

Bradwell Site LCLC

Report for December 2015 - May 2016

June 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 the regulatory requirements.

Stakeholder Communications

Magnox hosted 2 public drop-in sessions on 26 and 27 April in Bradwell and Mersea, respectively. These were held to raise awareness about Magnox plans for consolidating the storage of higher activity waste from Dungeness and Sizewell A at Bradwell and provide an update on the decommissioning of the Bradwell Site. We supported these Magnox drop-ins, with Rob Green and Phil Heaton, from our nuclear regulation team, attending to answer questions about our regulatory roles and responsibilities and provide further background information about the sites plans.

We are still seeing a high level of stakeholder interest in the Bradwell site. 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 continue to 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 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 make inspection visits to the Bradwell Site. Since the last SSG meeting, we have carried out two inspections. We also visited the site to provide regulatory advice and guidance on proposals for taking the Site into Care and Maintenance.

We have looked at:

- Arrangements for management of Higher Activity Wastes
- Arrangements for the characterisation and sentencing of low level solid radioactive waste
- Proposals for the acceleration of the Bradwell Site to a Care and Maintenance stage
- In addition to our own inspection activities, we routinely review the operator's reports of events and incidents occurring on its site.

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.

As reported in my previous report, in October 2015, we received notification from Magnox, about an event on site, which caused a short term discharge with elevated NOx levels. The increased discharges did not cause environmental levels to exceed the relevant air

quality standard. Since the last LCLC Meeting we have now completed our investigation. In accordance with our enforcement policy, we decided that no subsequent enforcement action was needed as our initial enforcement action was proportionate, in light of the action taken by Magnox to return promptly to compliance.

Our enforcement policy is available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/389348/LIT_5197.pdf

During April, 2016, we received notification that Magnox had blockage of their foul sewer, which caused an overflow of some sewage from the primary settlement tank. We considered this to be a failure to comply with a condition of their (non-radioactive discharge) permit and we issued the Site with a Site Warning (a CCS category '3', or 'minor' non-compliance). Our enforcement action has been documented in a CAR (Compliance Assessment Report), which is available on the public register.

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

Annual Review

Every year, Magnox holds a review of their performance at site over the previous 12 months. This review of performance covers Safety and Security matters as well as Environmental performance and includes representation from all of the relevant regulators. In May, Magnox hosted the first Regional based performance review, at the Sizewell A site, combining the reviews for the Sizewell A, Dungeness A and Bradwell sites.

We attended the review and generally feel that Magnox's performance over the past year at these sites has been good overall, although we agree with Magnox that there is scope for continued improvements to be made in certain areas.

Permit Variations

As detailed in my previous report, we are currently 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. The applications for permit changes are available via our website and the web portal (see Further

Information). In addition we sent copies of these documents out to interested parties. We received a number of representations from members of the public and interest groups about the changes requested by Magnox.

Due to the volume of responses we have received, it is taking us longer to prepare draft permits and draft decision documents for consultation than we originally expected. We now do not expect to make our draft permits and draft decisions available for public comment before the end of June. We recently wrote to Magnox and interested parties to inform them that we are still considering these applications. We will also be making the draft permits and draft decision documents available to interested parties and respondents on our web portal (see Further Information).

We have not yet made these changes 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.

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 and this work is detailed in a RASCAR, which is 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 making these available via a web portal, which is accessible by the public (see further information).

I have included a summary of discharges 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 below or around 1 per cent of the relevant limits in the environmental permit.

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Environmental Monitoring

We have carried out sampling and analysis for our independent environmental monitoring programme, in line with the increased monitoring implemented, following our review of the programme against our guidance¹ and requests received to carry out additional reassurance monitoring.

The information from our monitoring programme is made publically available via the web portal (see Further Information). The monitoring data for the calendar year 2015, will also be published in next year's Radioactivity in Food and the Environment report (RIFE).

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 authorisation 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.

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 2014" (RIFE 20) was published in October 2015 and is available along with previous reports on the GOV.UK website [2].

RIFE 20 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 2014, the

¹ Environment Agency (2010) Radiological Monitoring Technical Guidance Note 2 –

Environmental Radiological Monitoring.

² <https://www.gov.uk/government/publications/radioactivity-in-food-and-the-environment-2014-rife-20>

total dose to this group of people was 0.005 milli-sieverts (or less than 0.5% of the relevant public dose limit). This is unchanged from the figure of 0.005 milli-sieverts attributed for the year 2013. The group identified with the highest potential impact was an adult who was a high consumer of local fish. 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.

Habit Survey

We use information about local habits to help us make the assessment of the worst case potential environmental (radiological) impact, published in RIFE. This information about habits is taken from a survey of habits in the local area that we carry out and review periodically. In August 2015, CEFAS (Centre for Environment, Fisheries and Aquaculture Science) on behalf of the EA and the FSA carried out a survey of habits in the local area. The Bradwell Site habit survey has now been published and is available on the Cefas website, here:

<https://www.cefas.co.uk/publications/environment/bradwell2015.pdf>

Previous Bradwell Site habits surveys as well as surveys carried out around other sites can also be found on the CEFAS website, via the Cefas publications page, here:

<https://www.cefas.co.uk/cefas-data-hub/search-publications/>. In the 'Title' add 'Radiological habits survey' and it will list all of the habits survey reports (it won't work if you add an 's' to survey).

Care and Maintenance

We are continuing our work together with the ONR to advise the site on regulatory issues. 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 has met with the operator four times since the last SSG meeting.

Consolidation of ILW Storage

We have supported Magnox's public drop-in events to engage stakeholders on their proposals for consolidating the storage of ILW across the 3 South East Magnox sites (Dungeness A, Sizewell A and Bradwell). The proposals are for storage of

ILW from Dungeness A and Sizewell A to be consolidated at the Bradwell Interim Storage Facility (ISF), taking advantage of spare capacity that will be available in the Bradwell store. We encourage Magnox to explore all such credible options for the management of their waste and to manage their wastes in such a way as to minimise the environmental and other impacts arising from its management. For instance, we note that the consolidation being considered, is likely to reduce resource use associated with the construction of additional stores. Nonetheless, we recognise the importance of ensuring a broad level of support and public acceptability is in place to underpin any such decisions, through appropriate engagement with relevant stakeholders and interested parties.

Treatment of FED

FED treatment has taken place at Bradwell, since March 2015, following an outage. The environmental performance of the treatment plant (ADAP) continues to be in line with what we expected to ensure the levels of radioactivity in the discharges are kept to a minimum (as low as reasonably practicable).

Bradwell Lead Site Inspector

In May 2016, Mr A Pynn took over responsibility as the Lead EA Site Inspector for the Bradwell Site.

Other News

Guidance Note on Revocation of Permits

Between February and May 2016, we held a public consultation on our proposed new guidance on “Requirements for Release of Nuclear Sites from Radioactive Substances Regulation”.

The proposed new guidance has been produced jointly by the Scottish Environment Protection Agency (SEPA), the Environment Agency (EA) and Natural Resources Wales (NRW).

The consultation was hosted by SEPA on behalf all three environment agencies. Full details and the associated documents can be viewed on the SEPA “Consultation Hub” website:

<https://consultation.sepa.org.uk/operations-portfolio/grr>

We are now considering the responses received to the consultation. Over the next year we will also be using the draft guidance to support our

provision of regulatory advice and guidance to nuclear site operators on a trial basis at several nuclear sites.

New Chief Executive

Sir James Bevan joined the Environment Agency on 30th November 2015 as the new Chief Executive.

Sir James is an experienced UK civil servant with more than thirty year’s experience in the UK and abroad; previously serving as the High Commissioner for India.

Sir James was visible in the recent flooding events in the North of the Country in December and has spent time touring local offices around the country in order to meet staff and view the variety of work undertaken by the Environment Agency.

Bradwell Seawall Repairs

During February we carried out repairs to the Bradwell Seawall (flood defences). These repaired damage to the seawall that had been caused by bad weather during winter.

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

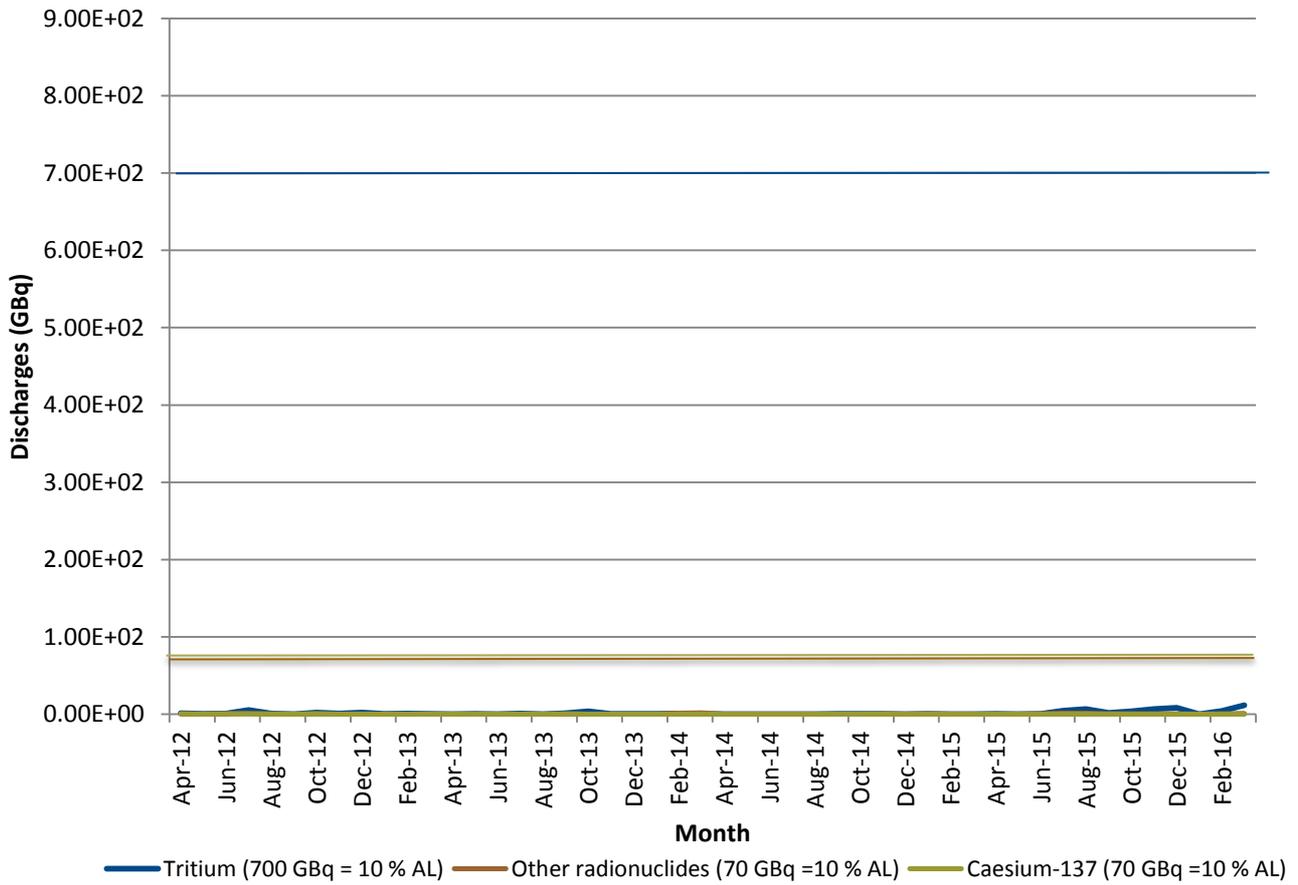
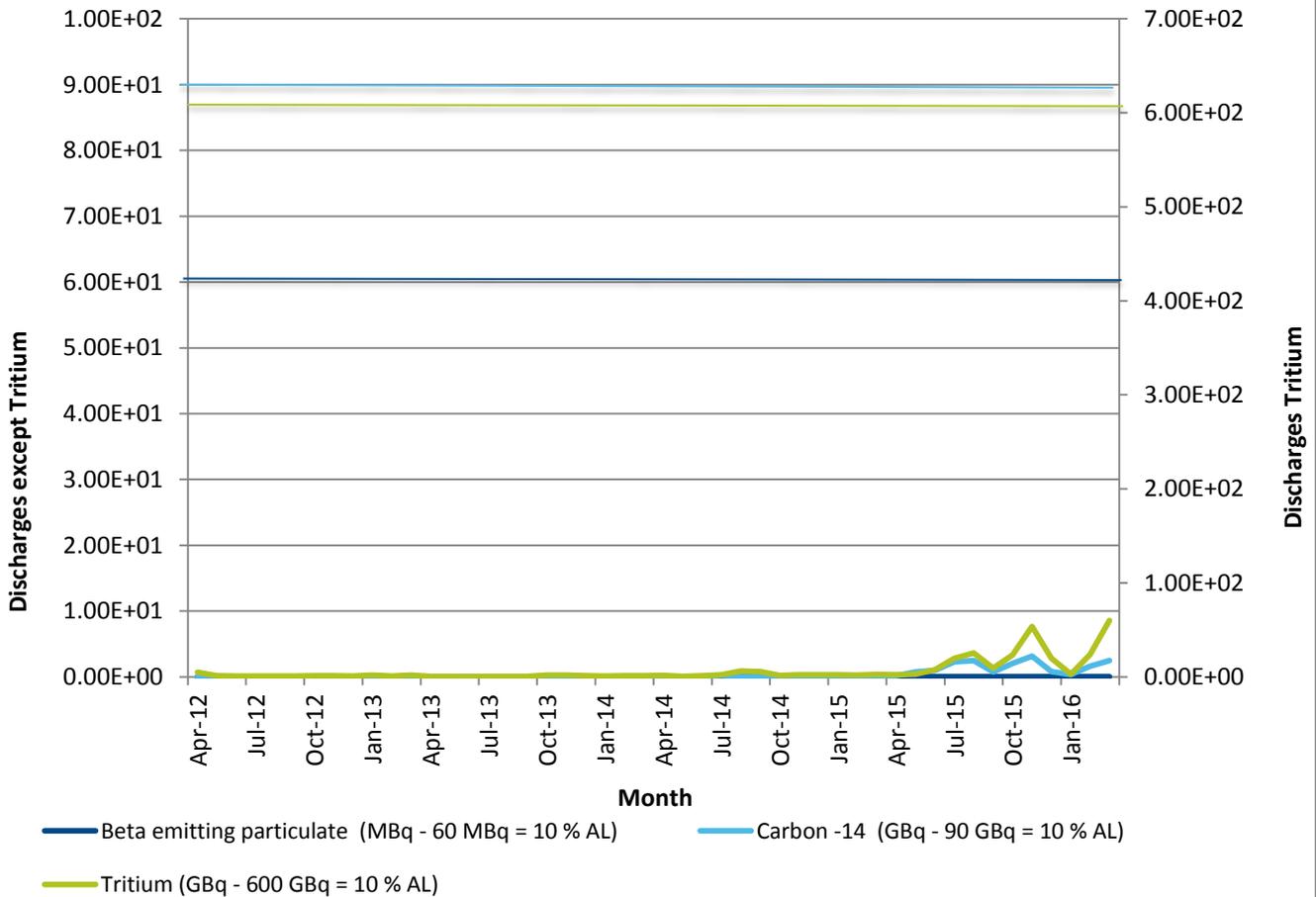


Table 2 Monthly Gaseous Discharges from Bradwell Site (against 10 % Annual Limit)



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