

Environment Agency Nuclear Regulation Report to Dungeness Site Stakeholder Group



October – December 2014

Introduction

This report covers the Environment Agency's regulation of both Dungeness A and B sites and related environmental subject matter.

Nuclear regulation

Andrew Pynn is the lead regulator for the Dungeness A site.

Jo Moakes is the lead regulator for the Dungeness B site.

Andrew and Jo work in the Nuclear Regulation Group (South) and liaise with colleagues based in Kent in regulating the Dungeness sites.

Attendance at site

We regulate radioactive waste disposals through environmental permits that contain limits and conditions aimed at minimising wastes and protecting the environment. We check compliance with the permit by making regular inspections. These are recorded on Radioactive Substances Compliance Assessment Reports (RASCAR) which details our inspections and any non-compliance found; they are placed on the Public Register.

We undertook site visits to Dungeness A on 27-28 October.

We made site visits to Dungeness B on 16-17 October and 10-11 December.

Regular contact is also maintained with the site by telephone and email in addition to formal correspondence.

Discharge reports

Both Dungeness sites are required to report to us liquid and gaseous discharges to the environment and transfers of radioactive wastes to other sites on a regular basis. These reports are placed on the public register. Liquid and gaseous discharges from both Dungeness sites

remain within the limits set by our Environmental Permit.

Radioactivity in Food and the Environment report (RIFE)

The RIFE report was published in December 2014. A copy can be found on our website - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/387254/RIFE19_report.pdf Doses to the public from the operations of both nuclear sites at Dungeness were consistent with previous years. The assessed dose from all sources was estimated to be around 0.021mSv per year or 2% of the public dose (1mSv per year) to those living close to the site. This is almost entirely related to direct radiation from the site.

Current regulatory issues

Dungeness A

Radioactive Waste Management Arrangements

We have undertaken a themed compliance inspection focussing on the operator's procedures, systems and infrastructure for the management of radioactive waste. This was a wide ranging inspection looking at the entire process from the initial optioneering stage deciding the best treatment/disposal option, through to waste characterisation, packaging and consignment off site.

The results of the inspection were generally positive and some areas were regarded to represent best practice across Magnox. A number of minor improvements and recommendations were also identified which will be followed up as part of our routine engagement with the site.

We concluded that site arrangements were sufficient overall with no non-compliances identified.

FED treatment plant

The future use of the MXD plant is still to be determined and the permit application is still on hold as communicated in the previous SSG report. Some FED material still exists at

Dungeness A and Magnox are currently exploring all options with regards to its treatment or disposal.

Sewage treatment plant

Before Christmas we were notified by Magnox that the main discharge pipe from the sewage treatment plant had developed a leak. Magnox have responded by making a field repair but the pipe will have to be replaced as the repair is not a permanent fix. In the mean time the plant operators have been using tankers to remove the treated effluent to prevent leakage through the damaged section. The sewage treatment plant does not process radioactive effluent so there is no risk of any contamination being caused.

Dungeness B

Active Laboratory

We carried out an inspection of the active laboratories to determine whether the governance arrangements, training of staff, sampling and analysis, instrument set-up and operation are appropriate. Overall we were satisfied with the governance arrangements, level of knowledge demonstrated by sampling and laboratory technicians as well as instrument operation and calibration.

Gaseous sampling cubicles

We have received a copy of a report from EDF's contractors confirming that the residence time of the gas flowing through the charcoal Maypack filter is within acceptable parameters. The results from the laboratory assessment demonstrate that the charcoal Maypack is >99% efficient at the flow rate and humidity experienced at Dungeness B.

Ponds

The operator notified us during the weekly telecon in November that it had lost some pond water from its system into a sump due to an incorrect alignment of a valve. This radioactive liquid was retained in the system and then treated in the Active Effluent Treatment Plant (AETP). The radioactive discharges were well within the limits set in the permit. We are investigating what steps were taken by the operator when this occurred to ensure that all decisions considered minimising the radiological discharges to the environment.

Radioactive Waste Management Arrangements

A number of areas for improvement, observations and good practice have been identified and communicated to the operator. The key area for improvement identified is gaining the senior management endorsement of the Radioactive Waste Implementation Plan to ensure that key deliverables are appropriately resourced. In respect to good practice it was clear that there had been early engagement between the Radioactive Waste Advisor and Statutory Outage Manager to ensure that appropriate measures were taken to minimise and manage the radioactive waste generated.

We noted that the operator has made significant improvements to their radioactive and non-radioactive clearance facility including the installation of better lighting, resurfacing of the tarmac and construction of dedicated sorting bays. In addition, the operator has optimised the disposal of specific radioactive waste streams such as air filters by applying appropriate waste management techniques.

Tritium in groundwater

As discussed in previous SSG meetings, the operator notified us and ONR in July 2014 that groundwater samples taken from borehole 66 was well above the investigation level of 100 Bq/l. [It should be noted that the investigation level is not a limit set in the Environmental Permit but an agreed level of activity that the operator will investigate based on the UK Drinking Water Inspectorate guidance]. Since sealing the leak in the nitrogen pipe-line the groundwater results supplied by the operator has continued to demonstrate an overall downward trend in the levels of tritium; these have only increased slightly following rainfall events. Recent sampling results have been around approximately 200 Bq/l. The operator will be providing us with a copy of their remediation strategy by the end of March 2014. We will review this strategy with ONR to ensure that it is satisfactory. We will provide you with any updates following the completion of the investigation at the next meeting.

We received notification on 19 December that slightly elevated levels of tritium (around 160Bq/l) had been discovered in a separate area of the site. We are confident that this is not linked to the leak described above. The operator identified very early on that there was a failure in pipe-work connecting condensate from the boilers in to the surface water drains. A temporary overland pipe-

line has been installed whilst the operator carries out an inspection to confirm that this is the leak pathway. We will investigate the cause and review the actions taken by the operator to determine whether this constitutes a breach of the permit.

Eels Regulations

We have assessed the report to meet with the Eels Regulations Improvement Condition in the environmental permit and deemed this to be satisfactory. We issued a variation to the permit which became effective on 31 December 2014. This requires the operator to review the implementation of the 'best practice' measures using our cost benefit assessment, and where this is found not to be appropriate to explore the costs of installing alternative measures. A list of these can be found in our guidance document on our website:
<https://www.gov.uk/government/publications/safe-passage-for-eels>

The operator is required to submit this information in a report format by 30 September 2015.

Exercises

We have just started preparing the Level 2 emergency exercise which is planned for March 2015 with the Emergency Planning Coordinating Committee.

Beach Feeding

We are in the process of finalising the legal agreements which are required to meet with the planning condition set by Kent County Council. We expect to commence beach feeding before Christmas.

Flood risk management

EDF received planning permission was approved on 18 November 2014 to install rock armour behind the shingle bund in front of the station to improve the flood resilience to the standards expected by the Office for Nuclear Regulation. The rock armour was delivered on 31 December 2015 by boat.

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