



DSG(2015)P024

Dounreay Stakeholder Group
Site Restoration Sub Group Update Report
November 2015



Site Inspection Work & RSA Compliance

In July SEPA undertook an inspection of DSRL's arrangements for the management of solid Low Level and Out of Scope waste on the Dounreay site. As a result of issues identified relating to the consideration of alternatives to disposal of LLW and the retention of evidence demonstrating compliance of clean waste, SEPA will be undertaking future inspection of these arrangements.

SEPA met with DSRL to discuss the outcome of SEPA's review of the adequacy and results of the Low Level Pits monitoring programme being undertaken by DSRL, including the impacts on groundwater in relation to the Groundwater Directive requirements. The discussions also covered DSRL's plans and programme for the retrieval of waste from the pits for repackaging and subsequent disposal to the new LLW disposal facilities.

In July DSRL notified SEPA of the discovery of some holes in the ventilation ducting associated with the on-site laboratories. As the holes within the ducting were downstream of any abatement (i.e. HEPA filters), no additional radioactivity would have been discharged to the environment. It was subsequently established that the ventilation system was in an extremely poor condition. As a result, SEPA has sent a Warning Letter to DSRL in relation to the failure to keep the ventilation system in good repair and associated failures in the maintenance and inspection regime and the failure to review the implications on existing infrastructure when delays to programmes occur.

As previously reported (in SEPA's April 2015 report), in February SEPA received notification of an issue regarding the mis-consignment of items containing thorium from Dounreay to the National Nuclear Laboratory's (NNL) research and development facility at the Springfields Fuels Limited nuclear licensed site near Preston. It has been established that there were failings in DSRL's arrangements for the control of the thorium containing items, which resulted in their subsequent inadvertent disposal to Springfields. This resulted in several non-compliances with DSRL's RSA authorisation in relation to waste characterisation, consignee acceptance, notification and record keeping requirements. As a result SEPA has written to DSRL outlining the non-compliances and advising of SEPA's intention to undertake inspection of DSRL's Quality Plan for future shipments.

During September SEPA undertook a further inspection of DSRL's Environmental Improvement Plan, which will include reviewing DSRL's evidence for the close out of actions. This inspection was a follow-up to SEPA's previous inspection of the EIP undertaken earlier this year and on this occasion DSRL was able to provide clear evidence to support its close out of Actions arising from the EIP.

Discussions were held with DSRL in relation to the shaft and silo retrieval project plans, including how DSRL intend to manage higher activity wastes.

During w/c 12 October, SEPA undertook inspection of DSRL's management system and arrangements. The inspection identified one non-compliance, which was in relation to the failure of DSRL to provide evidence to demonstrate how waste is managed in an integrated way.

SEPA's Compliance Assessment Scheme results for 2014 were published on 20 October. DSRL's overall compliance rating for its Radioactive Substances Act (RSA) Authorisation (RSA/N/1079137) in 2014 was Poor.

DSRL previously held 3 RSA authorisations for the Dounreay site: 1 for gaseous waste disposals; 1 for liquid waste disposals and 1 for solid waste disposals. On 24 April 2014, these 3 authorisations were revoked and were replaced by a single RSA authorisation that covered gaseous, liquid and solid waste disposals.

The 2014 CAS scores for DSRL's various RSA Authorisations are as follows:

- Licence Number RSA/N/1027347 for gaseous waste disposals (from 1 Jan to 24 April 2014): Good
- Licence Number RSA/N/1027715 for liquid waste disposals (from 1 Jan to 24 April 2014): Excellent
- Licence Number RSA/N/1027722 for solid waste disposals (from 1 Jan to 24 April 2014): Excellent

Other Site Work

In September and October SEPA attended a workshops in Warrington along with the Office for Nuclear Regulation on the Unirradiated Fuels Characterisation Facility.

Low Level Radioactive Waste Facility

SEPA undertook an inspection of waste disposed of to the facility, along with DSRL's disposal records in relation to sample of waste packages. Similar issues relating to the consideration of alternatives to disposal of LLW, which were identified during the previous inspection on the Dounreay site, were identified.

Site End State

In August SEPA met with the NDA to discuss the end state at the Dounreay site and, more broadly, across the NDA's estate in Scotland. The meeting addressed a number of high level topics including:

- The optimisation of DSRL's proposed site end state work at Dounreay.
- SEPA's developing guidance for the revocation of Authorisations under the Radioactive Substances Act 1993 (as amended).
- SEPA's expectations with respect to the application of the Groundwater Daughter Directive (2006/118/EC) and the associated Controlled Activities (Scotland) Regulations 2005 (CAR) and their implications for the protection of groundwater.

The meeting highlighted a number of issues including the need to understand what different stakeholders mean when using the term 'end-state'. The 'end-state' from the perspective of the NDA, as used in their contractual undertakings and defined in the Energy Act 2005, is seen as the point at which the site is suitable for re-use, recognising that there are potential differences between re-use, public access and new ownership. In developing the revocation guidance SEPA uses the term 'site reference state' which marks the boundary between the period of restricted use of the site and the subsequent period of unrestricted use.

Whilst recognising that the actual or potential end uses of the site are important considerations for other stakeholders neither the NDA 'end-state' or the SEPA 'site reference state' consider end-use explicitly.

SEPA's developing guidance for the revocation of Authorisations includes the use of waste management plans and the concept of a 'site wide environmental safety case' to demonstrate the environmental safety of the site at the period when the Authorisation is revoked. In developing this approach SEPA has reviewed the potential use of a number of exemptions, under CAR, relating the entry of (non-radioactive) hazardous substances into groundwater at the site. Recognising that this updates previous advice given to DSRL, SEPA are preparing a position statement on the issue. It is recognised that the potential use of such exemptions may aid in the optimisation, in terms of cost and technical feasibility, of remediation options for the Dounreay site.

In terms of end state work on site, it was also stressed that SEPA has spent considerable resource in reviewing DSRL's site zonal characterisation work to date. SEPA's review has been both detailed and broad in scope and is indicative of our expectation of DSRL's approach to future investigation and reporting of their site characterisation work. Such expectations are consistent with those associated with other major site remediation projects in Scotland.

SEPA and DSRL will be having a technical meeting at the beginning of November to discuss the site's plans for further site investigation and the implications of SEPA's developing revocation guidance.

Non-Nuclear Site Regulation

On 20 October SEPA published the following 2014 Compliance Assessment Scheme results for DSRL Non-nuclear environmental licences and permit;

- PPC Part B Permit for the on-site cementation plant: CAS rating for 2014 – Excellent
- PPC Part A Permit for the new Low Level Waste Facility: CAS rating for 2014 - Excellent
- PPC Part B Permit for the Low Level Waste encapsulation plant: CAS rating for 2014 – Excellent
- Waste Management Licence for the Dounreay site: CAS rating for 2014 – Good
- Waste Management Licence for Landfill 42: CAS rating for 2014 –Excellent
- CAR abstraction licence for the new Low Level Waste Facility: CAS rating for 2014 – Poor
- CAR abstraction licence for the new Low Level Waste Facility: CAS rating for 2014 – Excellent
- CAR licence for abstractions from the Dounreay site: CAS rating for 2014: Excellent

SEPA has refused DSRL's application for surrender of the Landfill 42 Waste Management Licence. The refusal was due primarily to the lowering of the groundwater table in the vicinity of LF42 by ongoing dewatering at the Low Level Waste Facility excavations. This meant that the impacts, or otherwise of LF42 on the water environment could not be accurately assessed at this time.

On 25 August SEPA received a report of an escape of PFA from the Dounreay waste encapsulation plant, understood to have resulted from the failure of a newly added section of flexible ducting. SEPA attended site to carry out an investigation and subsequently received the associated DSRL investigation report. SEPA are currently waiting on an update of ongoing actions from this investigation report and for details of the new design solution that will be necessary for the plant to become operational again when available.

On 6th October there was an exceedance for suspended solids on Outfall 2 which was found to be due to power washing floor slabs. Resample of discharge was below limit.

Planning

Nil to Report

Vulcan

SEPA attended two meetings with Vulcan staff to discuss the disposal of radioactive waste from defueling the current reactor. Further meetings are to take place on this subject.

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