

**Office for Nuclear Regulation (ONR)  
Quarterly Site Report for  
Vulcan (Naval Reactor Test Establishment)**

**Report for period 1<sup>st</sup> January – 31<sup>st</sup> March 2014**

**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 of the Dounreay Stakeholder Group and are also available on the ONR website ([www.hse.gov.uk/nuclear/ilc](http://www.hse.gov.uk/nuclear/ilc)).

Site inspectors from ONR usually attend Dounreay 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.

## **Vulcan Naval Reactor Test Establishment (NRTE)**

The majority of sites inspected by ONR are licensed under the Nuclear Installations Act 1965 (as amended). Vulcan NRTE is not a licensed site although it operates under Authorisation from the Ministry of Defence (MoD) Defence Nuclear Safety Regulator (DNSR). The site is adjacent to the Dounreay licensed site and is regulated by ONR through other legislation as noted below. This report summarises the inspection and regulatory activities associated with the Vulcan NRTE which are co-ordinated with inspections by DNSR.

### **1 INSPECTIONS**

There were no physical visits to the site during this period, however there were regulatory interactions via written communication, telephone conversations, and video conference.

### **2 ROUTINE MATTERS**

#### **Inspections**

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

- the Health and Safety at Work Act 1974 (HSWA74); and
- regulations made under HSWA74, for example the Ionising Radiations Regulations 1999 (IRR99), the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPIR), and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).

Under REPPIR the duty holder (Vulcan NRTE) is required on a three yearly cycle to review the last Report of Assessment (ROA) and either provide a declaration of no change of circumstances or if this is not the case make a further assessment. Furthermore, at any time, when there has been a material change, the duty holder is required to assess the impact of the change on the Hazard Identification and Risk Evaluation that supports the existing Report of Assessment. Vulcan undertook such a review following the detection of an increased level of radioactivity in the cooling water in 2012. That review, reported to ONR in October 2012, concluded that the Report of Assessment remained valid - Section 3 of this Report discusses that matter further.

As part of the routine three yearly cycle to review the Report of Assessment, in August 2013 ONR accepted a declaration of no change pending ongoing interactions with Vulcan regarding a new Report of Assessment. By making the declaration, Vulcan was confirming that there had been no change in circumstances which could affect the extant REPPIR assessment. However, it was agreed by all parties that it would be beneficial for Vulcan to produce a new Report of Assessment as it would provide an opportunity to take into account the developing regulatory guidance, and relevant good practice, for such an assessment.

Once Vulcan have revisited their analysis and produced a revised Report of Assessment ONR will then consider that report and review whether the current Detailed Emergency Planning Zone remains appropriate. During this quarter, the ONR Nominated Inspector and an ONR Fault Studies Specialist Inspector together with the DNSR representatives held a video conference with Vulcan regarding the production of the new Report of Assessment. During the video conference, ONR made clear the regulatory expectations for a Report of Assessment as detailed in the recently revised ONR Technical Assessment Guide (NS-TAST-GD-082 Rev 2 The Technical Assessment of REPPIR Submissions and The Determination of Detailed Emergency Planning Zones).

Vulcan is in the process of planning the annual Level 1 Demonstration Exercise i.e. LONESTAR 14 which is due to take place later in the year. The ONR Site Inspector together with an ONR Emergency Planning Specialist Assessor reviewed the draft objectives for the exercise and provided advice on their development.

During this period, an ONR Specialist Radiological Protection Inspector continued to review the progress Vulcan has made with addressing the remaining actions arising from the IRR99 themed intervention undertaken in March 2013. That inspection looked at the operator's compliance

arrangements together with the implementation of those arrangements at the site. ONR considers that the site continues to make good progress in addressing the remaining actions.

### **3 NON-ROUTINE MATTERS**

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

On the 6<sup>th</sup> March 2014, the Secretary of State for Defence made a parliamentary statement in which he stated that in January 2012, increased levels of radioactivity had been detected in the cooling water surrounding the prototype core but that both radiation exposure for workers at the site and discharges from the site had remained well inside the limits.

ONR were informed of the issue by the Defence Nuclear Safety Regulator (DNSR) in the summer 2012, and were required to keep the information on a need to know basis for security reasons.

Vulcan NRTE is not a licensed site under the Nuclear Installations Act. Nuclear safety at the site is regulated by the MOD regulator DNSR. However, ONR does have wider health and safety legal vires which include the regulation of the site under REPPiR and IRR99.

Following notice of the issue, ONR sought and received assurance from the MOD and from DNSR that Vulcan was meeting its legal requirements under REPPiR and IRR99 i.e.:

- Regarding REPPiR, ONR received via DNSR verbal assurance and then written assurance that the technical basis for the Hazard Identification and Risk Evaluation (HIRE) required to be produced under REPPiR and, hence, the determination of the Detailed Emergency Planning Zone for Vulcan NRTE remained valid.
- Regarding IRR99, during a routine visit to the site in October 2013 the ONR Nominated Site Inspector received verbal assurance directly from the Naval Superintendent Vulcan that doses to workers remain below legal limits and were As Low As Reasonably Practicable (ALARP). Furthermore, during the visit the Nominated Site Inspector inspected a rig that was intended to be used to train workers in order to help ensure that their doses were ALARP. Following the ministerial announcement ONR received written assurance of these matters.

### **4 REGULATORY ACTIVITY**

Under health and safety legislation ONR site inspectors, and other HSE inspectors, may issue enforcement (Crown) notices to secure improvements to safety.

No enforcement (Crown) notices were issued during the quarter.

Reports detailing regulatory decisions can be found on the ONR website at [www.hse.gov.uk/nuclear/pars](http://www.hse.gov.uk/nuclear/pars).

### **5 NEWS FROM ONR**

Insight into ONR's work as an independent regulator of the nuclear industry can be found in ONR's Quarterly News. The online publication ([www.hse.gov.uk/nuclear/onr-quarterly-report.htm](http://www.hse.gov.uk/nuclear/onr-quarterly-report.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, as it progresses toward becoming an independent statutory corporation. [www.hse.gov.uk/nuclear/index.htm](http://www.hse.gov.uk/nuclear/index.htm). For the latest news and updates from ONR visit the website and sign up for our ebulletin ([www.hse.gov.uk/nuclear/ebulletin/index.htm](http://www.hse.gov.uk/nuclear/ebulletin/index.htm)).

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