal of Low Activity Waste but we have not yet issued the RASCAR. As well as an inspection of the management systems, this focused on the disposal of Intermediate Level Waste (ILW) items through the LLWR disposal framework. No evidence that items beyond the 'compliance volume' radioactivity limits for shipments to the LLWR were found. We found the waste team to be knowledgeable about their management systems and the disposal framework. We also checked the disposal paperwork for 3 drums and 1 partially loaded shipment of waste and found the paperwork, including the characterisation of waste to be complete. The electronic systems in place were found to be capable in managing and recording the shipments of waste.

## 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 November we undertook an inspection looking at the Pollution Prevention and Control (PPC) environmental permit (EP333LZ). This permit regulates the management, monitoring and emissions from combustion plant at the station. This includes the Large Combustion Plant (LCP), which are the stand-by emergency gas turbines, used in case of loss of offsite power failure.

We conducted a walk around looking at all the available plant regulated under the permit, including the gas turbines (LCP), auxiliary boilers, vaporiser boilers and mobile generators. We found that the station had good arrangements in place to manage combustion plant, with no non-compliances identified under the permit. We made two recommendations to further improve arrangements at the site and maintain future compliance. These recommendations included checking the length of guarantee of the fire retardant nature of grout on a fuel wall bund penetration and to add any extra checks to the maintenance regime. The other recommendation was to update station documentation at the next revision with further information on how they comply with the *Electricity Supply Industry*

*Industrial Emissions Directive (IED) Compliance Protocol for Utility Boilers and Gas Turbines.* We will follow up progress as part of our routine regulatory regime.

On the 17/18th February we visited HPB to undertake a compliance review of some of the events that had occurred over the previous months and to look at the way the site conducted investigations into environmental events. We were able to conclude our compliance response for the loss of pond water to the Active Effluent Treatment Plant (AETP) reception tanks (see Events and Enforcement Section). We are still in the process of writing up our findings on the other issues covered and will report back at the next SSG Meeting.

We completed an EA initiated variation to all nuclear sites Compilation of Environment Agency Requirements, Approvals and Specification (CERAS). This is a document that sits beneath the site permit to provide further detail of what is required for monitoring, sampling and notifications. The varied HPB CERAS was issued in December 2019. The variation was required to ensure compliance with EU legislation on the standardised reporting of radioactive discharges from nuclear sites.

## Events and enforcement

### Hinkley point A

In our last report we advised that we 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 (FMDT). We have concluded our investigation and we have raised 3 CCS4 (the lowest level) non-compliances and have placed 3 actions on Hinkley Point A to review its procedures to include recognition of when supervision is required and verification of samples submitted to the laboratory.

### Hinkley Point B

On the 4th September we were informed that some of the pond water at Hinkley Point B 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. After visiting the site in February, on conclusion of some checks on a valve involved in the event- We have determined that this event was a breach of permit condition c.1.1.1 (a) which requires the operator to have a written management system adequate to maintain compliance with their environmental permit. We found that there were some procedural deficiencies in the plant operating instruction for the task. We have rated this non-compliance as a CCS4 rating, which is our lowest level, as there was no environmental impact as a result of the event. The station have undertaken a number of actions to prevent a re-occurrence, which have now been completed.

Hinkley Point B notified us in December 2019 that they had exceeded the Quarterly Notification Level (QNL) for gaseous Carbon-14 (C-14) discharges in the previous November. The QNL was exceeded due to issues with the Gas Bypass Plant (GBP) and moisture levels within the reactor, which meant that the site completed a number of controlled blow-downs of the reactor gas to the atmosphere.

The QNL is a pre-determined level of radioactivity over a 3 month period defined in the permit, which we use to ensure we are formally notified of any significant short term changes in operation or plant performance and process control. Exceeding the QNL is not a breach of a permit limit, but we require operators to send us a report that details the occurrence and review how the Best Available Techniques (BAT) were used to control and minimise discharges.

Each blow-down undertaken was assessed and a BAT assessment was undertaken. We were informed that the QNL could be exceeded by the site a few weeks before and were kept up to date with emerging plant issues.

Due to permit limits being on a 12 month rolling period and the Gas Bypass Plant being out of service for a period of time to remediate the issue, there are higher levels of C-14 than usual in the reactor coolant, which means the QNL is expected to be exceeded until June 2020.

We are currently reviewing the notification report submitted under condition 4.3.8 of the permit, along with information from our site visit on the 17/18th February to determine if there were any non-compliances against the site radioactive substances permit, as a result of this event. We will report back on our findings 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 were within the permitted limits and notification levels during this period. However, HPA have undertaken a statistical analysis of their FMDT results which we have reviewed. A full suite of results is expected.

The liquid and gaseous discharges from HPB were within permitted and notification limits, with the exception of gaseous C-14 where we were informed the QNL was exceeded (see events and enforcement section above).

## **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].

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

## Other news

### News on the RIFE report

There has been a press report stating that the RIFE 2018 report shows that there are increases in the activity concentrations of sediments in the vicinity of Hinkley Point. The data in fact shows that there has been no radioactivity detected by the RIFE sediment screening samples and that the results reported are the 'limit of detection values' for the sample methodology used to calculate the radioactivity. As we reported last year the limit of detection has increased slightly from the limit used in the method in 2016 but this does not mean that increased actual radioactivity has been found in the sediments.

Prior to dredging operations the Environment Agency undertook its own sampling and analysis review of the sediments and these were reported to the SSG.

### 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>