

# Bradwell Site LCLC

Report for June 2016 - November 2016

December 2016

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

## Radioactive substances

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 carry out regular checks of the Bradwell site's compliance with regulatory requirements.

## Stakeholder Communications

We are currently consulting on our draft 'minded to' decision for the three environmental permit variations. Details of the consultation as well as draft permits and application documents can be found at the following location:

<https://www.gov.uk/government/publications/cm0-7hp-magnox-limited-consultation-on-draft-decisions-and-environmental-permits-advertisement>

The consultation closes on 15 December 2016 and comments can be sent to our national permitting service at the following email address:

[psc-waterquality@environment-agency.gov.uk](mailto:psc-waterquality@environment-agency.gov.uk)

There remains a general high level of stakeholder interest in the Bradwell site which has been enhanced by recent media reports highlighting the permit variation. In response to this interest we are continuing to make information we have about the site openly accessible and to provide further reassurance to the public in and around the Bradwell area. We are continuing to encourage Magnox to consider how they can also make useful information more readily available to local stakeholders and interested parties.

We will periodically review our assessments of the potential radiological impacts from permitted discharges, in light of any new information that comes to light. Our assessment and monitoring information continues to indicate that the potential radiological impact from discharges contributes an extremely small component of public dose

(which is dominated by natural sources) and demonstrate that our initial radiological assessments were, as we expected, pessimistic. We therefore remain confident that our assessments provide a robust basis for a bounding or 'worst-case' potential environmental impact. We make information from our monitoring and assessment activities around the Bradwell Site available via a web-portal, here:

<https://ea.sharefile.com/d-s9822215ebc94f5a9>

The web-portal also includes briefing material and answers to some of the frequently asked questions that we have received from the local community. Please let me know at the address given, if you would like to receive emails telling you when we have made new information available on the web-portal.

## Site Inspection

We continue to undertake compliance inspections of the Bradwell Site. Since the last LCLC meeting, we have carried out two inspections. We also attended meetings at the site on several occasions to provide regulatory advice and guidance on decommissioning activities and the Care and Maintenance transition process.

We have looked at:

- Arrangements for maintaining sufficient numbers of suitably qualified and experienced personnel.
- Site management structure.
- Aqueous discharges.
- The FED treatment and effluent abatement process.
- Sampling, analysis and reporting of discharges.

We prepare Radioactive Substances Compliance Assessment Reports (RASCARs) detailing our inspections and any non-compliances identified. These are placed on the public register. During these inspections we did not identify any non-compliances, however we provided Magnox with regulatory advice and guidance to make improvements in line with best practice.

Generally, we remain satisfied, for the Bradwell site, that Magnox achieves a good level of compliance with our regulatory requirements.

## Regional working

Magnox is working closer as a south east region and is forming more links with its sites at Dungeness and Sizewell. As more regional working is planned to aid site decommissioning, we have decided to do the same and I am now working even closer with the Environment Agency inspector for those two sites. Magnox now host a regional meeting which is attended by us and ONR to discuss the regional approach to decommissioning and waste management.

## Permit Variations

As detailed in previous reports, we have been considering three applications for changes to the environmental permits at Bradwell. The changes requested will allow Magnox to make changes to the liquid effluent discharge system, and include changes to both the permits for the radioactive and non-radioactive properties of the discharge.

We have not yet made any changes to the permits and the current RSR permit and CEAR (Compilation of Environment Agency's Requirements) are those that became effective in March 2013 and in November 2013, respectively.

We have conducted a thorough assessment of these applications and have had to request additional information on a number of occasions. That has caused a significant delay in the determination process, however we now believe we have all the information necessary to make our decision.

As stated previously, the consultation on our findings ends on 15 December 2016.

Following the end of the consultation we will read all of the responses and comments received which will all be addressed in the final decision document. We do not respond individually to comments received as part of a permit variation consultation.

We are not anticipating being in a position to issue the permit variations before the new year.

We feel it is important to reiterate that these permit variations relate to the continuation of an existing activity and do not authorise the discharge of additional waste streams into the estuary.

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 have requested that Magnox should consider how they can make information like this more readily available to local stakeholders and interested parties. In the meantime we are continuing to make these available via a web portal, which is accessible by the public (see further information).

I have included a summary of liquid and gaseous radioactive discharges over recent years, at the end of my report for background information. For reference purposes I have highlighted the level of discharge corresponding to ten per cent of the annual limit contained in the environmental permit, to provide some context to the significance of the discharges. It should be noted that the fluctuations in liquid and gaseous discharges do not necessarily point to an underlying trend. Overall the levels of gaseous and liquid discharges remain far below the levels when Bradwell was an operating power station.

From an environmental impact perspective the discharges are not significant and remain consistently low when compared to permit limits.

## Environmental Monitoring

We have carried out sampling and analysis for our independent environmental monitoring programme, in line with our enhanced monitoring programme.

The independent monitoring data indicates that the levels of radioactivity found in the environment remain low and close to background levels. The environmental monitoring information should provide the public with further reassurance about the behaviour of radioactivity in the local environment and confirmation that the impact from permitted discharges is not radiologically significant.

The site's permit contains a requirement to carry out a suitable environmental monitoring programme, to monitor and assess the impact of their discharges on the environment. The monitoring data from Magnox's programme continues to indicate the level of radioactivity in the environment is low.

## Discharge Reports

customer service line  
03708 506 506

incident hotline  
0800 80 70 60

floodline  
0845 988 1188

[www.gov.uk/environment-agency](http://www.gov.uk/environment-agency)

We make the information from both the Magnox and our own environmental monitoring programmes, available to the public via the web portal (see Further Information) and on the public register.

## Environmental Impacts

We publish our independent monitoring of environment annually in RIFE reports, along with independent monitoring of the food-chain, which is carried out by the Food Standards Agency.

The latest report, "Radioactivity in Food and the Environment 2015" (RIFE 21) was published recently and is available along with previous reports on the GOV.UK website here:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/563010/RIFE21.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/563010/RIFE21.pdf)

RIFE 21 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 2015, the total dose to this group of people was 0.017 milli-sieverts (or less than 2% of the relevant public dose limit). This dose to the most exposed person increased from last year although it is important to state that the increase is due to a higher component of direct radiation from the site. The dose to the public from aqueous discharges is unchanged from 2014 at 0.005 milli-sieverts

This radiological dose is far below the UK Government dose limit for members of the public from man-made sources of 1 milli-sieverts per year and can be compared to the average dose to the population in the UK from all sources of radiation which is around 2.7 milli-sieverts per year.

## Care and Maintenance

We are continuing our work together with the ONR to consider and advise Magnox on regulatory issues associated with Care and Maintenance (C&M). We advise on the potential environmental considerations associated with their plans to prepare the site for entry to a Care and Maintenance phase.

The joint regulatory forum meets bi-monthly to review the site's progress with decommissioning and to consider and advise on arrangements around the transition into C&M.

## Consolidation of ILW Storage

The local Essex planning committee have now decided to grant permission to Magnox to transfer intermediate level waste (ILW) to Bradwell for storage within the site's interim storage facility (ISF).

Magnox wish to take advantage of spare capacity in the Bradwell store to bring waste over from Dungeness A and Sizewell A for consolidated storage.

## Treatment of FED

FED treatment is continuing to take place with discharges being closely monitored by the operator and us. The environmental performance of the treatment plant (ADAP) continues to be in line or superior to what we expect to ensure the levels of radioactivity in the discharges are kept to a minimum (as low as reasonably practicable).

We are working with Magnox to explore additional options to dispose of FED off site which may reduce the amount of FED to be treated at Bradwell.

## Further Information

The Environment Agency website has now moved to GOV.UK. Further information on our role in regulating the use of radioactive substances and related activities on nuclear licensed sites can be found on the GOV.UK website.

In addition, we have set up a web-portal to make further information available about the Bradwell Site. This is available, here:

<https://ea.sharefile.com/d-s9822215ebc94f5a9>

The web-portal includes environmental information that we routinely make available on the public register and briefing material and answers to some of the frequently asked questions that we have received from the local community over recent months.

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The Environment Agency's Lead Regulator for the Bradwell site is Mr A Pynn, based in the Nuclear Regulation Group (South), NRG(S). NRG(S) is based at our Wallingford office in Oxfordshire.

NRG (S) are responsible for the environmental regulation of radioactive substances on and from nuclear licensed sites in southern England (and in Wales on behalf of Cyfoeth Naturiol Cymru). We also work closely with the local Environment Agency teams in East Anglia in relation to other Environment Agency roles and responsibilities.

**Address:** Environment Agency  
Red Kite House  
Howbery Park  
Wallingford  
Oxfordshire  
OX10 8BD

**Email:** [nrg.south@environment-agency.gov.uk](mailto:nrg.south@environment-agency.gov.uk)

**Telephone:** 0203 0259584

Table 1 -Monthly Liquid Discharges from Bradwell Site (against 10% of Annual Limit)

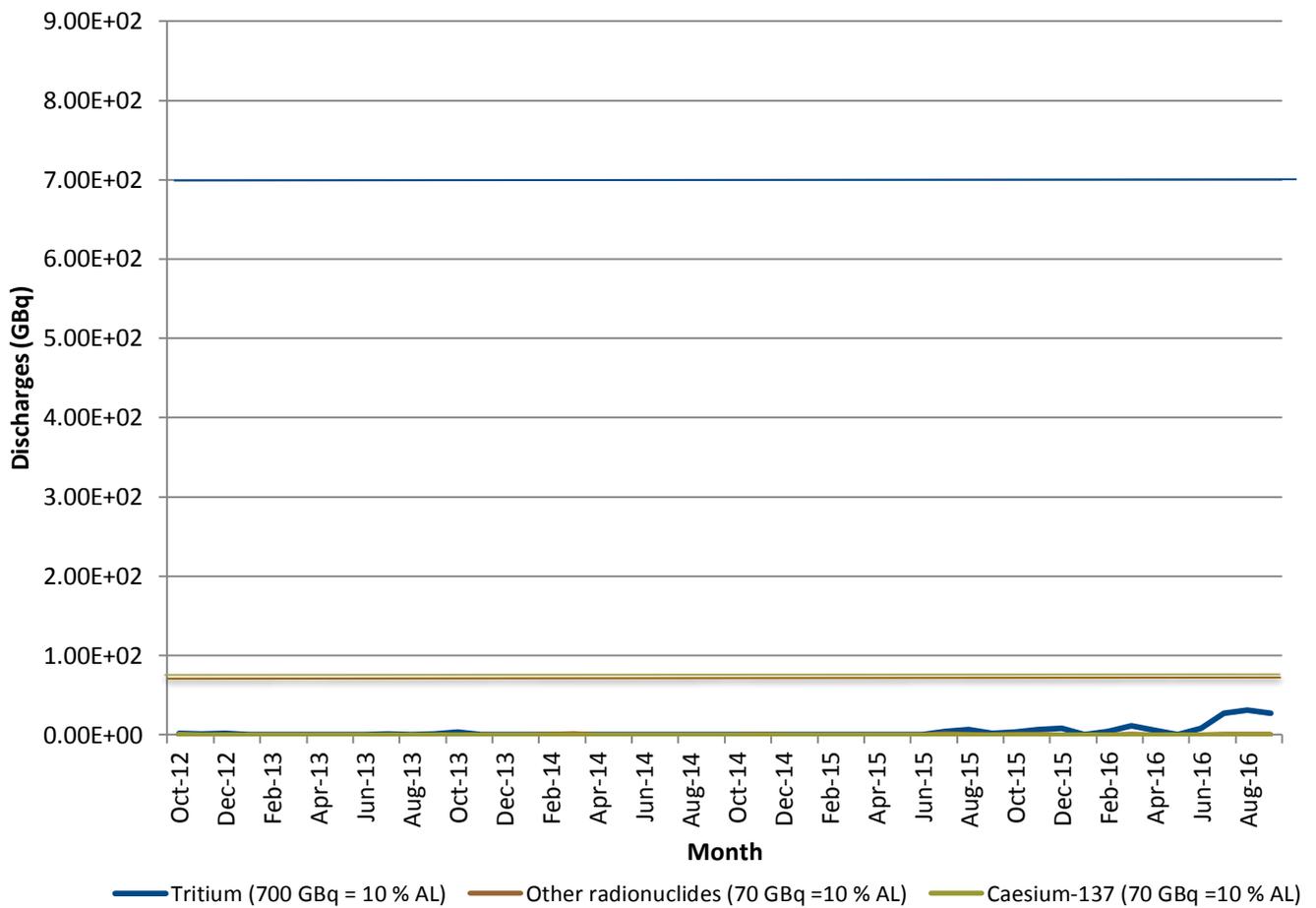


Table 2 Monthly Gaseous Discharges from Bradwell Site (against 10 % Annual

