



25 February 2022

Environmental Authorisations (Scotland) Regulations 2018

**Dounreay Site Restoration Limited Low Level Waste Disposal
Facilities variation application**

Consultation document for discretionary consultees and the public

Overview

It is part of SEPA's remit to regulate the disposal of radioactive substances within Scotland, we do this through the issuing of permits. These permits regulate the quantity and activity of waste which may be disposed of to a disposal facility over its operational lifetime.

Dounreay Site Restoration Limited (DSRL) operate the Low Level Radioactive Waste Disposal (LLWD) Facility adjacent to the Dounreay Nuclear site in accordance with a radioactive substances permit. This consultation has been issued in response to an application from DSRL to vary this permit.

If you wish to review the DSRL application and supporting documents and provide comments for SEPA to consider as part of our process to determine if we will grant the variation, please submit them to us by **25 March 2022**.

As part of this application SEPA has concluded that there are no actions required in relation to The Transboundary Radioactive Contamination (Scotland) Direction 2021. This direction effectively replaces what would have been required under Article 37 of the EURATOM Treaty that would have been required prior to Brexit.

Application details

We received an application from the Dounreay Site Restoration Limited Low Level Waste Disposal Facilities, on 12 August 2021 for a variation to permit EAS/P/1173599.

DSRL have submitted a number of documents in support of their application. The documents include the application form as submitted by the applicant, along with technical and non-technical supporting documents. These documents, listed below, are available on request from SEPA or can be downloaded from the [online web consultation page](#).

- DSRL LLWF variation application summary in brief
- DSRL LLWF variation application forms
- DSRL LLWF variation application supporting document
- DSRL LLWF Environmental Safety Case 2020
- DSRL background overview of the Dounreay Low Level Waste Disposal Facilities

Why your views matter

This is your opportunity to let us know about any material information that you believe SEPA should consider as part of our determination process.

Should you wish to submit a response to this consultation, you can use one of the following options:

- visit the SEPA consultation hub and complete the [consultation online](#);
- submit your response to the question in this document by e-mail to rsenquiries@sepa.org.uk;
- submit your response to the question in this document by post to:

Registry
Scottish Environment Protection Agency
Angus Smith Building
6 Parklands Avenue
Eurocentral
Holytown

North Lanarkshire
ML1 4WQ

Background to the consultation

The Dounreay Low Level Waste Facility (LLWF) was originally authorised for the disposal of Low Level Waste (LLW) under the Radioactive Substances Act 1993 (RSA 93) by SEPA in January 2013. With the introduction of new legislation on 1 September 2018 known as the Environmental Authorisations (Scotland) Regulations 2018 (EASR) the original RSA 93 authorisation was superseded and a new disposal permit (EAS/P/1173599) came into effect on 1 April 2019.

The first phase of three potential phases of the disposal facility vaults, D3120 (for low-level waste) and D3130 (for low-level demolition waste), were completed in May 2014 and started receiving waste in April 2015.

During 2016 DSRL identified that some of the individual radionuclide total activity disposal limits as laid out within Schedule 2 of their permit were preventing the disposal of LLW that was being, or was expected to be, generated by the Dounreay decommissioning programme. DSRL recognised that this issue stemmed from the unavoidable uncertainty in the estimated inventory on which the limits were based.

These limits were estimates of the inventory that DSRL used for the original permit application which did not take account of any variation in the actual inventory that is generated from the Dounreay site. This approach has constrained the optimised management of the LLW produced during the decommissioning programme by limiting the activity of certain radionuclides that do not contribute significantly to the overall risk posed by the disposal facility. DSRL undertook a programme of work to develop proposals for an alternative means of managing the total activity to be disposed to the facility along with an updated environmental safety case (ESC) to demonstrate compliance with regulatory standards.

In addition, DSRL's experience from the operation of the disposal facility has identified several instances where compliance with the Authorised Waste Acceptance Criteria (WAC) and other related conditions could not easily be demonstrated. In particular, DSRL noted

that one of the Authorised WAC relating to non-radiological hazards could no longer be aligned with the latest version of SEPA's regulatory guidance. SEPA proposed that these issues should be addressed and realigned as part of DSRL's application to vary the permit.

Feedback from DSRL on the draft EASR permit during the transition from RSA93 to EASR in 2019 also identified aspects which would benefit from further clarification or rewording. SEPA recommended that these could also be addressed as part of the current variation application.

Dounreay Site Restoration Limited's variation application is primarily seeking to change the method for evaluating the total permitted inventory as defined in schedule 2 of the current permit. DSRL are requesting a variation to make use of an alternative for controlling the total inventory for disposal known as "a sum of fractions" method. This method provides more flexibility for DSRL regarding the waste disposed of to the site while still ensuring compliance with the environmental safety case.

The application is supported by an updated ESC that has taken account of the latest inventory estimates for LLW that is expected to, or has the potential to, arise from the Dounreay site decommissioning programme.

Questions

Do you have any material information to raise that SEPA should consider during our determination process with this application? If so, please provide your comments on:

1. the move to a "sum of fractions" approach;
2. other requested changes as laid out within "DSRL LLWF variation application supporting document".

For information on accessing this document in an alternative format or language please either contact SEPA by telephone on 03000 99 66 99 or by email to

equalities@sepa.org.uk

If you are a user of British Sign Language (BSL) the Contact Scotland BSL service gives you access to an online interpreter enabling you to communicate with us using sign language.

<http://contactscotland-bsl.org/>

www.sepa.org.uk

Strathallan House, Castle Business Park, Stirling, FK9 4TZ