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DIRECTORATE-GENERAL FOR ENERGY

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

Main Conclusions of the Commission’s Article 35 verification

BELGIUM

Tihange NPP discharge and environmental monitoring and the national environmental radioactivity monitoring network in the vicinity

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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 by a site (and control thereof);
- 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 Belgium on 14 – 17 November 2016. This mission dealt with

- Monitoring of radioactivity in liquid and gaseous discharges at the Tihange nuclear power plant;
- Environmental radiological monitoring programme and activities as implemented in the vicinity of the Tihange nuclear power plant, including sampling and monitoring systems, analytical methods, quality assurance and control aspects, reporting, etc.;
- 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 Belgian 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 radioactivity in the air, water and soil in Belgium are adequate. The Commission services 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 continuous monitoring of levels of radioactivity in the air, water and soil on and around the Tihange NPP site are adequate. The Commission could verify the operation and efficiency of a representative part of these facilities.

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) which will be superseded by 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, p. 1).

- (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 Tihange NPP site are adequate. The Commission could verify the operation and efficiency of these facilities.
- (4) A few technical recommendations are formulated, in particular the following:
 - a. Concerning the monitoring of gaseous radioactive discharges from Tihange Unit 2 (Section 8.3 of the TR) the verification team recommends putting in place a system of interlocks to avoid accidental discharge of tanks and suggests improving the clarity of the gas storage tank labelling system.
 - b. Concerning the sampling of atmospheric deposition close to the TELERAD station IMA/T01 (Section 8.6.3 of the TR), the verification team recommends a review of the representativeness of the sample.

Notwithstanding these recommendations the verified parts of the Tihange NPP discharge monitoring system, on-site environment monitoring facilities and the national monitoring system for environmental radioactivity in the plant vicinity 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 Belgian competent authorities through the Belgium Permanent Representation to the European Union.
- (6) The Commission services request a report on the implementation of the recommendations from the Belgian authorities and about any significant changes in the set-up of the monitoring systems before the end of 2017. Based on this report the Commission will consider the need for a follow-up verification.
- (7) Finally, the verification team acknowledges the excellent co-operation it received from all persons involved in the activities it performed.

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