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DIRECTORATE-GENERAL FOR ENERGY
DIRECTORATE D - Nuclear Safety and Fuel Cycle
Radiation Protection

Main Conclusions of the Commission's Article 35 verification

Institute of Isotopes, Budapest

HUNGARY

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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 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.

For the EC, the Directorate-General for Energy (DG ENER), and in particular its Radiation Protection Unit (at the time of the verification ENER D.4), 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.

In autumn 2011 several monitoring laboratories in EU Member States detected elevated levels of iodine-131 in air that could not be explained by local sources. By applying back-trajectory calculations the source of the contamination could be narrowed to eastern Central Europe. The IAEA was informed and distributed the information. Consequently, Hungary confirmed releases by the Hungarian radioisotope production firm Institute of Isotopes Ltd., Budapest; however, the annual release limit was not surpassed. Although the health consequences for the population (both, in the Budapest area and outside Hungary) can be seen as marginal the event showed 'weaknesses' in communication.

Thus, from 6 to 8 March 2012 a team of three inspectors from DG ENER D4 visited the site and adjacent areas in order to obtain full information from the operator and from the regulatory authority about the event and the lessons learned. The visit also included verification of the operator's facilities for monitoring liquid discharges, as well as the sampling site for radionuclides in air at the *Országos "Frédéric Joliot-Curie" Sugárbiológiai és Sugáregészségügyi Kutató Intézet (OSSKI; "Frédéric Joliot-Curie" National Research Institute for Radiobiology and Radiohygiene - NRIRR)* in Budapest that forms part of the Hungarian National Environmental Radioactivity Monitoring System (NERMS).

The present report contains the results of the discussions with the operator, measuring laboratory staff and the relevant Hungarian authorities involved in regulatory and control tasks, in particular the Hungarian Atomic Energy Agency (HAEA), as well as results of the verification team's review of some aspects of the environmental surveillance on and around the site in relation to the radiological event. The purpose of the review was to provide full information both from the operator and from the regulator concerning the event and the investigations and countermeasures put in place till now. Monitoring equipment related to the event was verified as well. The verification team witnessed also the production site and received a presentation of improved production methods that are currently being tested.

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)

With regard to general radiological and environmental radioactivity and discharge monitoring aspects the present report is also based on information collected during the 2010 verification in Hungary. However, the report does not go into the details of such monitoring as far as it was not verified during this visit.

MAIN CONCLUSIONS

All verifications that had been planned by the verification team were completed successfully. The team wishes to indicate its appreciation of the quality and the comprehensiveness of the information supplied to it before and during the visit.

At a number of points in the report reference is made to the sampling programme and specific measures in place in Hungary in general and with regard to the Paks NPP in particular. This information is provided to give an 'overall' view of the situation in Hungary and was not the object of verification. Earlier reports, references HU10-03 and HU04-4, deal with these aspects in greater detail.

The information provided and the verification findings led to the following observations:

- (1) The verification team received detailed information about the event both from the operator and the relevant Hungarian authorities. This information pointed to several shortcomings of the site operator, particularly with regard to reporting. The verification team took note of the shortcomings.
- (2) The programmes set up in response to the event by the site operator and by the Hungarian authorities seem sound and effective. The team witnessed a part of the monitoring arrangements and verified administrative, operative and quality control measures. The information provided and the results presented to the Commission team were appreciated and the control and monitoring systems to be put in place are considered to be appropriate.
- (3) The verification team identified a lack of communication between the operator, the competent authority, within involved authorities in Hungary and at international level.
- (4) The different radioactivity monitoring systems in place seem to be efficient and effective. However, procedures for systematic control of the results have to be urgently established.
- (5) The measures introduced by the authorities and the site operator after the event are in line with the provisions laid down under Article 35 of the Euratom Treaty.
- (6) The detailed verification findings and ensuing recommendations are compiled in the 'Technical Report' that is addressed to the Hungarian competent authorities through the Hungarian Permanent Representative to the European Union.
- (7) The Commission services request from the Hungarian Competent Authorities to be kept fully informed about the results of the studies to explain the event in detail, as well as about any future findings relative to the event at the Institute of Isotopes.
- (8) Finally, the verification team acknowledges the excellent co-operation it received from all persons involved in the activities it performed.

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