

WYLFA SITE, ANGLESEY, WALES (MAGNOX LIMITED)

SAFLE WYLFA

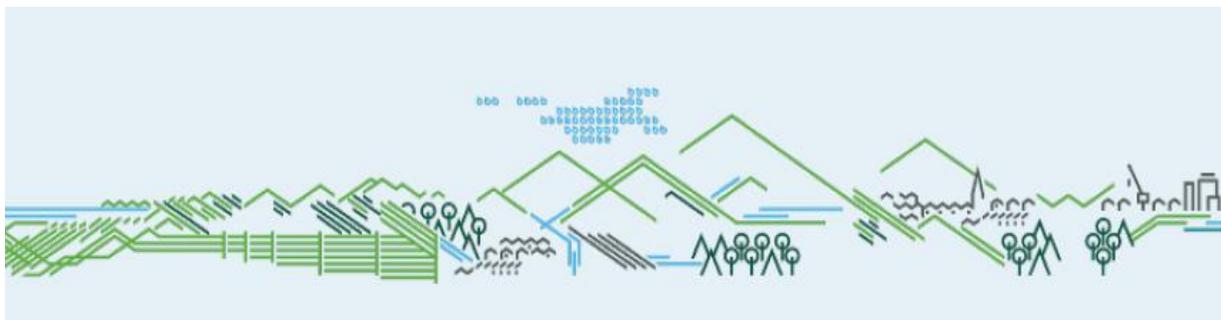
REPORT TO THE SITE STAKEHOLDER GROUP 22ND JUNE 2017

FOREWORD

This report is issued to the Site Stakeholder Group (SSG) to provide a brief summary of the regulatory activities of Natural Resources Wales (NRW) and the Environment Agency (EA) relating to the Wylfa nuclear site.

NRW is accountable to the Welsh Government for the environmental regulation of nuclear sites in Wales. NRW has a contractual arrangement in place which enables them to draw on the experience and resources of the Environment Agency's specialist Nuclear Regulation Group, to assist in the delivery of on-site inspection work and associated assessments.

We regulate the disposal of radioactive waste from Wylfa Power Station, operation of the combustion plant, discharges to water and conventional waste. Please see Annex 1 for further information on our role.



Introduction

This report covers the period since the last Site Stakeholder Group (SSG) meeting on 9th February and highlights some key activities and areas of interest.

Discharges from Wylfa

All radioactive discharges from Wylfa remain within the annual limits set in the site's radioactive substances environmental permit. Discharges have reduced considerably since the site ceased generation at the end of 2015, and we will be reviewing the discharge limits and notification levels specified in the permit later this year.

All non-radioactive discharges to water remain within the limits set in the site's water discharge consents.

Environmental monitoring

Magnox Ltd are required to carry out routine environmental monitoring under their radioactive substances permit. This involves taking a wide range of environmental samples from locations in the vicinity of the site and analysing them for radioactivity content. Recent results from Magnox's programme (from September-December 2016) are in line with those from previous periods and show no cause for concern.

The Environment Agency also undertakes an independent programme of environmental monitoring, on behalf of NRW. This enables us to check the levels of radioactivity in the environment arising from nuclear site permitted discharges, and so assess dose to the public to ensure that this remains within statutory limits. The results are widely reported, along with results from monitoring programmes around other UK nuclear sites, in the Radioactivity in Food and the Environment (RIFE) report, which can be found at:

<http://www.food.gov.uk/science/surveillance/radiosurv/rife/>.

Routine regulatory matters

We issued our Site Environment Report for 2017-18, which sets out our regulatory objectives for the Wylfa site.

We meet regularly with the Waste Team to discuss progress on waste management issues. The majority of routine low level radioactive waste (LLW) arisings are now sent off-site for incineration. Characterisation of legacy waste (including redundant equipment) is progressing slowly, and Magnox are starting to prepare for the different types of waste which will be generated during care and maintenance preparations. A sampling campaign to update waste fingerprints is planned later this year.

We carried out a routine compliance inspection on 11 May, looking at arrangements for monitoring and maintaining the condition and performance of environmental-related plant. We focussed on the Active Effluent Treatment Plant (AETP), and found the current arrangements to be adequate. An ongoing issue in the AETP is the presence of particulate matter in the Final Monitoring and Delay Tanks (FMDDTs). The contents of a tank are sampled prior to discharge, and a small quantity of particulate was found in a sample from FMDDT1 in April. This tank was cleaned out in 2016, but some residual contamination may be present. Magnox have agreed to install some additional filtration to minimise the risk of discharging the particulate matter, which has low levels of radioactivity associated with it.

We received and reviewed reports on the disposal of spent desiccant. Desiccant was used while Wylfa was generating to remove moisture from the reactor gas. The desiccant beads became contaminated with radionuclides including tritium, carbon-14 and chlorine-36 (all beta emitting radionuclides). Legacy stocks of desiccant were sent to Tradebe-Inutec for washing and thermal treatment in 2015. Washing removed around half of the tritium, and the majority of the remaining activity was removed during the subsequent thermal treatment. There were some radioactive discharges to water as a result of the treatment processes, but these have a very low radiological impact. The final solid waste product can be disposed of as very low level radioactive waste (VLLW), rather than being stored for a considerable period of time until it has decayed or until a disposal facility becomes available for ILW. Magnox

Ltd will be retrieving the remaining desiccant from the auxiliary gas plants later this year.

Permitting

Nothing to report this period.

Events & enforcement

We regularly review summaries of all events reported, & discuss those relevant to environmental compliance with Magnox Ltd as part of our routine regulation. There have been no events with significant environmental impact in the period covered by this report.

Clearance alarm levels

An inspection at another Magnox site in late 2016 identified that alarm levels in the monitoring equipment used to clear waste from the reactor building had not been updated to reflect the most recent waste 'fingerprints'. A similar issue was identified at Wylfa in December 2016.

The purpose of clearance monitoring is to demonstrate that items or quantities of waste contain such low levels of radioactivity that they are 'out of scope' of the radioactive substances regulations. Waste which is successfully cleared is subsequently managed as non-radioactive waste. The alarm level in the Rados bag monitors at Wylfa should have been reduced in September 2015, in line with an update to the waste fingerprint. There was potential for waste which was 'in scope' to be incorrectly categorised as 'out of scope' in the intervening period.

Following investigation and discussions, we concluded there had been two minor non-compliances with the radioactive substances permit and issued a warning to Magnox Ltd in respect of this event. Magnox have now put in place formal arrangements to ensure that updated fingerprints are implemented in all relevant systems in a timely manner, and to ensure that regular checks are undertaken to confirm that the clearance monitoring equipment is being used correctly.

Contact details

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Annex 1: The role of Natural Resources Wales & the Environment Agency at nuclear sites

Operating and cleaning up nuclear sites generates radioactive and non-radioactive wastes. Our role as the environmental regulator is to ensure that the impact of those wastes on people and the environment, now and in the future, is as small as it can be. We also aim to prevent pollution, enhance the environment, and contribute to the sustainable development of the UK.

We inspect nuclear sites and assess proposals from operators, to provide assurance that the operator is complying with the limits and conditions of the permits we issue under the Environmental Permitting Regulations 2010 and other relevant legislation and policy.

We supplement direct regulation with a partnership approach, working with the operators, the Nuclear Decommissioning Authority (NDA) and the Office for Nuclear Regulation (ONR) to solve problems jointly.

We expect operators to comply fully with all relevant legislative requirements and permits. If this does not happen, we will not hesitate to use our enforcement powers to ensure that action is taken to protect the environment or to secure compliance.

In summary our objectives are to:

- Ensure that environmental permits are up to date, flexible and fit for purpose and that they drive environmental improvement
- Assess compliance with the limits and conditions of the permits
- Reduce risks to the environment and avoid creating further legacies
- Ensure that integrated waste strategies continue to improve
- Ensure that solid waste is packaged in a form suitable for disposal
- Ensure that infrastructure and assets are maintained to minimise environmental impact
- Develop guidance on Best Available Techniques (BAT)
- Influence NDA so that they provide appropriate direction to operators to

minimise waste and improve environmental outcomes

- Encourage integrated management of fuel and nuclear materials so as to prevent or minimise the potential environmental impacts
- Ensure land and groundwater contaminated by radioactivity or other pollutants is managed appropriately and protect land and groundwater from further contamination
- Monitor and assess organisational change to ensure that environmental performance is maintained

Natural Resources Wales and the Environment Agency have produced joint guidance on our requirements for decommissioning of nuclear sites, which can be found here:

<https://www.gov.uk/government/publications/the-decommissioning-of-nuclear-facilities>