

EUROPEAN COMMISSION
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
ITALY
ITREC Treatment and Remanufacturing of Fuel Elements Facility**

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Art. 35 Main Conclusions - IT 15-05

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 and may verify their operation and efficiency.

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 Italy from 15 to 16 December 2015. This mission dealt with

- Environmental radiological monitoring programme and activities as implemented in the visited regions of Italy, 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;

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and the general public against the dangers arising from ionizing radiation (OJ L-159 of 29/06/1996) which will be superseded by Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising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).

- Installation of ambient gamma dose rate probes as part of the national surveillance network.

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 Italian 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 discharges of radioactivity in the air, water and soil at the ITREC facility are adequate. The Commission services could verify the operation and efficiency of a representative part of these facilities.

- 2) A few technical recommendations and suggestions are formulated, in particular the following:
 - a. Concerning gaseous discharges at the ITREC plant (Section 9.1 of the TR) the verification team recommends repairing the thermal insulation of the isokinetic sample bypass line in order to guarantee good representativeness of the bypass airflow sample.
 - b. Concerning the ITREC plant analytical laboratories (Section 9.3 of the TR) the verification team supports the intention to achieve laboratory quality accreditation. As a matter of good laboratory practise, it is suggested to initiate long-term trend analysis of the HPGe-detector stability control results.
 - c. Concerning the regional authority's ITREC site-related monitoring programme (Section 9.4 of the TR) the verification team supports the planned modernisation of the dose rate monitoring stations.
 - d. Concerning the ARPA Basilicata laboratory (Section 9.5 of the TR) the verification team recommends greater participation in relevant laboratory intercomparison exercises and proficiency tests. In view of the future tasks and new equipment, options should be explored to increase the qualified staff in the laboratory in order to maintain sufficient expertise. Furthermore there is a need to make sure that the equipment calibration procedures are adequate and well documented. In particular, the resolution control of the gamma spectroscopy systems should be carried out on a regular basis and monitored for early detection of any HPGe-detector degradation. The verification team supports the development towards using an integrated laboratory database also at the radioactivity laboratory.

These recommendations and suggestions aim at maintaining a constant monitoring quality level. They do not discredit the fact that the verified parts of the national monitoring system for environmental radioactivity are in conformity with the provisions laid down in Article 35 of the Euratom Treaty.

- 3) The detailed verification findings and ensuing recommendations are compiled in the 'Technical Report' that is addressed to the Italian competent authorities through the Italy Permanent Representation to the European Union.
- 4) The Commission services request a report on the implementation of the recommendations from the Italian authorities and 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.
- 5) Finally, the verification team acknowledges the excellent co-operation it received from all persons involved in the activities it performed.

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