

Report to Sizewell Site Stakeholder Group

March 2015

This report covers the Environment Agency's regulation of Sizewell A & B nuclear sites and related issues for the period between December 2014 and February 2015.

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.

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.

Information about our permits and our compliance inspections is placed on the Public Register. More information on the types of information we keep on the Public Register and how it can be accessed can be found on our website.

We work within the Regulator's Code, a statutory code of practice developed by Government that requires regulators to:

- support compliant business growth
- engage with business over the way regulation is delivered
- take a risk-based and proportionate approach to regulation
- share information with other regulators where practicable
- provide advice and guidance on how to comply

- publish service standards, report on performance in meeting them and demonstrate compliance with the Regulators' Code.

Further information on how and why the Environment Agency regulates and what the benefits of regulation are can be found in our publication, *Regulating for People, the Environment and Growth*, which is available through our website.

Current Regulatory Activities

Sizewell A

During this reporting period we have been investigating an incident involving radioactive waste which was initially reported to us by Magnox in September 2014.

The incident concerned a consignment of eight radiologically contaminated waste heat exchangers that had been decommissioned and dispatched from Sizewell A to Siempelkamp in Germany for treatment.

The heat exchangers had been sent to Germany in July 2013 for treatment by a smelting process which is commonly used for slightly radioactive metal items. One of the conditions of acceptance set by the treatment facility is for the items to be empty of any free liquids.

Magnox informed us that as one of the heat exchangers was being prepared for smelting, a small amount of water leaked out into the workshop. The investigation revealed that each of the heat exchangers held a small quantity of radioactive contaminated water (approximately 60 litres each).

The spilt water was contained and cleaned up and the remaining water within the heat exchangers was drained out and disposed of appropriately.

Through our investigation we are satisfied that any environmental impact from this event was minimal. However failure to dispose of waste in accordance with the waste acceptance criteria for a receiving site constitutes a non-compliance with Sizewell A's Environmental Permit. We have also recorded a second non-compliance against

Sizewell A's management arrangements for their failure to ensure adequate checking of the waste prior to dispatch.

We are following this up with Magnox to ensure systems are in place to prevent a reoccurrence.

There were no other regulatory visits or interventions during this reporting period.

Sizewell B

Sizewell B returned to power from the refuelling outage early in December. Since this time the power station has operated normally and there have been no environmental issues reported to us.

During December we conducted a site inspection primarily focussed on "intelligent customer" arrangements following an event reported to us earlier in 2014 when a stack monitor was mis-calibrated and EDF had to resubmit some their discharge data to us. A number of improvements had already been identified by EDF following this event. We gained assurance during our inspection that EDF's management systems were sufficient to achieve compliance with our permit, which includes conditions about keeping monitoring equipment in good order.

During this period we also assessed the EDF's report demonstrating the planned Dry Fuel Store employs the Best Available Techniques (BAT) for environmental protection during its operation. We concluded that BAT will be applied during the operation of the store but we also raised a number of further questions which EDF are currently addressing.

We also assessed EDF's report demonstrating that BAT will be applied should EDF choose to increase the burn-up of the fuel used in the reactor. EDF's proposal is subject to regulatory approval from the Office for Nuclear Regulation (ONR) and our assessment was made in support of this process as well as to ensure compliance against our permit. Our assessment concluded that there are good sustainability arguments for increasing fuel burn-up and that discharges would remain within current permitted limits.

In February, we conducted an inspection of the permitted Combustion Activity at Sizewell B, which constitutes a number of emergency and back-up diesel generators across the site. We permit the operation of the generators but they are usually only run to test the generators and ensure that they would operate in a severe emergency when power from the National Grid

has been lost. This inspection also took in the condition of oil and chemical storage tanks. No non-compliances were recorded during the inspection but one emergency diesel generator was identified as requiring a re-test of its emissions to air to ensure compliance with the limits in the permit.

At the December SSG meeting, EDF reported that there had been a spill of chlorinated water from their hypochlorination plant. Environment Officers from our local area office in Ipswich attended site on the day of this incident and concluded that there was no significant environmental impact from the spill and no further regulatory action was required. Since then we have been kept informed by EDF as they have investigated the cause of this event.

Enforcement

Magnox have been issued with a Warning Letter following the incident with the heat exchangers being dispatched from Sizewell A to Siempelkamp (see above). The incident resulted in two non-compliances being recorded against their Environmental Permit.

No enforcement action has been necessary at Sizewell B.

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?*

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

Environmental Monitoring

We have started to review our environmental monitoring programme around the Sizewell sites. This is part of a wider review we are conducting around all the nuclear sites in England and Wales. We take a range of samples from around nuclear sites throughout the year and report these results annually in the Radiation in Food and the Environment (RIFE) report, alongside sample results taken by the Food Standards

Agency (see below for more information about the RIFE report).

This wide-ranging review has been triggered by the publication of our guidance document¹ on monitoring for radioactivity in the environment and changes in operations at a large number of nuclear sites, for example most Magnox power stations have entered a decommissioning phase in recent years.

The focus of the review will be to ensure that our monitoring programme is taking the right sort of environmental samples, for example sediments and seawater, with the right frequency. We will also review the analytical techniques used on the samples to ensure that we are still looking for the right sort of radioisotopes in the environment.

We will share the findings of our review and explain if we are making any changes to the environmental monitoring programme around Sizewell.

Radioactivity in Food and the Environment (RIFE) Report 2013

The annual *Radioactivity in Food and the Environment* (RIFE) report presents results of nation-wide monitoring programmes conducted by the Environment Agencies and the Food Standards Agency. These monitoring programmes support our regulatory function and provide a check that public radiation exposures are low and within legal limits. This report includes detailed information and data from monitoring carried out around nuclear sites in the UK in 2013. In summary, this year's report was similar in its findings to previous years in that:

- Food remains safe and the public's exposure to ionising radiation is within legal limits.
- All doses were below the legal limit in 2013.
- Radioactivity from natural background, rather than nuclear sites, continues to be the more significant source of exposure to communities in all areas of the UK.

Around Sizewell, the total dose from all pathways and sources during the year was 0.021 mSv (or approximately 2% of the dose limit to members of the public), slightly more than a chest x-ray

(0.014 mSv)². Specific assessments for representative members of the public, such as high consumers of local produce and houseboat dwellers were less than the total dose.

Further details can be seen in the RIFE report which is available electronically at <https://www.gov.uk/monitoring-radioactivity>.

Sizewell Habits Survey 2015

During the summer of 2015, our contractors will be in the Sizewell area to conduct a habits survey. The results of the survey will be used in our radiation dose assessments to ensure that we are identifying the most exposed persons in the area and that we are taking into account changes in activities and populations within the area. We routinely undertake habits surveys around nuclear sites to ensure we are using up-to-date information. We publish our dose assessments in the annual RIFE report (see above).

Previous habits surveys can be found on our contractor's website:

<http://www.cefas.defra.gov.uk/publications-and-data/scientific-series/environment-reports.aspx>

Nuclear Sector Environmental Performance Report

We first published the *Sector Plan for the Nuclear Industry* in November 2005. The plan set out the main environmental issues facing the industry and the ways in which we and industry can work together to address them. It also set out a range of objectives for environmental improvement, representing commitment from both the industry and ourselves to achieving and reporting on improvements in performance. The objectives agreed by the Environment Agency and the nuclear sector go much further than the minimum statutory duty, and include many voluntary initiatives.

The sector plan committed us to publishing an annual report on the environmental performance of the nuclear industry based on the performance indicators. In December 2014, we published our 9th annual nuclear sector plan performance report. It describes the environmental performance of the nuclear industry during 2013, as measured by the objectives and metrics of the Nuclear Sector Plan, which was revised in 2012.

¹ Radiological Monitoring Technical Guidance Note 2 – Environmental Radiological Monitoring, December 2010

² <https://www.gov.uk/government/publications/ionising-radiation-dose-comparisons/ionising-radiation-dose-comparisons>

Overall, the nuclear sector made good progress towards meeting the objectives in the nuclear sector plan in 2013. Since 2005 improvements in performance have continued in a number of areas. Despite positive progress in improving environmental performance across the industry, there needs to be greater focus to improve performance especially for Intermediate Level Waste conditioning within the industry, though we note that there has been good progress with this issue at Sizewell B.

Full copies of the environmental performance report can be found on our website at:

<https://www.gov.uk/government/publications/nuclear-industry-environmental-performance-reports>

Contacts

The Environment Agency's Lead Regulator for the Sizewell A and Sizewell B sites are Andrew Pynn and Stuart Parr respectively. Andrew 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.

Andrew 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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