Report to Sizewell Site Stakeholder Group

September 2019

This report covers the Environment Agency's regulation of Sizewell A & B nuclear sites and related issues for the period between May 2019 and August 2019.

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 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, for the Control of Major Accident Hazard (COMAH) regulations that apply to 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.

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.

Current Regulatory Activities

Sizewell A

Inspections.

We undertook an inspection on 22nd and 23rd May 2019 on environmental leadership.

We found the arrangements generally satisfactory and found no non-compliances.

Discharges from site.

Gaseous discharges from Sizewell A are mainly constant. There are small variations as the reactors are now "breathing" (i.e. no forced discharge). Discharges follow a seasonal variation.

Aqueous discharges can vary as different decommissioning projects are undertaken at site. As the pond drain continues we are monitoring the discharges that the Operator is required to report to us.

In quarters 1 and 2 2019, there was a small rise in tritium discharged in aqueous waste. However the combined figures for both quarters are still less than 1% of the annual permitted limit. Combined totals for caesium-137 in quarters 1 and 2 were approximately 2% of the annual limit. Combined totals in quarters 1 and 2 for the "any other radionuclide" category of aqueous waste were approximately 3% of the permitted annual limit. This compares to the calendar year of 2018 when the total discharges were about 10% of the permitted limits for Caesium-137 and "other radionuclides" and less than 1% for tritium in aqueous waste.

We will continue to monitor discharges and report any issues to the SSG.

Update on measurement of Strontium-90 in marine sediment samples around Sizewell.

The Operator is undertaking extra reassurance sampling of strontium-90 in marine sediment during the pond drain. Results from quarter 2 2019 are below limits of detection for the areas being sampled (Aldeburgh and Southwold). We will continue to keep the SSG informed of any issues we see in both the Operator's and the Environment Agency's environmental monitoring programmes.

South East sites waste teleconference.

On 19th August 2019 we dialled into a joint Magnox, EA and Office for Nuclear Regulation (ONR) meeting on waste strategy at South East sites. This meeting discusses how waste disposal is optimised and managed at the sites (Dungeness A, Sizewell A and

Bradwell) and provides a forum for Operator and Regulator feedback.

Sizewell A radioactive substances environmental permit variation

In June 2019 we issued an Environment Agency initiated variation to the Sizewell A permit and compilation of Environment Agency Requirements and Specifications (CEARAS).The permit was changed to include new conditions that will require the Operator to develop and maintain a Waste Management Plan (WMP) and a Site Wide Environmental Safety Case (SWESC) in line with the joint Environment Agencies' guidance document 'Management of radioactive waste from the decommissioning of nuclear sites: guidance on the requirements for release from radioactive substances regulation' (known as the GRR, see briefing note below).

We also introduced changes into the permit as a result of amendments in 2018 to the Environmental Permitting (England and Wales) Regulations 2016. These implement changes arising from the updated Basic Safety Standards Directive (2013/59/Euratom) which sets out standards for radiation protection in the European Member States and is based on international studies on the effects of radiation.

We took the opportunity to change the list of gaseous discharge routes on the Sizewell A permit. We removed the present "Fixed High Efficiency Particulate Air (HEPA) Filter Units" category specified in table S3.1 of the permit with a full list of gaseous discharge routes that this presently covers. This provides transparency of the major gaseous discharge routes going forward into decommissioning.

There were no changes to permit limits in this variation.

As a result of the changes to the permit we updated the CEARAS to make it consistent with the changes made.

Management of Bradwell site.

The final physical works to bring the Bradwell site into its Care & Maintenance configuration were completed in the last week of August and, apart from the ISF, the Bradwell site is now managed and run from Sizewell A. A small number of staff will remain on the Bradwell site until December to operate the Interim Storage Facility (ISF). After that the ISF will be operated by staff based at Sizewell A.

An exercise is planned in September and October to test the re-entry procedures that will be used by staff based at Sizewell A when they carry out periodic inspection and maintenance work Bradwell site while it is in Care & Maintenance.

At the current time the Bradwell site SSG plans to continue to meet. We will continue to report on Bradwell related regulatory matters that arise through this forum.

Change in Sizewell A Regulator.

From 1st October, Peter Reynolds will be taking over from Phil Fahey as Sizewell A Lead Regulator. Peter is currently, and will continue to be, the Bradwell lead Regulator.

Sizewell B

Routine Compliance Inspections

We undertook inspections to assess Outage readiness on 22nd & 23rd May. We did not identify any non-compliances and were generally satisfied with evidence of compliance for the radioactive substances permit. We did identify one non-compliance against the combustion plant permit. Three welding generators were identified without the secondary containment required by the Operator's own procedures. There was no environmental impact; additional containment was provided promptly and well before these items were used in the Outage.

Inspection after Warning Letter

We carried out an inspection on 20th August to assess progress following the issue of a Warning Letter on 29th March. This related to non-compliances with the radioactive substances permit when the wrong tank was discharged from the secondary liquid waste system on 6th February. We were satisfied that the Operator had completed all the actions required to minimise the risk of recurrence, and pleased that some of them were completed well ahead of the agreed timetable.

Other Compliance Matters

The Operator reported to us on 10th July that they had identified evidence of a minor oil leak from temporary plant. Their subsequent investigation did not identify the root cause. However, they have agreed a number of actions relating to temporary/mobile plant that will minimise the risk of this recurring, including some that will apply to all EDF nuclear sites. Several drums of oil-contaminated shingle were disposed of as hazardous waste. There is residual contaminated material that cannot be safely removed because there are high voltage cables below. We await the Operator's final investigation report.

On 12th July several tonnes of ammonia solution escaped from a storage tank but were contained in the tank bund. This is designed to provide secondary containment in such a situation. We were satisfied

that the Operator reported this to us promptly and took action to minimise the risk of off-site impacts. They later safely disposed of several tonnes of ammonia solution as hazardous waste. We will liaise with the ONR, with whom we have joint responsibility for COMAH on nuclear licensed sites, to agree an appropriate regulatory response after reviewing the Operator's final investigation report.

Sizewell B radioactive substances environmental permit variation

In July 2019 we issued an Environment Agency initiated variation to the Sizewell B permit. This was solely for the reasons explained above (under Sizewell A) relating to the GRR and amendments to the Environmental Permitting Regulations. There were no changes to any permit limits for Sizewell B, nor were there any changes to the CEARAS.

Enforcement

We have taken no enforcement action and noted no non-compliances during the period May 2019 – August 2019 for Sizewell A.

For Sizewell B we identified a non-compliance with no environmental impact against the permit for combustion activities, reference EP3634LR, following the inspection in May. We provide advice and guidance only in respect of this non-compliance

We will determine our response to the oil pollution and ammonia events in that took place July after the Operator submits their final investigation reports.

Contacts

The Environment Agency's Regulators for the Sizewell A and Sizewell B sites are Phil Fahey and Richard Lee respectively. Phil and Richard 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 Richard 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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Pollution incidents should be reported to our Incident Hotline on 0800 80 70 60 (24-hour service).
https://www.gov.uk/report-an-environmental-incident

SITE STAKEHOLDER GROUP - BRIEFING NOTE

Management of radioactive waste from decommissioning of nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation (GRR).

What is the GRR?

The GRR is new guidance published by the environment agencies in July 2018 (Scottish Environmental Protection Agency, Environment Agency, and Natural Resources Wales).

The guidance is for operators of all nuclear sites, whether or not they have already begun decommissioning and clean-up.

The guidance describes what operators need to do when they are planning and carrying out their work to decommission and clean-up their sites. It sets out clear criteria that operators need to meet throughout the lifecycle of their site in order to be released from radioactive substance regulation (in other words, to surrender their permit) after the conclusion of all activities on the site.

What does the GRR do?

It sets standards for public and environmental protection that are consistent with international and domestic law, guidelines and policies. These standards limit the:

- level (dose) of radiation people and the environment are exposed to whilst the site is being regulated
- risk of exposures to radioactive substances dispersed through the environment after the site is released from regulation
- level (dose) of radiation people are exposed to from local concentrations of radioactive substances after the site is released from regulation

Operators must keep the risks of radiation exposure to people as low as reasonably achievable, taking account of economic and social factors. This is called optimisation. It is a basic principle of the international system to protect people from radiation and it is central to the GRR.

What does this mean for nuclear sites?

The guidance requires operators to:

- produce a waste management plan
- produce a site-wide environmental safety case that demonstrates the environmental safety of the nuclear site as a whole
- make sure the condition of their site meets standards for protection of people and the environment, now and into the future

We are introducing conditions to each nuclear site permit during 2019, which reflect the requirements of the GRR. Operators will then work on developing their Waste Management Plans and Site Wide Environmental Safety Cases over the following few years. The environment agencies will monitor how operators are progressing to ensure the permit requirements are met by the agreed dates.

Optimising waste management

The operator's waste management plan must strike the best overall (optimal) balance between:

- the safety of the public, workers and the environment
- other factors such as costs, potential future uses of the site, or the impacts of transport of waste and materials

Waste management plans must be optimised to each site's individual circumstances. This means that at different nuclear sites it might be optimal to use either one of the approaches below or a mix of both:

- remove all radioactive waste and contamination from that site and transport it for disposal or treatment at some other suitable site(s)
- dispose of all radioactive waste and leave all radioactive contamination on that site

We will only authorise disposal of radioactive waste on a site when we are satisfied the operator has developed an optimal waste management plan, and has satisfied us that the final condition of the site, and the work to be done to reach that condition, are safe for people and the environment. The operator must do this by meeting all the requirements in the GRR.

Stakeholder engagement

The GRR requires the operator to engage widely when developing their developing Waste Management Plan and Site Wide Environmental Safety Case. Local communities, the planning authority and regulators all have an important role in such discussions.

We have engaged with the Office for Nuclear Regulation during the development of the GRR and will continue to ensure joined-up regulation during the implementation phase.

Where can I get more information?

There is a summary and link to the full guidance at:

https://www.gov.uk/government/publications/decommissioning-of-nuclear-sites-and-release-from-regulation

You can also speak to the Environment Agency site regulator.