



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

Directorate D - Nuclear energy, safety and ITER
D.3 – Radiation protection and nuclear safety

Verification under the terms of Article 35 of the Euratom Treaty

Main Conclusions

THE NETHERLANDS

Borssele Nuclear Power Plant

Discharge and environmental monitoring and national environmental radioactivity monitoring network in the vicinity

Dates 16-19 May 2022

Verification team Mr Vesa Tanner, DG ENER
Mr Agris Ozols, DG ENER

Reference NL 22-02

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 standards¹.

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 Netherlands on 16-19 May 2022. This mission dealt with

- Facilities for routine monitoring of environmental radioactivity and radioactive discharges at the Borssele nuclear site;
- Facilities for emergency monitoring of environmental radioactivity at the Borssele nuclear site;
- 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.

¹ 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)

MAIN CONCLUSIONS

All verifications that had been planned by the verification team were completed successfully. The information supplied by the Dutch 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 monitoring of levels of radioactivity in air, water and soil at the Borssele nuclear site and in its vicinity are adequate. The Commission could verify the operation and efficiency of a representative part of these facilities.
- (2) The verification activities that were performed demonstrated that the facilities necessary to carry out monitoring of levels of radioactivity in air, water and soil at the Borssele nuclear site in the event of a radiological emergency are adequate. The Commission could verify the availability of a representative part of these facilities.
- (3) The verification activities that were performed demonstrated that the facilities necessary to carry out continuous monitoring of levels of radioactivity in the gaseous and liquid discharges at the Borssele nuclear site are adequate. The Commission could verify the operation and efficiency of a representative part of these facilities.
- (4) The verification team wishes to make the following recommendation:
 - a) The air sampling station at the Borssele town is old and has a very low airflow (approximately 3-4 l/min) that can barely be felt at the airflow exit (TR section 9.3.2).

The verification team recommends renewal of the off-site air sampling systems in the vicinity of the Borssele NPP.

This remark aside, the verification team nevertheless concludes that the verified parts of the monitoring facilities and the monitoring system for environmental radioactivity at the Borssele nuclear site conform to the provisions laid down under the Article 35 of the Euratom Treaty.

- (5) The detailed verification findings are compiled in the 'Technical Report' that is addressed to the Dutch competent authority through the Permanent Representation of the Netherlands to the European Union.
- (6) The Commission services kindly request that the Dutch authorities submit, before the end of 2024, a report on their implementation of the recommendation, as well as on any significant changes in the set-up of the monitoring systems. The Commission will take this report into account when considering whether a follow-up verification would be necessary.
- (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