

Permitting decision

Radioactive Substances Regulation (nuclear sites)

We have decided to issue an Environment Agency initiated variation for Sellafield site operated by Sellafield Ltd. The decision is effective from 1 October 2020 in variation V011 of permit number KP3690SX.

We consider in reaching our decision that we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document sets out the reasons for our decision.

Part 1: Variation for the disposal of radioactive waste

Introduction

This Environment Agency initiated variation introduces a tritium (H-3) activity concentration limit of 12,000 Bq/g for waste disposals to the Calder Landfill Extension Segregated Area (CLESA) landfill on Sellafield site.

Sellafield Ltd originally submitted its proposal for a tritium activity concentration limit in its application in October 2018 as part of a Major Permit Review (MPR) at that time. We subsequently determined this application in February 2020 and this is recorded in our decision document in response to application EPR/KP3690SX/V009 (Environment Agency 2020). We determined that we could include the tritium limit in the permit whilst ensuring that people and the environment were protected. We concluded that such a limit would allow greater flexibility in the disposal of waste containing tritium to CLESA and allow decommissioning to progress more quickly. However, we were unable to implement this decision in permit variation V009 because we had not had the necessary confirmation from the Department for Business, Energy and Industrial Strategy (BEIS) on the potential need for a Euratom Article 37 submission for the waste disposals associated with this activity limit.

In March 2020, in response to the coronavirus pandemic, Sellafield Ltd made an application to postpone the effective date of variation V009 from 1 April 2020 to 1 October 2020 and we agreed. This was achieved by variation V010, with an effective date of 1 October 2020, and variation V009 was withdrawn. There were no other changes between these variations.

We subsequently received confirmation from BEIS that a full data submission under Article 37 was not required for the introduction of a tritium activity concentration limit on disposals to CLESA, and that an Article 37 section 5(d) statement would be appropriate. In August 2020, we received confirmation from BEIS that a 5(d) statement had been submitted and received by the European Commission. A 5(d) statement does not require a response from the European Commission and so we can now proceed with implementing the tritium limit on disposals to CLESA under this variation.

The UK left the EU on 31 January 2020 but there is a transition period until 31 December 2020. Throughout the transition period, the UK will continue to comply with all the requirements of EU law, include Euratom Article 37. As part of our transition arrangements, the UK continues to apply the requirements of Article 37.

We do not need to consult on this variation because we consulted on our draft decision for variation V009 (between October and December 2019) and our response to consultee comments is included in our decision document for that variation (Environment Agency 2020). The material content of this variation is unchanged from that consultation and our subsequent decision.

We omitted to explain the reasoning for the introduction of one of the new requirements in the Compilation of Environment Agency Requirements (CEAR) 4.2.2 part 2, in the decision document in response to application EPR/KP3690SX/V009 (Environment Agency 2020). This related to the requirement for an annual report on ongoing activities during storage of unconditioned higher activity wastes (HAW), to provide the necessary assurance that Sellafield Ltd is using Best Available Techniques (BAT) to ensure that these wastes will be suitable for future disposal.

Some operational HAW and significant quantities of legacy HAW at Sellafield have not been issued with final Letters of Compliance and remain unconditioned. In some cases the wastes are yet to be retrieved from legacy facilities and in other cases wastes have been retrieved and are now in modern standards containment, but are stored in an unconditioned form. In most situations, this position has developed because of the need to progress High Hazard and Risk Reduction (HHRR). We recognise and support the progress being made at Sellafield on HHRR and the reductions in environmental impacts and risks that will result from these priority activities. However, we also recognise that wastes stored in an unconditioned form may require further processing into a disposable form. Furthermore, unconditioned wastes may become a future legacy if not managed appropriately in the interim, resulting in secondary wastes and discharges arising from

the need to rework non-disposable wastes or wastes that become challenging to process. Through a new CEAR requirement, we will require Sellafield Ltd to provide us with an annual report on ongoing activities during storage to provide the necessary assurance that Sellafield Ltd is using BAT to ensure that these wastes will be suitable for future disposal. This will help to ensure appropriate mitigation of risks across the lifecycle to ultimately permit disposal of these wastes.

Justification (RSR-A, Q11)

The practices that are justified are production of nuclear fuel, generation of electricity by nuclear reactors, and recovery of usable products from spent nuclear fuel. The justified practice, for example generation of electricity, includes the decommissioning of relevant facilities and the associated waste management.

Euratom Article 37 (RSR-C3, Q2c)

An Article 37 section 5d statement has been received by the European Commission. This variation is not dependent on a response from the Commission to this statement.

Operator and Operator Competence (RSR-A, Q12)

We have not identified any reasons indicating that the operator is unable to operate in accordance with the permit.

Radioactive Waste Disposal Routes and Limits (RSR-C3, Q2d)

This variation implements a tritium activity concentration limit of 12,000 Bq/g on disposals of waste to the CLESA landfill. This allows greater flexibility in the disposal of radioactive waste to the landfill, allowing decommissioning to progress more quickly.

This variation implements our previous decision which is discussed in paragraphs 390 to 396 of our decision document in response to application EPR/KP3690SX/V009 (Environment Agency 2020). Nothing has changed to alter our assessment and determination at that time.

Monitoring (RSR-C3, 2d)

No change is required to the existing CLESA monitoring programme relating to this variation. The CEAR requirement for reporting of disposals to CLESA has been modified to include reference to the tritium activity concentration limit.

Radiological Assessment (RSR-C3, 2d)

Our previous decision included an assessment of the dose impact against our guidance ('Near-Surface Disposal Facilities on Land for Solid Radioactive Wastes: Guidance on Requirements for Authorisation') and we remain satisfied that this change can be made without challenging the dose and risk constraints in the guidance. We are also satisfied that the supporting BAT assessment facilitates decommissioning activities on site.

Decision

We had previously determined that we could include a tritium activity concentration limit for disposal of waste to CLESA in Sellafield Ltd's permit whilst ensuring that people and the environment are protected. We conclude that our previous decision remains valid and have decided to implement this in the permit with this variation.

We conclude that the operator can operate in accordance with the permit conditions to meet statutory requirements and the requirements of Government policy.

Reference

Environment Agency (2020). Decision document: Sellafield Ltd and Sellafield site. Environmental permitting: radioactive substances activities. 20 February 2020.