



Office for Nuclear Regulation (ONR) Quarterly Site Report for Wylfa Power Station

Report for period 1 October – 31 December 2015

Foreword

This report is issued as part of ONR's commitment to make information about inspection and regulatory activities relating to the above site available to the public. Reports are distributed quarterly to members for the Wylfa Site Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/lrc/>).

Site inspectors from ONR usually attend Wylfa Site Stakeholder Group meetings and will respond to any questions raised there. Any person wishing to inquire about matters covered by this report should contact ONR.

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1 INSPECTIONS

1.1 Dates of inspection

The ONR site inspector made inspections on the following dates during the quarter:

13, 14, 21, 22, 23 October 2015
16, 23, 24, 25, 26, 27 November 2015
7, 8, 9, 10, 11, 16, 17 December 2015

2 ROUTINE MATTERS

2.1 Inspections

Inspections are undertaken as part of the process for monitoring compliance with:

- the conditions attached by ONR to the nuclear site licence granted under the Nuclear Installations Act 1965 (NIA65) (as amended);
- the Energy Act 2013;
- the Health and Safety at Work Act 1974 (HSWA74); and
- regulations made under HSWA74, for example the Ionising Radiations Regulations 1999 (IRR99) and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).

The inspections entail monitoring licensee's actions on the site in relation to incidents, operations, maintenance, projects, modifications, safety case changes and any other matters that may affect safety. The licensee is required to make and implement adequate arrangements under the conditions attached to the licence in order to ensure legal compliance. Inspections seek to judge both the adequacy of these arrangements and their implementation.

In this period, routine inspections of (site/station) covered the following:

Management of operations including control and supervision;
Staff training, qualifications and experience;
Emergency preparedness;
Incidents on the site;
Decommissioning;
Organisational changes;

In general, ONR judged the arrangements made and implemented by the site in response to safety requirements to be adequate in the areas inspected. However, where improvements were considered necessary, the licensee made satisfactory commitments to address the issues, and the site inspector will monitor progress during future visits. Where necessary, ONR will take formal regulatory enforcement action to ensure that appropriate remedial measures are implemented to reasonably practicable timescales.

Safety System Inspections

ONR includes inspections of the systems that contribute to the safety of operating reactors in addition to compliance inspections based on the conditions attached to the nuclear site licence. The nuclear site licence requires that all licensed sites must have a safety case in respect of any operation which may affect safety. For the Magnox reactor that remains in operation at Wylfa power station, 30 systems have been identified to provide the basis for inspecting safety systems to ensure they meet the claims made on them by the safety case. The intention is to inspect systematically over a five year cycle all of the safety related systems identified for the site. ONR considers that this approach will provide the necessary level of assurance that the requirements of the safety case are met and the site is being operated safely.

This quarter the safety system inspected was the Civil Structures. On the basis of the inspections, the systems were deemed to be operated and maintained in accordance with the requirements of the station safety case. Where areas for improvement were identified, station undertook to take appropriate action to address them. ONR will monitor progress to complete the agreed work.

Further details of ONR's system inspections at Wylfa power station and other nuclear licensed sites can be found at: <http://www.onr.org.uk/intervention-records/index.htm>

2.2 Other work

The site inspector held a periodic meeting with safety representatives, to support their function of representing employees and receiving information on matters affecting their health, safety and welfare at work.

3 NON-ROUTINE MATTERS

Licensees are required to have arrangements to respond to non-routine matters and events. ONR inspectors judge the adequacy of the licensee's response, including actions taken to implement any necessary improvements.

Matters and events of particular note during the period were:

Ventilation supply fan running in reverse

A supply fan motor supplying air to numerous areas within the Reactor Equipment Building (REB) was discovered to have been running in a reverse direction. Initial investigations suggest that this has been the case for an extended period. The result of this plant configuration is that air has been extracted from contamination controlled areas and discharged via an unauthorised route. An initial survey of the system was carried out. This did not reveal significant contamination although trace amounts of Cobalt-60 were detectable by chamber monitor and gamma spectrometry upon further analysis. Magnox Ltd is undertaking an investigation into the root cause of this event. A follow-up investigation into this incident was undertaken jointly between ONR and Natural Resources Wales (NRW) in December. No further action is proposed by ONR other than to monitor closure of the actions arising from the final Magnox Ltd investigation report. Natural Resources Wales (NRW) is currently considering its response to the event, in respect of compliance with the radioactive substances environmental permit and it has confirmed that the environmental impact of the event was minor.

Disruption to Selective Tripping Scheme

On the 22nd October 2015, ONR Site Inspector (Nuclear Safety) undertook a preliminary investigation into events surrounding the removal of the Selective Tripping Scheme Relays when undertaking the 415V essential services board bus-section control circuit maintenance and functional check on 20 October 2015. On 21 October, Magnox Ltd reported this incident to ONR and confirmed that removal of the Selective Tripping relays has the potential to reduce defence in depth in the event of a loss of grid fault. Without the relays there would be a risk of not being able to start the Gas Turbine that provide essential electrical supplies for safety related plant. However, it is not considered that the diesel generators would be affected and thus some defence remained.

Having considered the findings from ONR's preliminary investigation and following the application of ONR's Enforcement Management Model, it was concluded that compliance with License Condition (LC) 28 at Wylfa was significantly below standard in this instance when compared with the relevant ONR Technical Inspection Guide as well as Magnox Ltd's own

arrangements for compliance with LC28. The failure to implement adequate arrangements when undertaking this maintenance activity resulted in safety being prejudiced.

In response to an enforcement letter, issued by ONR, Magnox Ltd has provided ONR with an Improvement Programme for conduct of maintenance at Wylfa with a specific focus on the post generation phase of operations. This programme is expected to address procedural quality as well as use and adherence to these and includes (but is not necessarily limited to) the following:

- Fitness for purpose; technical accuracy; document control and revision; suitability of checks
- Pre-Job briefings and task walkdowns
- Supervision
- Standards of behaviour – including use of self-checking

The submitted programme is clear, prioritised and resourced such that arrangements are in place for all significant safety related maintenance instructions that are due in the first 3 months of defueling (April, May, June) to be thoroughly reviewed before progressing into defueling, and the remainder will be reviewed before the end of June. ONR will conduct readiness inspections targeted at this aspect to ensure that the required improvements are implemented adequately prior to providing permission for the amendment to the Operating Rules enabling implementation of the Post Generation Defueling Safety Case.

Removal of Fuel Transfer Machine/Secondary Dry Store Cell Interlock

Magnox Ltd reported an incident involving the removal of the interlock from the Dry Store Cell (DSC) 4 and 5 access bridge, to ONR on 28 September 2015. The interlock device which prevents operation of the Fuel Transfer Machine (FTM) by isolating the electrical supply, whilst the access bridge is removed, was found detached from the access bridge lifting beam on 23 September 2015. This could potentially allow the FTM to be driven over the open void once the bridge is removed. Magnox Ltd's fact finding in support of its investigation has established that the interlock was removed by riggers employed by Doosan Babcock Ltd during replacement of the access bridge on the 13 August 2015. During the period of its removal and discovery the FTM has been in use (note: access bridge in place so no risk of transfer machine entering void space).

Interviews undertaken by ONR with the Doosan Babcock Ltd riggers and their site manager confirmed that no written instructions, pre-job briefs, work order cards, risk assessments or lifting plans were provided in support of this task. It is further apparent, from interview with the Magnox Ltd crane operator, that he did not have any information either. Members of the respective duty holders considered the other to be responsible for control and supervision. The riggers confirmed that they removed the interlock from the bridge as they considered it necessary to separate the lifting beam from the bridge. They were unaware of the function of the interlock and its purpose. The crane operator also confirmed that he was unaware that an interlock was present. The riggers confirmed they had not undertaken this task before and it was only the second time the crane operator had undertaken the task.

Having considered the findings from my investigation and following the application of ONR's Enforcement Management Model, I have concluded that compliance with License Condition 26 at Wylfa was unacceptable in this instance when compared with the relevant ONR Technical Inspection Guide as well as Magnox Ltd's own arrangements for compliance with LC26. The lack of any apparent control and supervision during the replacement of the access bridge on 13 August 2015 resulted in safety being prejudiced.

In response to an enforcement letter, issued by ONR, Magnox Ltd has submitted proposals to ONR that will address the root causes of this event that resulted in the removal of the interlock from the DSC 4 and 5 access bridge and subsequent operation of the fuel transfer machine from that date until late September when the removal of the interlock was identified. ONR will monitor Magnox Ltd's delivery of proposed improvements during the next quarter.

4 REGULATORY ACTIVITY

ONR may issue formal documents to ensure compliance with regulatory requirements. Under nuclear site licence conditions, ONR issues regulatory documents, which either permit an activity or require some form of action to be taken; these are usually collectively termed 'Licence Instruments' (LIs), but can take other forms. In addition, inspectors may issue Enforcement Notices to secure improvements to safety.

- The following LIs have been issued during the period:

Table 1
Licence Instruments and Enforcement Notices Issued by ONR during this period

Date	Type	Ref No	Description
04/12/15	Approval	Licence Instrument 565	<p>Dry Store Cell 4(DSC4) was designed for the bulk storage of nearly 29000 irradiated fuel elements in an actively controlled air environment. The operational requirements for maintaining the environment are provided in an Approved Operating Rule and associated reference Station Operating Instructions. Magnox Ltd has declared DSC4 to be fuel free and it now contains only a small inventory of ILW. Magnox Ltd considers that in this state the stringent conditions and limits specified are no longer required to maintain nuclear safety and can be removed, and replaced with appropriate alternative arrangements based on routine station operating instructions.</p> <p>ONR is satisfied with the claims, arguments and evidence provided in the Nuclear Safety Committee (NSC) paper "Proposals for the deletion of operating rule 4.5, associated reference station operating instructions (RSOIs) and maintenance schedule (MS) activities for secondary dry store cell (SDSC) 4" and other evidence provided through engagement with the Licensee.</p> <p>Consequently ONR has granted the Approval to amend the Wylfa Station Operating Rules by alteration of Operating Rule 4.5 and revision of related documentation as indicated in Magnox Ltd's safety submission.</p>
17/12/15	No Objection	Letter WYF71022N	<p>During July and October 2015 Magnox Ltd sought ONR agreement to load irradiated fuel into refurbished secondary Dry Store Cell 5 at Wylfa power station.</p> <p>ONR assessments of the modified and restricted secondary fuel route proposal have found it to be acceptable; restrictions have been implemented via design modifications, operator instructions and staff training. There is an ALARP case for use of Dry Store Cell 5 and the flask handling facility that now makes up the secondary route.</p> <p>Other than Dry Store Cell 4, ONR supports the use of the Wylfa secondary discharge route. Therefore, agreement to loading irradiated fuel into Dry Store Cell 5 has been given as requested by Magnox Ltd provided that the limits and conditions specified in the relevant safety case are applied.</p>

Reports detailing the above regulatory decisions can be found on the ONR website at <http://www.onr.org.uk/pars/>.

5 NEWS FROM ONR

Chief Executive

Adrienne Kelbie has been appointed Chief Executive of ONR and will take up the appointment on 18 January 2016. Adrienne is currently the Chief Executive of the Disclosure and Barring Service, and prior to this has had a varied career including periods as Deputy Chief Executive in a local authority and as Director of Operations responsible for national and international funding at the Big Lottery Fund.

Chief Nuclear Inspector

ONR is currently recruiting for its Chief Nuclear Inspector. The Chief Nuclear Inspector has the key role in providing assurance on the effectiveness of the UK's nuclear regulatory system to the ONR Board, ministers, licensees and the British public and will represent ONR nationally and internationally. The closing date for applications was Sunday 17 January 2016 and the recruitment campaign has now progressed to the next stage. Further updates on the recruitment campaign will be published on our website www.onr.org.uk.

Regulation Matters Magazine

Insight into ONR's work as an independent regulator of the nuclear industry can be found in ONR's Regulation Matters. The online publication (<http://www.onr.org.uk/regulation-matters.htm>) reports on the key themes and developments in each of ONR's regulatory programmes and provides an update about the ongoing changes at ONR. <http://www.onr.org.uk/index.htm>. For the latest news and updates from ONR visit the website and sign up for our ebulletin (<http://www.onr.org.uk/ebulletin/index.htm>).

6 CONTACTS

Office for Nuclear Regulation
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

website: www.onr.org.uk

email: ONREnquiries@onr.gsi.gov.uk

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