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

## October 2022

## Introduction

This report covers the Environment Agency's regulation of the Hinkley Point A & B nuclear sites and related issues for the period June 2022 to October 2022.

## Coronavirus: Nuclear site regulation operational update

We continue to keep the incidence of Coronavirus under review to ensure we can continue to maintain regulatory activities at Hinkley Point A & B.

## 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 (i).

We maintain regular contact with the sites between visits to the sites.

### Hinkley Point A

In August we carried out an inspection of the management system arrangements and Best Available Techniques (BAT) assessment for Magnox's environmental monitoring programme. Further information from Magnox's Site Support Office is required to complete the inspection but no non-compliances were identified at the HPA site.

In August and September, we attended the Annual Review of Safety Security and Environment (ARoSSE) and a level 4 waste meeting. We were advised that whilst environmental roles are currently fully resourced that there is concern about the ability to maintain appropriate capacity (skills) in future and the potential need for additional recruitment in the medium to longer term.

Magnox also shared their plans to ensure skills are retained at the site as decommissioning continues. Recent recruitment actions have resulted in the addition of an environmental co-ordinator and a waste co-ordinator to the Hinkley Point team. At the AROSSE, in conjunction with the ONR, we set out our expectations for using information and metrics gathered at the site to inform future decisions and how this can be used as the basis of future review meetings.

We have also attended a monthly waste meeting and used the opportunity to undertake an update and overview of Intermediate Level Waste (ILW) projects. This allowed us to introduce our new Nuclear Waste Assessor to Hinkley Point A as the previous assessor retired this year.

**Hinkley Point B**

We continue to hold routine meetings with the Environmental Safety Group (ESG), station management and Independent Nuclear Assurance (INA), in addition to relevant external bodies such as the Office for Nuclear Regulation (ONR). These routine interactions allow us to remain informed of any relevant activities and events at the site of regulatory interest, as the station enters its new life cycle phase of defueling.

On the 22nd-24th of August we conducted a defueling inspection, in conjunction with the ONR. This inspection looked a range of issues on preparations for the defueling period including discharges, monitoring, sampling and a review of pond chemistry and arrangements for increased fuel movement through the pond for defueling with ONR specialist chemistry inspectors.

Overall, we found that there were good arrangements in place for the management of discharges and pond chemistry into the defueling period, with no non-compliances identified. We gave the station two actions -one of which was to update obsolescent controllers on the gaseous sampling trolleys to ensure the long-term reliability of sampling equipment. This was something that the station was already planning to undertake but we have formalised so we can track progress. The other action was to confirm how flow rate through stacks are checked when plant modifications have been carried out.  We did note that there were several key documents being reviewed such as the pond water chemistry standard and a boiler feed water review. We have formally requested key documents being reviewed are supplied to us so we can be assured of continued compliance at the station. These will be reviewed and checked as part of our routine regulatory engagements.

The next inspection is planned for the 27th of October and will focus on the management of solid radioactive waste, as the station enters a new phase of its life cycle. We will review compliance with the current permit, particularly looking to ensure that the Best Available Techniques (BAT) are used to minimise both the volume and radioactivity of solid radioactive wastes generated by the station. We will also review how the station is planning to dispose of more challenging solid wastes generated during the operation of the power station, as listed on the problematic waste inventory and what wastes may remain beyond Fuel Free Verification (FFV) and handover of the station from EDF to the Nuclear Decommissioning Authority (NDA).

## Events and enforcement

### Hinkley point A

Between 2019 and 2021 Hinkley Point A advised us of a number of events relating to errors made in both the external laboratory and the laboratory at Hinkley Point A. We have completed our enforcement response to these events. We concluded there was 1 CCS4 non-compliance related to the need to ensure that staff receive training and are competent to undertake laboratory work, and 2 CCS3 non-compliances for failing to provide information and records relating to disposals of radioactive waste in an accurate and timely manner. CCS3 and CCS4 non-compliances are considered 'minor' non-compliances – with either a low or a negligible associated environmental impact.

An action plan has been agreed with Magnox which will include the reporting of an audit of the external laboratory by October 31 2022.

### Hinkley Point B

**Pond Water Loss Update**

In our last report we gave an update on our review of an event earlier in the year where during a routine sample of the pond water, a valve was inadvertently left open, resulting in a small loss of pond water to the Active Effluent Treatment Plant (AETP). This resulted in elevated radioactivity in the aqueous discharge to the Environment but remained below station action levels.

We recorded two non-compliances against the station's radioactive substances environmental permit for this event. We also placed some actions on the station one of which included assessing the potential to fit engineered control measures to prevent or warn of a valve being left open.

When we visited the station in August, we saw the newly fitted 'spring-back' mechanisms fitted for key valves in the Active Effluent Treatment Plant (AETP) relating to the ponds. This will significantly decrease the risk of this event re-occurring. The station is preparing a learning brief about the event and the new valves for other stations in the fleet to learn from.

**Quarterly Notification Level (QNL) exceedance.**

We received early indication from the station after the blowdown on Reactor 4 in early July that the QNL for gaseous C-14 would likely be exceeded on the blow down of R3, prior to the formal notification. We were formally notified by Hinkley Point B Power Station on the 5th of August 2022, that the Quarterly Notification Level (QNL) for gaseous Carbon-14 had been exceeded following the blowdown of Reactor 3 (R3), as part its final shutdown at the End of Generation (EoG).

The QNL is a pre-determined level of radioactivity over a 3-month period defined in the permit, which we essentially use as a 'hold point' to ensure we are formally notified of any significant short-term changes in operation and to review whether the Best Available Techniques (BAT) were being applied during operation of the reactor to ensure the radioactivity and volume of discharge were minimised.

Exceeding the QNL is not a breach of a legal annual permit limit, however we require operators to notify us and send a written submission under condition 4.3.8 of the station's environmental permit outlining how they applied the Best Available Techniques to minimise the discharge.

We have reviewed the written submission supplied to us as required under the permit. From the information supplied we believe that the station has applied the Best Available Techniques (BAT) during their operations associated with the reactor blow-down. We have not identified any non-compliances with the station's environmental permit.

The exceedance of the QNL for C-14 is likely attributable to higher C-14 in the aging reactor core and the length of time since the last full reactor blowdown. The station is at 47.6% of their annual limit for gaseous C-14, but this is expected to decrease now the reactors have shutdown. We will continue to monitor the discharges as part of our regulation of defueling preparations and as part of our routine regulation under the station permit.

## 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.

### Hinkley Point A

The liquid and gaseous discharges from Hinkley Point A were below any notification levels and within permitted limits. However, following a recent inspection of the environmental monitoring programme, we will be seeking improvements to how Hinkley Point A use radionuclide concentrations from their environmental data to characterise trends.

### Hinkley Point B

The liquid and gaseous discharges from Hinkley Point B were within permitted limits. We received notification from the station that the QNL was exceeded for gaseous Carbon-14, as detailed earlier in the report.

## Environmental impact

Nuclear sites are required to carry out a rigorous environmental monitoring programme (EMP) 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 ([ii]). We will continue to follow Government guidelines with Safe Systems of Work in place, with the with regards to our monitoring of the environment and foodstuffs. The 2020 Rife report has now been published here: Radioactivity in Food and the Environment, 2020 (publishing.service.gov.uk) and the 2021 report is in preparation.

We have completed our review of the Best Available Techniques (BAT) assessment for the HPB's Environmental Monitoring Program (EMP). This was an action we placed on the station in their Site Environment Review (SER) to review the EMP for discharges anticipated during defueling and against our best practice guidance for environmental monitoring 764_11 Environmental radiological monitoring (publishing.service.gov.uk).

We consider that given the reduction in discharges of the majority of radionuclides following the End of Generation (EoG), the proposed changes are reasonable and still follow recommendations and good practice in our guidance.

We have placed some actions and recommendations on the station before the changes are implemented particularly to implement a 'hold point' to ensure that the measured discharges at EoG align with those calculated in the EMP BAT on which the proposed changes are based.

## EIADR consultation

ONR are currently consulting on a pre-application opinion under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations (EIADR) from EDF Energy Nuclear Generation Ltd (EDF Energy) for their proposed decommissioning project at Hinkley Point B power station.

To support this request, EDF Energy has submitted a scoping report to the ONR that provides a high-level description of the decommissioning project and describes the scope of the environmental impact assessment that will be carried out for the future application for consent under EIADR.

The Environment Agency is a statutory consultee to the ONR consultation. We will respond to the consultation in line with our regulatory vires.

## 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 ([iii]) of the GOV.UK website.

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 Senior 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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[i] https://www.gov.uk/access-the-public-register-for-environmental-information
[ii] https://www.gov.uk/monitoring-radioactivity
[iii] https://www.gov.uk/government/publications/nuclear-regulation-in-the-environment-agency