

Report to Sizewell Site Stakeholder Group

March 2016

This report covers the Environment Agency's regulation of Sizewell A & B nuclear sites and related issues for the period between December 2015 and February 2016.

Our 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 check compliance with the permits by making regular inspections at Sizewell A & B.

Radioactive Substances Compliance Assessment Reports (RASCARs) detailing our inspections and any non-compliances found are placed on the Public Register.

We also 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 technical authority, alongside the Health & Safety Executive for the Control of Major Accident Hazard (COMAH) regulations that apply to Sizewell B.

Current Regulatory Activities

Sizewell A

On 2nd December we inspected Sizewell A to ensure that there was a full close out of the various themed audits that have been carried out on site over the last few years (2012 to 2014). These audits were asset management, out of scope/exempt waste arrangements, aqueous waste-the management of pond water chemistry, management arrangements and radioactive waste management arrangements. There were a few outstanding actions but no non-compliances noted during this inspection.

On 17th February we inspected the management arrangements for gaseous discharges. We looked at some of the recent changes that have happened on site and the present use of HEPA filter systems. We also discussed future discharges and monitoring for further decommissioning programs e.g. ponds decommissioning. There were several recommendations from this inspection but no non-compliances.

Ponds Decommissioning

In preparation for ponds decommissioning later in the year, Sizewell A is introducing various enablers on site. At the moment these include upgrades to machinery, ventilation and change facilities.

Two flasks of Ionsiv cartridges (filters that are part of the water treatment system) have been transferred from the ponds at Sizewell A to Oldbury pending further treatment and disposal.

Sampling has taken place of an historic fuel element bottle held in the ponds. The sampling will enable various options to be considered for the treatment, storage and ultimate disposal of this material.

We will be in further discussion with Sizewell A regarding ponds decommissioning in the future.

Diversion of Rain Water from AETP Roof to Storm Drains

We received a Best Available Techniques proposal proposing diverting rain water away from the Active Effluent Treatment Plant (AETP) roof to storm drains. At present this run off goes into the AETP for processing. As the potential for contamination to be released from the roof is minimal we believe this is a reasonable proposal. The storm drains are monitored for reassurance purposes.

Environmental Monitoring Programme

We require all nuclear operators to monitor the environment around their facilities for radioactivity. Part of the monitoring programme around Sizewell takes sediment samples from 5 beaches around the sites. One of the substances analysed in these samples is the radioactive isotope, strontium-90 (Sr-90), which emits beta

radiation, a form of radiation that can be blocked by clothing or similar thin barrier. Sr-90 is an isotope associated with nuclear fission that can come from power production but also from reprocessing, nuclear accidents and historic atmospheric weapons testing. It is also used in medicine for the treatment of cancer. Consequently, very small levels of Sr-90 are widespread in the environment.

Unusually, the sample from Aldeburgh beach taken in autumn 2015 gave a positive result for Sr-90. The last positive result from Aldeburgh beach was recorded in 2007. Normally, Sr-90 is not detected in these samples but in autumn a result of 1.32 Bq per kilogram was recorded, which is still a very small amount of radioactivity. In comparison, the human body contains around 4-5,000 Bq of the radioactive isotope potassium-40, which also emits beta radiation. We asked the operator to re-analyse the autumn sample and take a further sample in December. Both these analyses recorded positive results at similar levels: between 1 and 3.8 Bq per kilogramme of sample.

We are continuing to work with the operator to investigate these unusual results. It is important to note that these results are unusual and the levels of radioactivity detected are very low. We will continue to update the SSG as more information becomes available, noting that the analysis of environmental samples for the presence of Sr-90 takes several weeks.

Sizewell B

In January, we participated in an inspection alongside the Office for Nuclear Regulation (ONR) looking at SZB's management arrangements for solid radioactive waste. The correct segregation and storage of radioactive waste is a condition of the permit, in addition to ensuring that the generation of radioactive waste is minimised. The inspection found that SZB is compliant with their Environmental Permit.

In February, we visited the station to inspect arrangements for complying with the regulations controlling the use of fluorinated greenhouse gases and ozone depleting substances. These gases are often used on industrial sites for cooling and air conditioning; they are also used in electrical switchgear. The operator demonstrated they were complying with the regulatory requirements and are well managed.

During our February inspection we also looked at the operator's arrangements for recording and

reporting gaseous radioactive discharges from minor outlets – these are permitted outlets that represent less than 5% of the whole station's discharge limits and include the outlets associated with steam venting. Whilst we recognise that it is difficult for the operator to measure and record these small discharges, we determined that the operator is compliant with their permit conditions and appropriate records are being made for these discharges.

Eels Regulations

We issued a minor variation to the radioactive substances permit for Sizewell B in December 2014 relating to the Eels Regulations. This variation added an Improvement Condition (IC3) to the permit requiring the operator to complete a cost benefits appraisal of the Best Available Techniques for protecting eels from the impacts of being drawn into the station's cooling water intake and outfall.

The response to IC3 was submitted in September 2015. We have assessed the information and the operator has provided some additional clarification in some areas. Our fisheries experts have also visited the station to understand the site infrastructure.

We have yet to reach a final conclusion with regard to Sizewell B but it is likely that little physical improvements can be made at the station. The station already has a fish return system in operation. Instead, it is likely that we will require "alternative measures by other means" to be implemented to improve eel conservation measures locally through the development of an Eels Management Plan. We will continue to update the SSG as more information becomes available.

Enforcement

No enforcement action has been necessary at Sizewell A or B since the last report to the Sizewell Site Stakeholder Group in November 2015.

Discharge Reports

The operators at Sizewell A and B 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 and a digest of information is available via the Environment Agency section on the gov.uk website: [What's in your backyard?](http://www.gov.uk/what-in-your-backyard)

Liquid and gaseous discharges from both Sizewell A and Sizewell B sites were at levels

well within permitted limits and no Quarterly Notification Levels (QNLs) were exceeded in the period.

Other News

Guidance Note on Revocation of Permits

A public consultation has just commenced 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).

This consultation is being managed by SEPA on behalf all three environment agencies. Full details and associated documents are available on the SEPA “Consultation Hub” website:

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

Any comments you may wish to make on the proposed guidance will be most welcome. Details of how to respond to the consultation are provided on the “Consultation Hub”. The closing date for responses is Monday, 9th May 2016.

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.

Contacts

The Environment Agency’s Lead Regulator for the Sizewell A and Sizewell B sites are Phil Fahey and Stuart Parr respectively. Phil and Stuart are both Nuclear Regulators and part of the Nuclear Regulation Group (South) which is based at the Environment Agency’s Wallingford office in Oxfordshire.

Phil and Stuart undertake environmental regulation of radioactive substances on nuclear licensed sites in southern England and Wales. 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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