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DIRECTORATE-GENERAL ENERGY

Directorate D – Nuclear Energy
Radiation Protection

HUNGARY

National Environmental Radioactivity Monitoring

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Verification team: Mr S. MUNDIGL (Head of team)
Mr R. BARANCZYK (trainee)
Mr A. RYAN
Mr. P.VALLET

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INTRODUCTION

Article 35 of the Euratom Treaty requires that each Member State establish the 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 ⁽¹⁾.

Article 35 also gives the European Commission (EC) through the Directorate-General for Energy (DG ENER), and in particular its Radiation Protection Unit (ENER D4) the right of access to such facilities in order that it may verify their operation and efficiency.

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 (and control thereof).
- Levels of environmental radioactivity at the site perimeter and in the marine (if applicable), terrestrial and aquatic environment around the site, for all relevant pathways.
- Levels of environmental radioactivity on the territory of the Member State.

The aim of this verification was to check the operation and efficiency of the facilities and associated analytical laboratories for continuous monitoring of the level of radioactivity in air, water and soil on the territory of Hungary. In addition, two medical installations were included in the programme to verify the measures in place for the monitoring of gaseous and liquid radioactive discharges from their departments handling radioactivity.

The verifications covered the following sites and facilities:

1. the State Health Centre in Budapest,
2. Pozitron-Diagnosztika Ltd diagnostic centre, running a PET/CT and its own cyclotron with a radiopharmaceutical production facility.

No recommendations are addressed to the Hungarian competent authority, the Hungarian Atomic Energy Authority

¹ 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)

MAIN FINDINGS

The proposed verification programme could be completed within the time allocated. In this regard the verification team appreciates the advance information supplied, as well as the additional documentation received during and after the verification.

1. Main findings with respect to monitoring and controlling levels of radioactivity on the national territory

- 1.1 The verification activities performed confirmed the existence of an environmental monitoring programme accepted by the ministries involved.

The verifications do not give rise to specific remarks.

2. Main findings with respect to the State Health Centre in Budapest

- 2.1 The Commission noted the arrangements in place for the management of liquid radioactive discharges from the nuclear medicine department. Current Hungarian regulations require the monitoring of liquid radioactive discharges and the installation of a separate drainage system with adequate delay tanks only in case of thyroid cancer metastases treatment with applied I-131 activities of more than 550 MBq per patient.

The verification activities have shown that there are no cancer treatments with I-131 activities above 550 MBq/patient in the nuclear medicine department of the State Health Centre, therefore neither a discharge monitoring programme nor on-site or off-site environmental monitoring programmes are required.

The verifications do not give rise to specific remarks.

3. Main findings with respect to Pozitron-Diagnosztika Ltd

- 3.1 The verification activities demonstrated that the facilities necessary to carry out continuous monitoring of gaseous and liquid radioactive discharges from Pozitron-Diagnosztika Ltd. are adequate. The Commission could verify the operation and efficiency of the facilities visited.

The installation to continuously monitor ambient dose rate in the vicinity of Pozitron-Diagnosztika Ltd is adequate. The Commission could verify the operation and efficiency of the facility.

The verifications do not give rise to specific remarks.

CONCLUSIONS

The verification visit was successful and the objectives of the review were met. Within the remit of verification activities under the Article 35 of the Euratom Treaty it has been demonstrated that the facilities necessary to carry out continuous monitoring of levels of radioactivity in the air, water and soil on the territory of Hungary are adequate. The Commission could verify the operation and efficiency of these facilities.

In conclusion the Hungarian national monitoring network is in conformity with the provisions laid down under Article 35 of the Euratom Treaty.

The verification team noted the comprehensiveness of the systems currently in place and supports all efforts, budgetary or otherwise, to ensure that the current high standard is maintained.

In relation to the two medical installations visited the monitoring of gaseous, and liquid radioactive discharges and ambient dose rate, where performed, is adequate and in accordance with current Hungarian regulations.

Finally, the verification team acknowledges the excellent co-operation it received from all persons involved.

Mr S. MUNDIGL

Team Leader