

Site Stakeholder Group

Sizewell B Report - March 2015



Station Director's Report - March 2015

1. Safety performance and staffing

Station Safety Performance and staffing numbers

During the period of the report there has been:

- No Lost Time Injuries
- No environmental incidents
- No nuclear reportable incidents

We currently have **522** EDF Energy staff, **36** Apprentices and **250** year round contracting partners.

2. Generation

Operational update

The station has operated at around full power during this period.

Please click on the link below that provides a daily update of the status of our eight nuclear power stations. The link will show which nuclear reactors are in service and what they were generating at the time the information was updated. You can also see which reactors are out of service, what the reasons are and when we expect them to return to service. In addition, we have included the expected timing of the next statutory outage of each nuclear reactor.

<http://www.edfenergy.com/about-us/energy-generation/nuclear-plant-status.shtml>

3. Company Update

EDF Energy announces 10 more years for Dungeness B

EDF Energy has extended the expected life of its Dungeness B nuclear power station by ten years. This means it is due to continue generating low carbon electricity until 2028, producing enough power each year to supply the equivalent of 1.5m homes.

The decision has been made possible by a £150m investment programme to extend the life of the station. It comes after extensive reviews of the plant's safety cases and work with the independent nuclear regulator, the Office for Nuclear Regulation (ONR). The station will also be subject to continuing independent safety reviews by the ONR.

Improvement projects at Dungeness B have already included a £75m upgrade to control room computer systems and £8m on enhanced flood defences.

The life extension at Dungeness B is part of a wider EDF Energy programme to extend the lives of its eight nuclear power stations.

Based on the expected life extensions, all seven AGR stations will be operating in 2023 when the new nuclear power station at Hinkley Point C is due to be commissioned, subject to a final investment decision.

4. Sizewell B news

Sizewell B Safe to operate for another 10 years

The UK's nuclear power stations have to renew their license to operate every 10 years and Sizewell B has received the regulator's approval for continued safe operation.

The Office for Nuclear Regulation (ONR) has approved the Periodic Safety Review of the safety case for Sizewell B. This allows the UK's only Pressurised Water Reactor (PWR) to operate for a further 10 years.

The industry regulator confirmed Sizewell B meets its safety case to continue delivering low carbon power to over 2million customers until 2025 and the station is already working on the case for the next ten years to ensure operation to at least 2035. This is the station's current stated lifetime although two years ago EDF Energy expressed its aim to extend its life for 20 years beyond that to 2055.

A Periodic Safety Review (PSR) is carried out every 10 years at all nuclear power stations in the UK.

The PSR is a look back at the operation of the station over the last ten years and a look forward at processes to manage safe operations for the next ten years. The review also looks at the experiences of other nuclear stations around the world to see if lessons can be learned.

This is the second PSR to be carried out at Sizewell B. The PSR highlighted opportunities for improvement which will be programmed into the station's enhancement plans. This work will be part of the maintenance tasks carried out every 18months when the station is brought offline to refuel.

Radioactive discharges from Sizewell B Power Station during our thirteenth Refuelling Outage

Please refer to **Appendix 1** of this report for the information relating to the radioactive discharges from Sizewell B Power Station during our thirteenth Refuelling Outage. The Refuelling Outage started when the station was disconnected from the National Grid on 17 October 2014 and ended when the station was reconnected to the Grid on 3 December 2014.

To recap from the information submitted with the eleventh and twelfth Refuelling Outage data: only Noble (inert) Gas discharges to air are assessed using a "real time" technique, permitting the half-hourly data points requested by the SSG. Other radionuclides require sampling media (e.g. filters) to accumulate radioactivity over a period of time, usually a week, following which they are taken to a laboratory for analysis. The quantities of radioactivity being discharged are so low that shorter sampling periods lead to results that are below the limit of detection for the analytical technique; this presents less meaningful information.

As requested, on the accompanying chart we have included the Noble Gas data for the Unit Vent and Radwaste Building stacks on the same axes as the data from Gundremmingen Power Station. Once again the instruments registered at their limit of detection values throughout the outage. A second chart shows this data on an expanded y-axis, so that the minute variations can be seen.

A number of short interruptions in the data can be seen; these occurred during periods when maintenance to the power supplies was being carried out.

There is a third discharge stack, that for the Gaseous Radioactive Waste System. The results are shown on a separate chart because the limit of detection for the Noble Gas instrument is much higher than the other two. However, the flow rate from this stack is very low and furthermore it is shutdown with no flow for most of the outage, which accounts for the gaps in the data shown on the chart. Taken together this means that the amount of Noble Gas radioactivity discharged from this stack is about ten times lower than for the other two stacks. The increase in the indication towards the end of the Refuelling Outage is within the normal range of variation for this instrument.

For the very low levels of radioactive discharge covered by the Environmental Permit the total amount of radiation discharged is more important than the rate of discharge expressed on the charts. For this reason included is a table showing the cumulative amount of radioactivity discharged for each permitted radionuclide group during the outage period. The table also shows the Quarterly Notification Levels and Annual Limits, for comparison.

Dry Fuel Store Update

Work started on the Sizewell B Dry Fuel Store (DFS) in January 2013 which entails movements of fuel to the DFS as part of the commissioning leading up to and following the next refuelling outage in 2016. Until that date fuel will continue to be safely stored on site in the fuel pond.

We continue with the concrete pour of the DFS base slab which is now 40% complete and represents a significant step towards the building construction. We are now finalising the design for the building steelwork and cladding to allow this work to progress once the slab is completed.

The clearing of a legacy national grid transformer is complete and has allowed us to progress the preparation of the remainder of the DFS building area. Work is continuing on the manufacture of the DFS equipment and storage casks. We have received the first major component (Hauling Transporter) and it is undergoing Site testing. The remainder of the components to allow us to commission the system are nearing completion of manufacture and factory testing and will soon be shipped to Sizewell to allow us to commence Commissioning.

The dry fuel store is an important major development for Sizewell B power station, ensuring the station has the ability to continue to store spent fuel, safely and securely, on site for the lifetime of the power station or until a deep geological disposal facility is available.

5. Community News

EDF Energy inspires girls to choose engineering – as new research shows change needs to happen

Pupils from Alde Valley Academy and Sir John Leman High Schools in Suffolk have taken part in a pilot workshop at Sizewell B designed to encourage more females into science and engineering roles.

The Year 10 and 11 pupils took part in the workshop to gain a better understanding of the range of jobs on offer for students with good qualifications in Science Technology and Maths (STEM) subjects. The pilot was launched as new research into women in engineering is released. The report, 'Igniting change: building the pipeline of female leaders in energy' found that that 5% of executive board seats are currently held by women while 61% of leadership boards have no women present at all.

EDF Energy believes that a diverse and inclusive workforce is critical to the performance of the business. In an industry which remains dominated by men, EDF Energy's work to encourage more women into scientific, technical and leadership roles is showing progress.

Women employed in the UK business represent 32% of all employees with 26% of management being women, and 10% female senior leaders. So there is still a way to go in ensuring greater gender balance at the top although the UK business met EDF Group's global target of 30% of women in the talent pipeline for 2014.

Sizewell B is highlighted in the national report as an example of setting a good practise by launching primary school visits to the power station and showing girls the range of roles science and engineering can lead to.

During the workshop held at Sizewell B visitor centre the pupils were set a task to challenge their maths and engineering skills. The pupils worked together in teams to design and build a structure that could hold a weight. They were able to 'buy' simple products such as paper, tape and scissors to assist with the project. Female apprentices and technicians from Sizewell B were also on hand to support the pupils.

Other schools interested in working with nurturing STEM subjects at school through partnerships with EDF Energy are encouraged to contact the Sizewell B visitor centre at sizewellbtours@edf-energy.com. A copy of the report can be found at - www.pwc.co.uk/oilgas/publications/powerful-women

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Appendix 1

Radioactive Discharges during Sizewell B Power Station's 13th Refuelling Outage***

	Tritium (GBq)	Caesium-137 (GBq)	Other Activity* (GBq)
Liquid Discharges	11,481	0.1	5.0
Quarterly Notification Level	30,000	4	15
Annual Limit	80,000	20	130

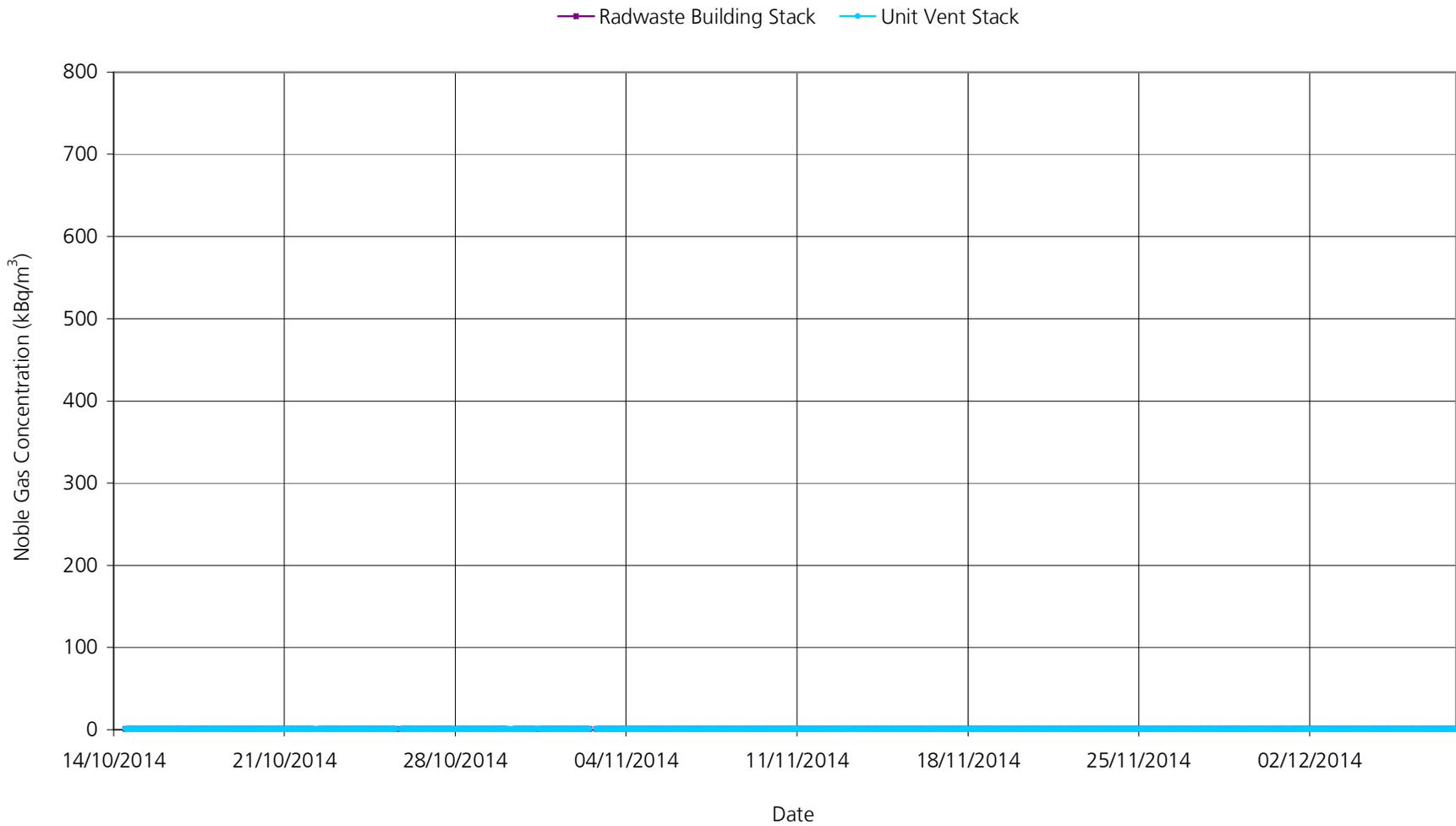
	Tritium (GBq)	Carbon-14 (GBq)	Iodine-131 (MBq)	Noble Gases (GBq)	Beta Particulate** (MBq)
Gaseous Discharges	71	37	1.2	496	0.4
Quarterly Notification Level	600	110	60	4,000	6
Annual Limit	3,000	500	500	30,000	100

* "Other Activity" in Liquid Discharges is assessed by a technique agreed with the Environment Agency and represents activity in liquid discharges other than tritium and caesium-137, which are specified separately.

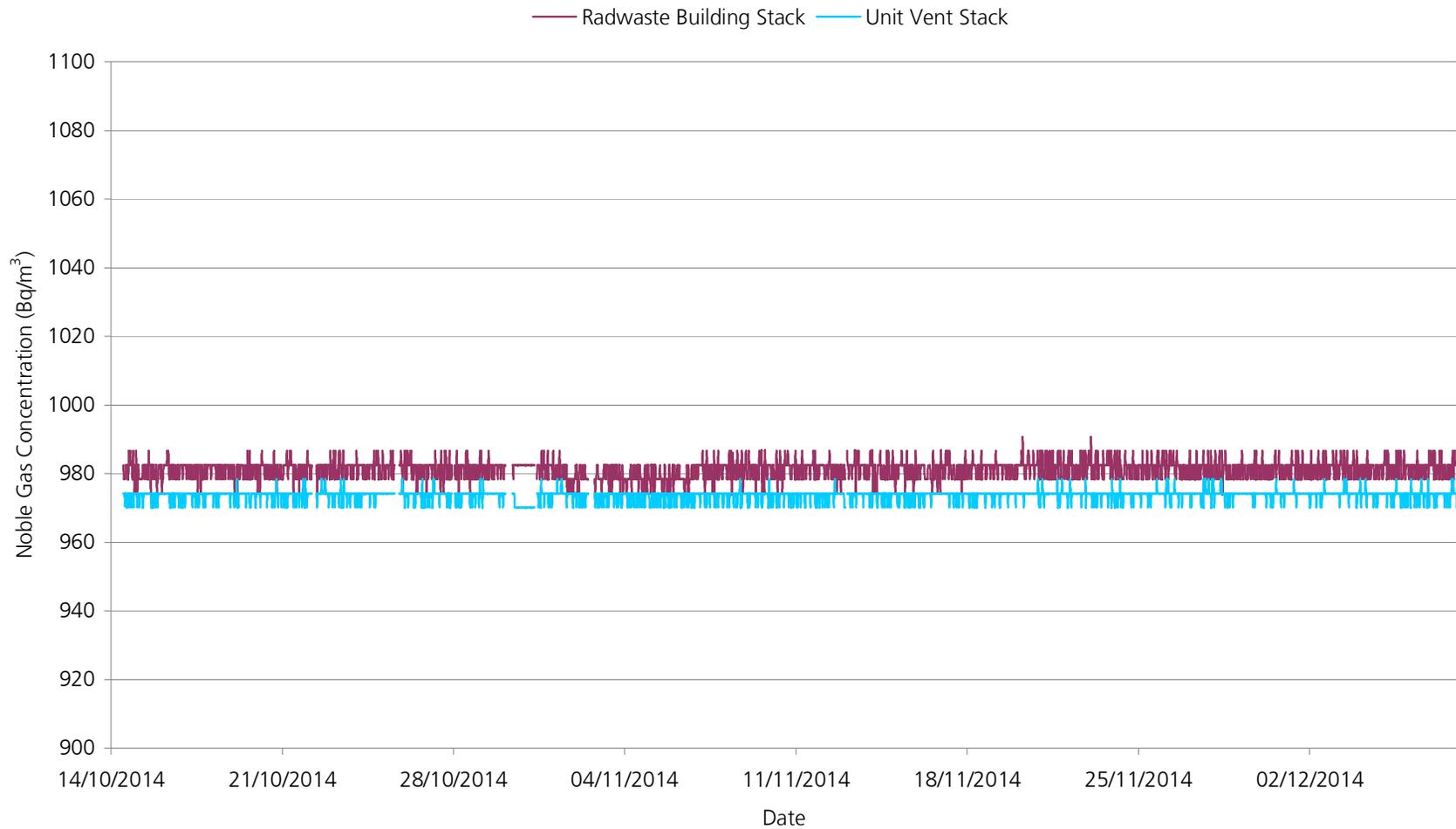
** "Beta Particulate" is an abbreviated form of "Beta-emitting radionuclides associated with particulate matter," as defined in the Environmental Permit.

***Liquid Discharges are reported for the period 13 October 2014 until 8 December 2014, inclusive. Gaseous Discharges are reported from the period 14 October 2014 until 9 December 2014, inclusive. These date ranges reflect the practice of sampling for complete seven day periods, commencing on Monday for liquid samples and Tuesday for gaseous samples.

Noble Gas Discharges during Sizewell B Power Station's 13th Refuelling Outage



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