

# Bradwell Site LCLC

Report for January to June 2019

**This report covers our regulation of Bradwell site and related issues.**

## Radioactive substances regulation

We regulate radioactive waste disposals to deliver the best outcome for the environment. We do this by placing limits and conditions in the environmental permits that help us ensure radioactive waste discharges are minimised and the environment is protected.

We did not identify any non-compliances with permit conditions at Bradwell site during the period since the previous LCLC. Generally we remain satisfied that Magnox achieves a good level of compliance with our regulatory requirements at Bradwell site.

In April we issued a varied environmental permit for Bradwell site. More information on the new permit is provided in the section of this report titled 'Permit Variation'.

## LLW Disposal

We noted during our readiness inspection in November that some accessible low level radioactive waste (LLW) remained on site. Magnox showed us their plans to package this waste by the end of the year and have it shipped off site by the end of January 2019. Magnox has been unable to meet this deadline. We have discussed the actions that Magnox is taking to dispose of this waste with their management team. We now expect all accessible LLW to be disposed of by August.

We have a site visit scheduled in the last week of June to assess waste management, and progress towards a quiescent state at Bradwell.

## Regional working

Staff at Sizewell A are progressively taking responsibility for environmental management at Bradwell site. Some staff remain at Bradwell because of the delay in completing physical works at Bradwell. In our previous report to the LCLC we stated that we expected handover to be completed in March 2018. We now expect all responsibilities to be handed over to Sizewell A in September.

## Permit Variation

We issued a permit variation for the Bradwell site, and a variation to the sites CEAR (Compilation of environment Agency Requirements) on 24 April. The changes came into force on 1 May and reflect the sites changed risk profile now that the site is approaching demobilisation.

In the varied permit we set lower limits for gaseous discharges and for liquid discharges to reflect the reduction of the radioactive source term at Bradwell and the step change in operations following the completion of the bulk of the work required to process, package and dispose of waste at Bradwell.

We removed the radioactive liquid effluent discharge route from the site because Bradwell will not discharge radioactive liquid effluent to the Blackwater Estuary while the site is in Care & Maintenance. (The quantities of effluent that may arise are expected to be small and will be transferred off-site for disposal elsewhere).

Discharge limits on surface water discharge have been maintained. This discharge consists mainly of rain water but could be contaminated by low levels of radioactivity.

Magnox have not yet met, or demonstrated that they meet, all of the Environment Agency's expectations for a site entering Care & Maintenance. We have therefore set information conditions in the permit requiring Magnox to report to us, at various intervals whether:

1. Magnox have management arrangement in place for Bradwell to meet all the conditions of their permit; due 6 months from the date of issue of the permit.
2. Magnox have set suitable environmental performance criteria and that their arrangements are achieving these criteria; due 13 months from the permit issue date.
3. Magnox have suitable asset management plans in place; due 5 years from the permit issue.

We have also introduced conditions relating to release of the site from radioactive substances regulation and to reflect amendments to the Environmental Permitting Regulations 2016. The most significant of these conditions is that the site operator should develop a site wide environmental safety case by 31 December 2023, or by another date agreed with the Environment Agency.

## Discharge Reports

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

We assessed monitoring returns and have trended releases to March 2019 (the most recent date for which we have data). Discharges of active liquid effluent have ceased. Gaseous emissions have reduced to levels similar to those recorded in 2014, before treatment of the Fuel Element Debris (FED) began at Bradwell.

From an environmental impact perspective the discharges are not significant and remain far below the levels when Bradwell was an operating power station. Environmental monitoring data indicates that the levels of radioactivity found in the environment remain low and close to background levels.

## Environmental Impacts

The RIFE report presents a yearly assessment of radiological dose to individuals in the vicinity of nuclear sites

The latest report, "Radioactivity in Food and the Environment 2017" (RIFE 23) is published on the SEPA website at:

<https://www.sepa.org.uk/media/383722/rife-23.pdf>

RIFE 23 includes an annual assessment of radiological dose to the group of people in the local population identified as being most exposed to radiation from the Bradwell site. In 2017, the dose attributed to this group of people from all pathways and sources of radiation from Bradwell was 0.011 millisieverts. This radiological dose is well below the UK Government dose limit for members of the public from man-made sources of 1 millisieverts per year.

## On-going regulation of Bradwell under Care & Maintenance

Although the most significant hazards have been removed from site or made passively safe for the Bradwell site to enter Care & Maintenance, the site remediation and restoration plan has not finished. There remain some areas of site that remain radioactive, which are due to be decommissioned at final site clearance (FSC). Magnox retains responsibility for ensuring these facilities are appropriately controlled and managed throughout this period. Discharges and disposals will reduce to a much lower level than they were when the site was undergoing operational or decommissioning work. These will still be regulated through the environmental permit.

We will tailor our regulatory activities, proportionate to the risks from site, whilst ensuring the standards of protection of the public and environment are maintained. We will continue to independently scrutinise Magnox's arrangements for compliance, taking on board the views of local stakeholders and interested parties, where relevant.

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The Bradwell site will continue to be regulated under the Environmental Permitting Regulations (EPR) 2016 and will have environmental permits for both radioactive substances activities and water discharges.

Magnox will continue monitoring and reporting of radioactive discharges from the site and an environmental monitoring programme around the site to determine the levels of radioactivity in the local environment and detect any trends in these levels.

We will continue to regulate the site to check that discharges and waste disposals are minimised, there is adequate surveillance monitoring of the site by Magnox, that the potential ageing, deterioration and obsolescence of the facility is assessed; and that the site is maintained in a condition that minimises the need for active environmental protection, monitoring systems or human intervention in relation to waste management and disposals during the Care & Maintenance period.

## Further Information

Contact the Environment Agency's Lead Regulator for the Bradwell site, Peter Reynolds, based in the Nuclear Regulation Group (South) at

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