



**EUROPEAN COMMISSION**  
DIRECTORATE-GENERAL FOR ENERGY

Directorate D - Nuclear Energy, Safety and ITER  
**D.3 – Radiation Protection and Nuclear Safety**

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## **Verification under the terms of Article 35 of the Euratom Treaty**

### **Main Conclusions**

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# **THE UNITED KINGDOM**

## **Sellafield nuclear site**

### **Emergency radioactivity monitoring arrangements**

#### **Monitoring of radioactivity in drinking water**

#### **Recent advances in monitoring aerial discharges**

<b>Dates</b>	22-24 November 2017
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<b>Reference</b>	UK 17-04

## INTRODUCTION

Article 35 of the Euratom Treaty requires that each Member State shall establish facilities necessary to carry out continuous monitoring of the levels of radioactivity in air, water and soil and to ensure compliance with the basic safety standards<sup>1</sup>.

Article 35 also gives the European Commission (EC) the right of access to such facilities in order that it may verify their operation and efficiency.

The radiation protection and nuclear safety unit (ENER D.3) of the EC's Directorate-General for Energy (DG ENER) is responsible for undertaking these verifications.

The main purpose of verifications performed under Article 35 of the Euratom Treaty is to provide an independent assessment of the adequacy of monitoring facilities for

- Liquid and airborne discharges of radioactivity into the environment by a site;
- Levels of environmental radioactivity at the site perimeter and in the marine, terrestrial and aquatic environment around the site, for all relevant pathways;
- Levels of environmental radioactivity on the territory of the Member State.

For the purpose of such a review, a verification team from DG ENER visited the United Kingdom (UK) on 22 – 24 November 2017. This mission dealt with

- Monitoring of radioactivity in gaseous discharges at the Sellafield nuclear site;
- Emergency radioactivity monitoring arrangements at the Sellafield site;
- Monitoring of radioactivity in drinking water in the Sellafield site vicinity;
- Measuring laboratories, in particular infrastructure, analytical methods, quality assurance and control aspects, as well as reporting.

The present document gives an overview of the main conclusions by the verification team concerning relevant aspects of the environmental surveillance and corresponding recommendations. More detailed information concerning the verification is available in the technical report (TR) of the verification.

## MAIN CONCLUSIONS

All verifications that had been planned by the verification team were completed successfully. The information supplied by the UK authorities in advance of the visit, as well as the additional documentation received during and after the verification was useful.

- (1) The verification activities that were performed demonstrated that the facilities necessary to carry out continuous monitoring of levels of radioactivity in the gaseous discharges at the Sellafield Site Area Ventilation (SAV) facility are adequate. The Commission could verify the operation and efficiency of these facilities.
- (2) The verification activities that were performed demonstrated that the facilities necessary to carry out monitoring of levels of radioactivity on and around the Sellafield nuclear site in the event of an emergency are adequate. The Commission could verify the operation and efficiency of a representative part these facilities.

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<sup>1</sup> Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation (OJ L 159 of 29/06/1996) and Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom (OJ L 13 of 17.1.2014).

- (3) The verification activities that were performed demonstrated that the facilities necessary to carry out continuous monitoring of levels of radioactivity in drinking water in the Sellafield nuclear site vicinity are adequate. The Commission could verify the operation and efficiency of a representative part of these facilities.
- (4) A few technical recommendations and suggestions are formulated, in particular the following:
- a. Concerning the Sellafield Site Emergency Monitoring Points System (SEMP) and the Site Perimeter Monitoring System (SPMS) (section 8.3 of the TR), the verification team supports the process to modernise these systems in the near future.
  - b. Concerning the national drinking water monitoring arrangements (section 8.4 of the TR), the verification team recommends that the Drinking Water Inspectorate (DWI) assesses the need for carrying out a country-wide inquiry on the availability of drinking water radioactivity data on the public websites of the regional water companies.
  - c. Concerning the drinking water monitoring arrangements in the vicinity of the Sellafield site (section 8.4 of the TR), the verification team recommends that the water company United Utilities makes drinking water radioactivity data available to the public via its website. In addition the team suggests acquiring an additional counting system for gross alpha/beta measurements to the United Utilities Warrington laboratory.

Notwithstanding these remarks the verified parts of the Sellafield site gaseous discharge monitoring system, drinking water monitoring facilities and the emergency monitoring arrangements are in conformity with the provisions laid down under the Article 35 of the Euratom Treaty.

- (5) The detailed verification findings and ensuing recommendations are compiled in the 'Technical Report' that is addressed to the UK competent authorities through the United Kingdom Permanent Representation to the European Union.
- (6) The Commission services request a report on the implementation of the recommendations from the United Kingdom authorities, and about any significant changes in the set-up of the monitoring systems before the end of 2019, or before the end of the applicability of the Euratom Treaty to the United Kingdom, whichever comes first.
- (7) Finally, the verification team acknowledges the excellent co-operation it received from all persons involved in the activities it performed.

V. Tanner

Team Leader