

Introduction

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

Nuclear regulation

Phil Fahey is the lead regulator for the Dungeness A site. Andrew Stone is the lead regulator for the Dungeness B site.

Phil and Andrew both work in the Nuclear Regulation Group (South). Officers from the Kent Area Environment Agency team also visit the site for general environment protection matters such as groundwater, contaminated land, waste management and water abstraction.

We work closely with other regulators such as the Office for Nuclear Regulation (ONR) in areas of common interest.

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 Compliance Assessment Reports which detail our inspections and any non-compliance found; they are placed on our Public Register.

We visited Dungeness A on 7th, 8th and 15th August and 19th September 2017.

On 5th/6th June we attended the 2nd annual regional review of safety security and environment with the Office of Nuclear Regulation. This was hosted by Magnox at Bradwell and encompassed a review of activities at all 3 South East sites (Sizewell A, Dungeness A and Bradwell).

We visited Dungeness B on 26th, 27th June and 18th July 2017. We attended the Emergency Planning Consultative Committee Meeting in July.

We have attended two planning meetings for the off-site emergency exercise that is planned for next March.

Regular contact is also maintained with the sites by telephone and e-mail in addition to formal correspondence.

Discharge reports

Both sites are required to report to us liquid and gaseous discharges to the environment and transfers of radioactive waste 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 the Environmental Permits.

Environmental monitoring

The Operators carry out monitoring of various environmental samples at periodic intervals and report the information to us. Dungeness B staff carry out the work on behalf of both sites. The programmes are slightly different to reflect the radionuclides that are being discharged, the historical discharges and the operational activities taking place at each site.

In addition to the Operators' environmental monitoring programme the Environment Agency participates in an independent UK-wide monitoring programme. The results of these monitoring programmes are published annually and are used to assess the dose received by members of the public in the vicinity of nuclear licensed sites. Radiation doses to people living around nuclear licensed sites from authorised releases of radioactivity were well below the UK national and European limit of 1000 micro Sieverts (μSv) per year in 2015.

Current regulatory issues

Dungeness A

Inspections

On 8th August January we performed an inspection on gaseous and aqueous waste at Dungeness A. We had a catch up meeting on 7th August

There were no non-compliances noted from this inspections.

Ground water and contaminated land (GWCL) meeting.

On 15th August 2017 we attended a meeting to obtain further understanding of ground water and contaminated land issues at site. A technical specialist from our Addington office attended with an expert from Magnox. We were given a tour and an overview of the site hydrology and the monitoring that is occurring. It was explained how Magnox deals with GWCL issues. Magnox have since submitted some documents for our attention describing how movement of shallow groundwater continues to be managed beneath the site to control any potential for emissions. We will be working closely with Dungeness A to ensure groundwater management continues to keep pace with the progress of site works.

Segregation of asbestos waste event.

In August 2017 we were informed by the Operator that on 12th July 2017 active radioactive waste was found in a non-active asbestos skip. Since a similar event in January 2017 (which was included in the last report), extra monitoring has been put in place at site for waste skips. This extra monitoring picked up that the radioactive waste had been placed in the wrong skip.

The skip was isolated and the active material removed.

We received the root cause investigation report which revealed that the failures of process at site were similar to those that caused the January 2017 event. This means that there are 2 further non-compliances to the permit.

Because this is a repeat event we have issued a formal warning letter to Magnox for these breaches. We have also classified the breaches as category 3 rather than the previous classification from January of category 4. The breaches are still classed as minor.

We are liaising with the Operator to ensure they put adequate processes in place to prevent these events from reoccurring.

Particulates in aqueous waste.

In August 2017 the Operator informed us that small amounts of particulate debris had again been seen in samples taken from the final delay tanks prior to discharge. The Operator is required to use best available to techniques to exclude all entrained solids from aqueous waste discharges. As a result of the finding all aqueous discharges were stopped from these tanks.

Further investigation revealed that the debris was metallic and had enhanced activity. This was not a repeat of the bacterial growth included in the last report. The Operator changed the filters and recirculated the fluid to remove the particulates. Discharges then recommenced.

The source of the particulates has been identified as being from the tanks themselves. The Operator will be carrying out some work to remove the source over the next few weeks. The Operator is maintaining vigilance to ensure particulates are not discharged to the environment.

Dungeness B

Environmental Permits

EDF Energy has applied for a variation to the Environmental Permit for discharging water to the English Channel to cater for a proposed new sewage treatment plant on site. The intention is that it will replace the old A-site sewage treatment plant that is still being used by the B station. We have asked for further information from the applicant.

We have issued a variation to the Environmental Permit for transferring radioactive waste to off-site premises. This covers combustible low level waste that is sent to incinerators.

Inspections

We carried out a joint inspection with the Office for Nuclear Regulation during the reactor 21 statutory outage which focussed on aspects of radioactive waste management.

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We carried out an inspection of gaseous radioactive effluents in June. We reviewed historical data and records and visited plant areas where discharges are filtered and monitored.

Discharges were higher in 2016 than in 2015. This is partly due to increased generation from the reactors and also as a result of the injection of carbonyl sulphide (COS) in to the reactors to help reduce carbon deposition on reactor steel components.

Discharges of carbon-14 to air

In September EDF notified us that the discharges of carbon-14 to air had exceeded the quarterly notification level (QNL) for the 3-month period June to end of August. The QNL is not a limit but is set at a level which prompts a review of the means used to minimise discharges.

The reason that the QNL was exceeded is because the reactor R21 purge back to CO₂ (the reactor coolant) at the end of the outage occurred during the same 3-month period as the reactor blow down (controlled depressurisation to atmospheric pressure) in June.

Purging of residual nitrogen from the reactor at the end of an outage is carried out for nuclear safety reasons and to optimise overall gaseous discharges. Short term discharges are made which will reduce longer term impacts that would result from returning the reactor to service with high levels of nitrogen.

No annual discharge limits have been exceeded.

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