Environment Agency Report to the Dungeness Site Stakeholder Group

June 2021

Introduction

This report covers our regulation of Dungeness A and B Sites and related environmental matters over the period February to June 2021.

The Environment Agency's priority remains to protect people and the environment. We have set out how we are doing this across the many areas we regulate, advise or interact with the public, for example, flood defence, flood warning, environmental sampling, permitting, angling and fisheries, waterways management and billing. Please see our page on GOV.UK (www.gov.uk/government/organisations/environment-agency).

Radioactive Substances Regulation

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 undertaking regular inspections. These are recorded on Compliance Assessment Reports which detail our inspections and any non-compliance(s) found.

We last visited Dungeness A for an inspection on waste arrangements (including higher activity waste) with ONR (Office for Nuclear Regulation) on 22nd and 23rd March 2021. We undertook an inspection on environmental awareness at site on 14th June 2021.

We undertook regulatory visits to Dungeness B on 9th-10th February, 16th-17th March and 2nd June 2021.

We also maintain regular contact with the sites by remote means in addition to formal correspondence and visits to the sites.

The Environment Agency has created regulatory position statements (RPS) to assist Operators with issues of non-compliance with specific permit requirements that are unavoidable because of the COVID emergency. These will expire at the end of June 2021. Dungeness A and Dungeness B have not used the RPS for many months as they have returned to more normal site working.

Site Regulation

Dungeness A

We are in regular contact with the Head of Radiological Protection and Environment to ensure that we are kept in touch with progress on decommissioning, progress on actions and recommendations and any emerging issues at the site.

Inspections:

In December 2020, we wrote to the Operator to request information to assure ourselves that the Operator is maintaining adequate arrangements and the highest standards of environmental protection for any remaining period of the COVID emergency. We assessed

the Operator's replies to our questions and we are satisfied that the Operator has adequate arrangements in place.

During the waste arrangements inspection we discussed site processes with a particular focus on some higher level wastes. We made several recommendations but no non-compliances were found.

During the environmental awareness inspection, we interviewed several members of staff to check their knowledge following the commencement of the site's environmental awareness project in May 2020. We found that the knowledge of staff at Dungeness A on environmental matters was improving. The Operator is aware that there is still work to do on this long term project.

Response to COVID 19.

We are still maintaining contact with the Operator on a regular basis. We have regular updates on the COVID situation at site.

Aqueous waste discharges and the MAETP.

Dungeness A is preparing to use a new modular active effluent treatment plant (MAETP) to meet its ongoing waste treatment needs and facilitate decommissioning of the existing active effluent pond water treatment plant.

We received initial waste acceptance criteria for the modular active effluent treatment plant (MAETP) in January 2021. We have made some comments and we received an updated response and environmental performance criteria for the plant. We have assessed these and are continuing our discussions with the Operator regarding the way forward.

We had a meeting in February 2021 with the Operator to review the aqueous waste strategy going forward and we have assessed further information regarding the holistic view of aqueous waste strategy for the future. This includes the dates for decommissioning of the present active effluent treatment plant whilst waste retrieval operations are still being undertaken and the use of the MAETP for aqueous waste generated from these retrievals.

The Operator has made an application for a permit variation to allow aqueous waste from the reactor voids to enter a discharge route direct to the surface water drains (see below). Our national permitting service (NPS) are still determining this application. The amount of radioactivity for this potential route is well below any permit limit and is already covered on the radioactive substances permit, however it is not covered on the water discharge permit. The Operator needed to perform an assessment on the impact to the environment of the non-radioactive content for the route to be included in the water discharge permit. We will be in discussions with the Operator to understand what monitoring will be in place before this route is used (if the permit is granted by NPS).

Engagement with the Operator regarding the turbine hall void.

We continue to liaise with the Operator on this project. We have received further documents which we have assessed and given feedback to the Operator. The first was regarding how the final option (involving stopping the pumping of the turbine hall void and leaving the material present in situ as discussed at the last SSG meeting) was selected for the turbine hall infill, taking into account sustainability, health and safety, cost and scheduling and the second was initial environmental performance criteria for the turbine hall infill Project. We have also received an assessment which reported that the stopping

of the pumping of the turbine hall void would not affect the volume of water entering the reactor voids.

We are working with the industry as a whole to ensure that the recognition of the importance of managing site based activities to protect groundwater and ensure safe management of conventional wastes is central to any decisions on decommissioning of sites.

Further to this the Operator will need to infill culverts in the turbine hall void which run under the material previously emplaced. The Operator has determined that there is some 3000m3 of water in these culverts that will need pumping out. The Operator will need a further variation to their water discharge permit to enable this water to be removed and disposed of as the pH of this water is high.

Joint EA/ONR meetings with the Operator.

We have remote regulatory meetings with the Operator and ONR on a monthly basis. We discuss COVID issues, significant events and learning over the previous month, a brief update on projects and programmes and upcoming Regulator inspections.

Quarterly we have larger strategic meetings (17th February and 9th June) where we discuss future strategies and lifetime plans for the site, waste projects and various other decommissioning topics. These meetings ensure the regulators can discuss issues at site together with the Operator.

Site Environmental review.

In April 2021 we issued our SER for 2021/22 to the Operator. This looks back at our regulatory effort in 2020/21 and gives an indication of our regulatory effort in the coming year. We expect to spend a similar amount of time regulating Dungeness A in 2021/22 as last year i.e. approximately 80 days in total.

Other issues.

We continue to liaise with the Operator regarding other projects at site

We continue to engage with the Operator on environmental awareness improvements at site. In May 2021 we received a summary report of the initiatives carried out at Dungeness A since May 2020. We regard these initiatives as good practice.

We attended a best available techniques meeting on the borderline wet waste project as Observers so we can understand the decision making process of optimisation of waste disposal routes.

We are in discussion regarding monitoring of gaseous waste at site following issues found in the Dungeness A medium active laboratory and the reactor lug vaults. We have been informed that the gaseous sampling nozzle in the low level active waste ventilation plant was too small to ensure isokinetic sampling. We are waiting for the Operator to upgrade this probe and perform a comparison of gaseous discharges to understand what this means for the accuracy of gaseous discharge reporting from this area. We do not expect any issues with permit limits as the discharges from this area have been reported as very low.

We are in discussion with the Operator and ONR concerning the further characterisation of pond skips. The Operator has stated that the characterisation previously undertaken of the pond skips stored at site is not sufficient and more is required to inform their disposability. This issue is affecting pond skips at several Magnox sites. We are working to understand what samples need to be taken, the reasons behind the extra characterisation and how

this will be carried out in practice. We are also interested in secondary wastes that may be generated as well as the disposability of the skips.

We received some information from National Grid regarding the fire in the electrical substation in June 2020. The fire was due to an unexpected instantaneous fault during re-energisation which could not have been predicted and was not part of a known problem with the variant of bushing in question. National Grid has put mitigation in place that if the bushings are seen to have a fault then a full internal inspection and test would be completed before they were re-energised. We were satisfied that there was no breach of F-gas regulations. No radioactivity was involved.

Dungeness B

Radioactive Substances Regulation

Site Inspections

In February 2021, we conducted a liquid radioactive waste inspection, during which we assessed:

i. The Active Effluent Discharge Authorisation process
ii. Appointment of individuals who can authorise disposal of radioactive waste
iii. Condition of the Active Effluent Water Treatment Plant (AEWTP)

We did not identify any permit non-compliance during the inspection. The discharge authorisation process appeared to be robust with a low likelihood of an unauthorised discharge occurring. Appointment of individuals who can authorise disposal of radioactive waste followed company standards. However, there were no records to demonstrate they completed the continuous training and development required by the company standard. Nevertheless, the station confirmed that they were completing the required continuous training and development. Therefore, we left a recommendation for the station to create and maintain continuous training records for those appointed to authorise radioactive waste disposals. We found adequate leak management arrangements in the AEWTP, with an active investment plan to repair plant defects.

In March 2021, we conducted a combined Combustion Plant and F-Gas compliance inspection. The Combustion Plant inspection focused on hazardous waste management and staff competency. We did not identify any permit non-compliance. The hazardous waste management arrangements and staff competency were satisfactory. The F-Gas compliance inspection focused on the management of banned F-Gas and record keeping. We did not identify any breach of the F-Gas Regulations. The station was aware of its responsibilities regarding banned F-Gas and we found no gaps in the F-Gas Register.

In June 2021, we conducted an Environmental Culture/Management inspection and assessed the following:

i. Environmental awareness of selected EDF staff
ii. Continuous environmental improvement
iii. Environmental management oversight by Senior Leadership Team (SLT)

We did not identify any permit non-compliance. The staff we interviewed showed good environmental awareness. The station's 2021 Environmental Improvement Plan contained proposals for continuous environmental improvement. SLT demonstrated positive environmental oversight and we challenged them to reinforce the environmental safety message to increase the levels of environmental awareness across the site.

Events and Enforcement

Dungeness A.

Nothing to report.

Dungeness B

Nothing to report.

Annual Review of Safety and Environment

We attended the annual regional review of safety, security and environment (ARROSSE) at Dungeness A on 15th and 16th June 2021. This meeting reviewed the performance at the Magnox South East sites of Dungeness A, Sizewell A and Bradwell.

Environmental Permitting

Dungeness A

Radioactive Substances Regulation

Water discharge permit

Our National Permitting Service (NPS) are determining a variation to add the discharge from the turbine hall void water to the permit. We have determined that this water which is discharged to sea needs to be included. This application is also considering the proposal to discharge waste from the reactor voids to the surface water drains (see above).

Dungeness B

In March 2021, we modified the Dungeness B CEAR (Compilation of Environmental Agency Requirements). The CEAR stipulates the agreements and conditions required by the environmental permit. The change we made allows the Operator to collect and process samples in the event that our contractor is not available at the time that the witnessed sample is due. In May 2021, we made a further change to the CEAR to allow transfer of spent desiccant from the station for direct incineration.

Discharge Reports

Both sites are required to report to us liquid and gaseous discharges to the environment on a monthly basis. Liquid and gaseous discharges from both Dungeness sites remain within the limits set by the Environmental Permits.

Dungeness A

Dungeness A has submitted the gaseous and liquid waste discharge returns required to us. We have reviewed discharge returns covering the period of this report and did not identify any unusual or unexplained trends. Discharges at site can vary depending on the decommissioning activities taking place. We noted in April 2021 there was a small rise in the caesium 137 and “any other radionuclide” categories of aqueous waste due to resin retrievals and processing of ponds sludge. The returns still represented less than 1% of

the annual limit for these radionuclide categories. We continue to monitor all discharge reports.

Dungeness B

Dungeness B has submitted the gaseous and liquid waste discharge returns required to us. We have reviewed discharge returns covering the period January to March 2021 and did not identify any unusual trends.

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 for the two sites are slightly different to reflect the radionuclides that are being discharged, the historical discharges and the operational activities taking place at each site. Dungeness B continued with the taking of samples for both of the programmes during the COVID-19 emergency.

Dungeness A

Dungeness A has submitted the Environmental Monitoring returns required to us. We reviewed the environmental monitoring returns for quarter 4 of 2020 and did not identify any unusual trends.

Dungeness B

Dungeness B has submitted Environmental Monitoring returns required to us. We reviewed the environmental monitoring returns for the period October to December 2020 and did not identify any unusual trends.

Further information

Further information on our role in regulating the use of radioactive substances and related activities on nuclear licensed sites can be found on the Environment Agency section of the GOV.UK website (www.gov.uk/topic/environmental-management/nuclear-regulation)

The Environment Agency's Lead Regulator for the Dungeness A site is Phil Fahey. The Environment Agency's Lead Regulator for the Dungeness B site is Eddie Osondu.

Eddie and Phil are Nuclear Regulators and part of the Nuclear Regulation Group (South) based at the Environment Agency's Wallingford office in Oxfordshire.

The EA's Nuclear Regulators undertake environmental regulation of radioactive substances on nuclear licensed sites in southern England. 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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