

Scottish Environment Protection Agency (SEPA)

SEPA Report to the Dounreay Stakeholders' Group November 2010

Pollution Prevention & Control (PPC)

DSRL expect to submit an application for a PPC permit for the storage of excavation and demolition wastes at the D6500 Waste Storage Site by early November.

The PPC permit surrender mentioned in SEPA's previous report is awaiting the transfer of conditions in the permit to a Controlled Activities Regulations permit which will be incorporated into the Radioactive Substances Act authorisation for liquid discharges from the site. These conditions put controls on the discharge of non-radioactive species through Dounreay's long sea outfall.

Radioactive Substances Act 1993 Authorisations

SEPA continue to undertake work to analyse the data from the Wet Silo leak detection monitoring systems. The Wet Silo is used to store Intermediate Level Waste.

Following an incident at a site in England where a number of bags of radioactive waste were incorrectly sentenced for disposal to a conventional landfill, SEPA undertook to inspect all the Scottish civil nuclear sites in respect of their arrangements for the management of clean and exempt solid waste disposal. In July SEPA undertook an inspection of DSRL's site's arrangements. During the inspection SEPA found no evidence of the inappropriate disposal of radioactive waste, but did identify some areas for further investigation or improvement, which have been communicated to the site.

As part of a routine programme of inspections, SEPA undertook an inspection of DSRL's clean, exempt and LLW waste management systems in September. Over the last 12 months DSRL has undertaken a programme of improvements to its waste characterisation, packaging and consignment process. SEPA's inspection showed considerable improvement over similar inspections undertaken in previous years.

The UK Strategy for the management of solid Low Level Radioactive wastes arising from the Nuclear Industry was published by NDA on behalf of the UK Government and devolved administrations in August 2010. It is available at <http://www.nda.gov.uk/documents/upload/UK-Strategy-for-the-Management-of-Solid-Low-Level-Radioactive-Waste-from-the-Nuclear-Industry-August-2010.pdf>

Proposed new Low Level Radioactive Waste Facility

SEPA and an external Consultant (RPS Group) have reviewed Post-Closure Criticality Safety Assessment submitted by DSRL. The document presented for review does not yet provide a robust justification and supporting evidence for its contention that a criticality is not credible within the Dounreay LLW Disposal Facilities post-closure. DSRL have prepared a plan to address the issues raised and a revised version of the paper will be available in late November.

SEPA reviewed the 'Skyshine' report from DSRL which covers the potential exposure of local residents to small doses of radiation during the period of operation of the facility before a permanent cap has been put in place over the vaults. Although some minor comments and improved calculations were suggested, any figures were substantially lower than the constraint value.

Ongoing discussion has been taking place on various other topics such as Performance Assessment, intrusion scenarios, monitoring plans and optimisation – all of which will support the next version of the Environmental Safety Case (ESC 2010) due to be published in October.

SEPA had a further two day Technical Meeting with DSRL & their consultants in September.

Details of the project can be found at:

http://www.sepa.org.uk/radioactive_substances/decommissioning/dounreay/proposed_llw_facilities.aspx

Radioactivity in Food and the Environment Report (RIFE)

The RIFE report for 2009 was published on the 13th of October. Following feedback from users of the report, the number of printed copies has been vastly reduced. The report is available at http://www.sepa.org.uk/radioactive_substances/publications/rife_reports.aspx along with the previous RIFE reports. The file size is over 5Mb so if anyone has issues with slow download speeds, SEPA will supply CD versions on request.

The previous RIFE report indicated that game samples taken from the Dounreay area contained elevated concentrations of Caesium-137. SEPA gathered additional samples of rabbit and venison during 2009 to assess variability amongst samples. Results from 2009 have indicated elevated concentrations of Cs-137; however the impact on dose is low (0.063 mSv). Further samples will be collected around Dounreay and also at other sites during 2010. It is not possible to determine the source of the Cs-137 which could come from authorised discharges from the Dounreay site, the Chernobyl accident or atmospheric nuclear weapons testing.

Controlled Activities Regulations (CAR)

Please see under Pollution Prevention & Control above.

Waste Management Licensing

SEPA met with DSRL and its appointed contractor in September to discuss options for the long term capping of Landfill 42. A number of options were discussed for the formation of the cap and formation of seaward defences, which will provide the required long term isolation of the waste mass. DSRL will take forward the outcome of that discussion and present its draft proposals for the final make up of Landfill 42 to SEPA in November.

SEPA has responded to queries about waste management from a number of potential tenderers for the design and build contract for the proposed Low Level Waste Facility.

Particles and Beach Monitoring

SEPA would like to record its debt of gratitude to Professor Keith Boddy CBE who sadly died on the 19 September 2010 aged 72. Scotland, and Caithness in particular, benefited in his latter years from his work advising SEPA on the previously little understood generation, movement and significance of radioactive particles in the environment. As chairman of the Dounreay Particles Advisory Group from 2003, he led the provision of expert scientific and technical recommendations to SEPA and the UK Atomic Energy Authority about the monitoring programme for particles around the Dounreay nuclear facility.

He was a member of the Radioactive Waste Management Advisory Committee, the Committee on Medical Aspects of Radiation in the Environment and the Ionising Radiations Advisory Committee. He was also a Fellow of The Royal Society of Edinburgh and of the Institute of Physics and an Honorary Fellow of the British Nuclear Medicine Society, the British Institute of Radiology, the Society for Radiological Protection, the European Federation of Medical Physics and Fellow and past President of the Institute of Physics and Engineering in Medicine. He was also a past President of the Hospital Physicists Association, the International Organisation for Medical Physics and the International Union for Physics and Engineering in Medicine. His achievements were recognised by the award of an OBE in 1989 and a CBE in 1998.

The full obituary which was printed in the Glasgow Herald can be found by following this link: <http://www.heraldscotland.com/comment/obituaries/professor-keith-boddy-cbe-medical-physicist-and-radiation-protection-expert-1.1062068>

Dounreay Parent Body Organisation Competition

SEPA has had an informal meeting with both competition participants during the informal information gathering phase & will be having more formal interactions with them in mid November along with the other regulators.

Planning

Nothing to report for this period.

SEPA

SEPA's 2009/2010 Annual Report has been published and can be found at <http://www.sepa.org.uk/sepaperforms> .