

Environment Agency Report to the Sizewell Site Stakeholder Group

May 2025

This report covers the Environment Agency's regulation of Sizewell A & Sizewell B nuclear sites and related issues for the period March 2025 to May 2025.

Our Regulation

We regulate radioactive waste disposals and discharges to the environment. We do this by placing limits and conditions in environmental permits, which helps us to ensure that radioactive waste discharges are minimised, and that the environment is protected. We carry out a variety of regulatory activities to check for compliance with our regulatory requirements, including site inspection, review of documents and arrangements and any reports of events.

Details of our assessments and any non-compliances identified are included in Radioactive Substances Compliance Assessment Reports (RASCARs), which are placed on our public register. See the 'further information' section at the end of this document to find out how to request documents from our public register.

We regulate and control other activities through our environmental permits, including surface water discharges to surrounding water bodies and emissions to air from emergency diesel generators. We are also the joint competent authority, alongside the Office for Nuclear Regulation (ONR), for the Control of Major Accident Hazard (COMAH) regulations that apply to Sizewell B.

Information on environmental permits and our regulation of the Sizewell sites can be found at: <https://www.gov.uk/guidance/sizewell-nuclear-regulation>

Site Regulation

Sizewell A

We continue to hold monthly meetings with Nuclear Restoration Services (NRS) to discuss the work taking place on site that could have an environmental impact, and we review quarterly discharge and environmental monitoring returns.

We have not undertaken any further on-site inspections since the last SSG meeting on 25 March 2025. Our next inspection is planned for 4 June 2025. We will inspect the management of non-radioactive and very low-level radioactive wastes produced on site. This will include an assessment of the wastes produced by the Turbine Hall demolition

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project, including management of the resultant sub-surface void and the non-radioactive waste stockpiles. We will be accompanied by colleagues from the local area Environment Agency Waste Team who will support the non-radioactive waste aspects of the inspection. We will report our findings at the next SSG meeting.

As mentioned at the last SSG meeting, in January 2025, we undertook a two-day asset management (AM) inspection. The purpose of this inspection was to check that NRS are appropriately managing the facilities and equipment on site, to minimise the risk of failure of environmentally relevant plant and to minimise and mitigate any environmental risks posed by the degradation of buildings, plant, and infrastructure. The inspection report is now complete, and our main findings are summarised below:

We identified a number of areas of good practice, such as:

- NRS were able to demonstrate that there is a defined senior manager accountability and governance of the asset management process.
- NRS have achieved and maintained ISO55001 accreditation.
- The Asset Management Database is now fully populated and NRS are using the information in meaningful ways to identify the highest risk assets across the fleet.
- NRS have a clearly defined procedure for management of redundant assets, and it was demonstrated that it is being used across the fleet.

We also identified several opportunities to further improve the Asset Management System, including the following:

- We recommended the development of a metric to capture positive performance outcomes, such as environmental and sustainability benefits achieved via asset management and benefits gained by a 'spend to save' approach to asset management.
- We recommended that NRS captures the asset related costs associated with project delays including staffing and maintenance. This will give NRS and ultimately, the NDA a better understanding of the potential costs and risks associated with changes to decommissioning programming schedule.
- NRS are in the process of developing multiple climate change initiatives. We recommended that the impact of climate change on assets and asset risk is considered during this process.

Overall NRS's approach to understanding and delivering asset management has improved markedly since the last detailed inspection of this topic in 2018, and further improvements are expected as the system matures.

Sizewell B

Alongside our inspection programme, we have maintained bi-weekly telephone and regular email contact with EDF, and routine review of returns.

On 25th March 2025 we carried out a radioactive solid waste inspection. We reviewed managements arrangements and practices to ensure that generation of solid waste is minimised and that optimised disposal routes are chosen. Following the inspection, we received additional supporting documents to demonstrate that best available techniques

(BAT) are implemented. We will review the additional information and update the SSG at the next meeting on the results of our assessment.

As noted in the previous SSG, EDF notified us and promptly rectified a corrosion issue with a small section of post-infiltration gaseous waste ducting in which some treated effluent was leaking. Since then, the Operator has submitted additional information on the root cause of the event, and we agree with the conclusions of the report, noting that the volume and release of radioactivity to the atmosphere was negligible. As a result of the event, we believe that EDF was not compliant with Sizewell B's environmental permit conditions (ref: EPR/XB3539DH). We will now consider the appropriate action in line with the Environment Agency's Enforcement and Sanctions Policy and provide an update at the next meeting of the SSG.

Enforcement

Sizewell A

We have not taken any enforcement actions at Sizewell A in the period since the previous SSG meeting (25 March 2025). The operator has remained compliant with the requirements of their permits.

Sizewell B

We have not taken any enforcement actions at Sizewell B in the period since the previous SSG meeting (25 March 2025). We will provide an update on the duct corrosion event at the next SSG meeting.

Environmental Permitting

Sizewell A

There have been no changes to NRS's Sizewell A permits in the period since the previous SSG meeting. We are expecting an administrative variation application from NRS to consolidate some changes at the site into the permit, such as removing references to gaseous disposal outlets which have not been present for some years and changing the description for the main aqueous outlet. NRS are not proposing to change any gaseous, aqueous or solid disposal routes or limits.

Sizewell B

There have been no changes to EDF's Sizewell B permit in the period since the previous SSG meeting. We are expecting a joint partial permit transfer application from Sizewell B (EDF Energy Generation Ltd.) and Sizewell C Ltd. to transfer an area of land, currently within the Sizewell B site boundary, from EDF to Sizewell C Ltd.'s permit.

Discharge Reports

The sites' environmental permits require the operators to use Best Available Techniques (BAT) to manage their operations so that wastes are minimised along with their impacts on the public and wider environment. Disposal of wastes – as solids, liquids, or gases – can only be made via permitted routes or by transfer to permitted sites.

NRS and EDF are required to report liquid and gaseous discharges to the environment to us on a regular basis. These reports are placed on the public register. We examine these reports and detail our assessment of their performance through RASCARs.

Sizewell A

At Sizewell A NRS are required to report liquid and gaseous discharges to the environment to us on a quarterly basis, within 30 days of the end of the quarter. Reports received in April 2025, covering the reporting period January to March 2025 (inclusive) showed that gaseous discharges from Sizewell A were at levels well within permitted limits. No aqueous active effluent discharges to the North Sea were made during this reporting period.

Low volumes of treated effluent were discharged from the sewage treatment plant, which serves both Sizewell A and Sizewell B sites. The plant is managed by NRS. Effluent is monitored at quarterly intervals for the presence of tritium or caesium-137. No radioactivity above limits of detection was reported in samples taken during the period covered in this report.

Gaseous discharges from Sizewell A are very low compared to when the site was operational (pre-2007). Gaseous discharges are fairly constant as the site's reactors are now "breathing" passively. This means there is no forced flow of air through the reactors and discharges follow a seasonal pattern across the year influenced by barometric pressure, and weather conditions.

Sizewell B

Liquid and gaseous discharges made from Sizewell B permitted routes have remained within permitted limits between January 2025 to March 2025, and returns were submitted to us within the required timescales.

The 12-month cumulative gaseous discharges of carbon-14 remained less than 67% of the annual limit, with other gaseous discharges less than 18% of respective annual limits. The 12-month cumulative liquid discharges were in-line with expected levels and remain less than 33% of the annual limit for tritium, and less than 8% for caesium-137 and other radionuclides.

During the previous SSG we reported that liquid tritium discharges increased from September to November 2024 as a result of preparation works during Reactor Outage 19 (RO19). Our review of subsequent discharge returns following the reactors return to service in December 2024 confirm that tritium discharges have progressively reduced (this aligns with the cyclic trend of discharges in following the station fuel cycle).

Environmental Monitoring

Radioactivity in food and the environment report

Our annual report for 2023 was published in November 2024 on GOV.UK [Radioactivity in food and the environment \(RIFE\) report](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/123456/rife-report-2023.pdf) - GOV.UK (www.gov.uk)

This report gives a detailed assessment of radioactivity in food and the environment and the public's exposure to radiation during a 2023. It shows that the public's exposure to permitted discharges and direct radiation near nuclear and non-nuclear sites is low and within dose limits.

For Sizewell, the total dose for the representative person was less than 0.010mSv in 2023, down from 0.011mSv in 2022, and less than 1% of the government derived limit to protect members of the public. Levels of radioactivity found in the environment remain low.

In parallel to this programme, the operators are required to carry out their own programme of environmental monitoring and to submit the results of this programme to us on a periodic basis. This is carried out jointly by NRS and EDF.

In March 2025, we received the environmental monitoring reports covering the period from October to December 2024 (inclusive).

Sizewell A

The reported results are consistent with our independent programme and do not indicate any results or trends of regulatory concern. We make the information from both operator and our own environmental monitoring programmes available on our public register.

Sizewell B

As a result of Sizewell C construction activities, some of the sampling locations of the Sizewell B Environmental Monitoring Programme (EMP) need to be relocated whilst other sampling points will be removed (notably relocation of passive shades sites, the replacement of environmental thermoluminescent detectors, and herbage and soil core sampling locations). As part of these proposals, EDF submitted a technical report to demonstrate that the proposed locations are appropriate and meet the objectives of the Environment Agency's radiological monitoring guidance. We have carried out a regulatory assessment of the proposed changes and captured our detailed comments in a RASCAR which will be placed on the public register. In summary:

- The proposed changes affect 5 (out of 31) sampling sites of Sizewell B's EMP terrestrial programme; the remaining of Sizewell B's EMP programme is unaffected.
- The information presented confirms that the proposed locations are suitable and meet the aims and objectives of the Environment Agency radiological monitoring guidance.
- The Operator's EMP remains appropriate and effective in detecting any abnormal results and supporting compliance with EDF's environmental permit (ref: EPR/XB3539DH) requirements.
- We consider EDF's proposal for parallel sampling (between the current and new locations) and validating the assumptions of the technical report as evidence of good practice.

We will continue our engagement with the Operator during the implementation of the EMP changes and the progress

We received the results of the EMP for the period between July 2024 to December 2024 (inclusive). Following the review of the EMP reports we note:

- One of the passive shades located around Goose Hill (TF9) was not sampled between 15th July 2024 to 12th September 2024 due to access issues relating to Sizewell C construction activities. This location, along with TF10, were removed in October 2024 in line with the proposed EMP changes.
- The new EMP sampling locations were installed and sampling commenced in Q3 of 2024.

The results of the EMP indicate radioactivity in the environment remains below regulatory concern and demonstrates the effectiveness of the Operator's programme and analysis in identifying and informing results of interest. The results continue to be consistent with our independent programme and do not indicate any other concerning results or trends.

Further Information

The Environment Agency's Nuclear Regulation Group (South) (NRG(S)) is responsible for the environmental regulation of radioactive waste disposals on or from nuclear licensed sites in southern England. We also support NRW in this role in Wales. We work closely with local Environment Agency teams as well as external bodies such as the Office for Nuclear Regulation.

The Environment Agency's Lead Regulators for Sizewell A and Sizewell B are James Heavingham and Themis Kantara.

NRG(S) Address	Environment Agency, Nuclear Regulation Group, Red Kite House, Howbery Park, Wallingford, Oxfordshire, OX10 8BD
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For regular updates on our work in regulating radioactive substances and nuclear sites visit our LinkedIn page:

<https://www.linkedin.com/showcase/regulating-radioactive-substances>

A public register service is available on the GOV.UK website at:

<https://environment.data.gov.uk/public-register/view/index>

Alternatively, you can request access to public documents directly by contacting the Customers and Engagement Team in the Wallingford office. Please email:

WTenquiries@environment-agency.gov.uk

Further information on how we regulate different types of nuclear sites, and protect people and the environment is available on the GOV.UK website at:

<https://www.gov.uk/guidance/nuclear-sites-environmental-regulation>

Our enforcement and sanctions policy is publicly available on the GOV.UK website at:

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<https://www.gov.uk/government/publications/environment-agency-enforcement-and-sanctions-policy/environment-agency-enforcement-and-sanctions-policy>

Our public participation statement on when and how we consult on permit applications is available here:

<https://www.gov.uk/government/publications/environmental-permits-when-and-how-we-consult>

UK Health Security Agency has placed guidance on ionising radiation dose comparisons on the GOV.UK website at:

<https://www.gov.uk/government/publications/ionising-radiation-dose-comparisons>

All our open consultations will appear on this webpage [Nuclear consultations - Environment Agency - Citizen Space \(environment-agency.gov.uk\)](#)

National news items

Assessing new nuclear power station designs – Have your say

Generic Design Assessment (GDA) is an open and transparent process. A nuclear power station design company going through GDA must set up a website to:

- publish information about the design
- invite the public to ask questions and make comments

The design company must respond to any comments or questions they receive. The regulators will see the comments and questions and the responses provided. We can also use this information to help inform our assessment work.

The Environment Agency has:

- completed step 2 and started step 3 of the [Generic Design Assessment](#) on Rolls-Royce SMR Limited's 470MWe small modular reactor on 30 July 2024. The [public comments process](#) for this GDA opened at the start of Step 2 and you can make a comment through the company website.
- completed step 1 and started step 2 of the [Generic Design Assessment](#) on Holtec International's small modular reactor SMR-300 on 1 August 2024. The [public comments process](#) for this GDA opened at the start of Step 2 and you can make a comment through the company website.
- completed step 1 and started step 2 of the [Generic Design Assessment](#) on GE-Hitachi Nuclear Energy's BWRX-300 small modular reactor on 12 December 2024. [GDA Step 1 of the GE-Hitachi SMR: statement of findings - GOV.UK](#) The [public comments process](#) for this GDA opened at the start of Step 2 and you can make a comment through the company website.

Learn more about assessing new reactor designs [New nuclear power stations: assessing reactor designs - GOV.UK \(www.gov.uk\)](#)

Read our blogs

[How the Environment Agency is assessing new nuclear power station designs – Creating a better place](#)

[Ensuring nuclear reactor designs meet high standards of environmental protection – Creating a better place \(blog.gov.uk\)](#)

Updated guidance: Monitoring the effects of permitted discharges from nuclear sites

We've published revised guidance on how to design and carry out an environmental radiological monitoring programme.

A radiological monitoring programme is a requirement of a radioactive substances activity permit which is held by operators of nuclear sites in England and Wales.

The guidance will also be used by the Environment Agency and other regulators and organisations who have or participate in independent environmental radiological monitoring programmes.

An operator's monitoring programme includes what they'll monitor, where and how often and the monitoring and sampling techniques.

What's new

- No longer has separate objectives for operators and regulators in relation to understanding doses to people and wildlife
- One of the criteria for defining a site's impact is the level of dose to the representative person. The change to the threshold of optimisation ([Managing Radioactive Substances and Nuclear Decommissioning: UK policy framework](#)) from 0.02 mSv/y to 0.01 mSv/y has been adopted in the guidance when it comes to defining a site's impact and for including the need to "assess total representative person dose" as an objective.
- Recognition of innovation and new techniques – we're happy to consider proposals from operators
- Inclusion of programmes for sites with a potential for variable impact (such as decommissioning sites)
- Example programmes as guidance to what an appropriate programme could comprise for different impact sites for those designing programmes
- How to consider sustainability such as minimising the sampling of living wildlife and habitats
- Accessible format on GOV.UK

Read the guidance [Environmental radiological monitoring: planning and implementing your programme - Guidance - GOV.UK](#)

Read about our monitoring programmes [Monitoring radioactivity - GOV.UK](#)

Public consultation: Application for the on-site disposal of solid radioactive waste at the Winfrith Nuclear Research site in Dorset.

Nuclear Restoration Services Ltd (NRS) has applied to vary (change) its Radioactive Substances environmental permit at the Winfrith Nuclear Research site in Dorset.

The Winfrith site is in the final stages of decommissioning, all the buildings will be knocked down and the site will be returned to heathland with public access. NRS is proposing to bury some of the demolition waste on site and some of this waste is radioactive. NRS has applied to vary its Radioactive Substances environmental permit to allow this to be done and has also applied for a new Deposit for Recovery environmental permit to allow it to bury non-radioactive demolition waste.

Most of the waste is low or very low-level radioactive waste. No higher activity waste will be left on site, that's being transferred off-site and kept securely for final disposal in a Geological Disposal Facility. Our 2018 guidance document: "Management of radioactive waste from decommissioning of nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation," which we call GRR, gives site operators the option to leave radioactive and non-radioactive waste on site if it represents the best option after balancing social, economic and environmental factors. Winfrith is the first site in England to make permit applications using the GRR guidance.

We are holding an initial online consultation from Wednesday 7 May 2025 to Friday 1 August 2025 and the application documents are available to view on Citizen Space: [Radioactive Substances Regulation variation](#), [Deposit for Recovery permit application](#)

We will address all the comments that we receive during our technical assessment of the applications. After this assessment is complete, we will set out our proposed decisions to issue or reject the permit applications. We will run a second public consultation and carefully consider the responses before we make our final decisions. We hope the consultation on our proposed decisions will take place in early 2026.

Read the guidance [RSR guidance for nuclear sites undergoing decommissioning - GOV.UK](#)

Have your say [Nuclear consultations - Environment Agency - Citizen Space](#)