



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

BULGARIA

Haskovo

Drinking and groundwater radioactivity monitoring arrangements in the city of Haskovo and the surrounding area

Dates	6 – 8 December 2022
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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 from a site;
- Levels of environmental radioactivity at the site's 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.

A verification team from DG ENER visited Bulgaria on 6 – 8 December 2022 to check aspects related to the implementation of Council Directive 2013/51/Euratom (Euratom Drinking Water Directive)² and of Council Directive 2013/59/Euratom (Basic Safety Standards Directive) by assessing the operation and efficiency of the facilities for monitoring the level of radioactivity in groundwater and drinking water in the city of Haskovo and in the surrounding area.

The verification focused on the analyses of gross alpha-activity, gross beta-activity, natural Uranium content, identification of specific radionuclides, and assessment of total indicative dose performed by the Bulgarian authorities. The verification activities also included visits to the laboratories in charge of performing the relevant analyses by looking at the infrastructure, analytical methods, quality assurance and control aspects. In addition, the verification inquired on the way monitoring data is made available to the general public.

This document gives an overview of the verification team's main conclusions on the drinking water and groundwater monitoring systems in place in the Haskovo region and recommendations for their improvement. 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)

² Council Directive 2013/51/Euratom of 22 October 2013 laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption (OJ L 296, 7.11.2013, p. 12–21).

MAIN CONCLUSIONS

The verification team successfully completed every verification planned for the visit. The information supplied by the Bulgarian authorities in advance of the visit, as well as the additional documentation and information received during and after the verification, was useful.

- (1) Overall, the radioactivity monitoring programmes and facilities related to the drinking water and groundwater monitoring in the city of Haskovo and its surroundings are in line with the requirements of Article 35 of the Euratom Treaty. Bulgaria has put in place a functional monitoring system for monitoring the radioactivity in drinking water and groundwater.
- (2) The verification activities found that, in case the monitoring results of drinking water indicate non-compliance with a parametric value, the Bulgarian authorities have in place a structured interorganisational communication for investigating, as well as for taking measures and actions for protecting human health from a radiation protection point of view.
- (3) The verification team wishes to make the following recommendations:

Information to the general public

- a) There have been studies and analyses performed in Bulgaria on the anthropogenic impact in the region, which have not revealed an industrial source of the contamination. The analyses carried out show that the increased concentrations of Uranium are a result of natural processes. There was no evidence that these evaluations were made available to the public (TR section 9.2).

The verification team recommends that the Bulgarian authorities ensure that the public is adequately informed of the results of the relevant studies commissioned to assess the causes of the increased natural Uranium concentration.

Laboratory of Regional Health Inspectorate (RHI) Plovdiv

- b) At the time of the verification, the laboratory was in the process to replace the old gamma spectrometry system with the new one. Hence, currently there are no analyses carried out for the detection of radionuclides at the radiochemical laboratory of RHI Plovdiv (TR section 9.3.2).

The verification team recommends that the RHI Plovdiv restores the gamma spectrometry analyses capability in the laboratory by the end of 2023.

- (4) The detailed verification findings are compiled in the 'Technical Report' that is addressed to the Bulgarian competent authority through the Permanent Representation of Bulgaria to the European Union.
- (5) The Commission services request that the Bulgarian authorities submit, before the end of 2024, a report on their implementation of the recommendations, 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.
- (6) Finally, the verification team acknowledges the very good co-operation it received from all persons involved in the activities it performed.

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