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Directorate H – Nuclear Energy
Radiation protection

Main Findings of the Commission's Article 35 verification in Denmark Danish National Monitoring Network for Environmental Radioactivity

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INTRODUCTION

Article 35 of the Euratom Treaty requires that each Member State shall 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.

Article 35 also gives the European Commission the right of access to such facilities in order that it may verify their operation and efficiency.

The main purpose of verifications performed under the 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 exposure pathways.
- Levels of environmental radioactivity on the territory of the Member State.

For the purpose of such a review a verification team from the European Commission visited different sites for monitoring environmental radioactivity in Denmark, from 7 to 11 April 2008. With due consideration of the scope of the verification mission and taking into account the relatively short time available for the execution of the programme, emphasis was put on:

1. The structure of the national environmental monitoring and sampling programme;
2. The analytical laboratories at the Risø site;
3. Automatic monitoring systems and environmental sampling arrangements at selected locations;
4. Discharge monitoring at the Copenhagen Rigshospitalet.

The team carried out verifications of monitoring systems and sampling facilities at several locations in Denmark. These verifications covered both on-line and off-line environmental and foodstuffs radioactivity monitoring provisions.

The present report gives an overview of the main findings of the verification team and corresponding recommendations.

Recommendations are addressed to the Danish competent authority, the National Institute of Radiation Protection (SIS).

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 the structure of the national environmental monitoring and sampling programme

The verification activities performed at the Danish National Institute of Radiation Protection (SIS) and at the Danish Emergency Management Agency (DEMA):

- 1.1 Confirmed the existence and functionality of the national environmental monitoring and sampling programme, covering the Danish territory as defined in the regulatory obligations.

However,

- 1.2 With respect to the point 1.1 above, the verification team noted that there is no formalised policy for reporting the results of the environmental monitoring programme.

Verification does not give rise to recommendations. The verification team suggests defining a formal reporting policy for environmental monitoring results.

2. Main findings with respect to the analytical radioactivity laboratories at the Risø site

The verification activities performed at the analytical laboratories of the Danish Decommissioning (DD) and Danmarks Tekniske Universitet (DTU):

- 2.1 Established that the laboratories are very well equipped and staffed with adequately trained personnel.
- 2.2 Established that quality assurance and control is implemented through a compilation of written procedures and working instructions.

However,

- 2.3 With respect to the point 2.2 above the verification team noted that there was no formalised system for sample archiving in the DTU laboratory in Risø.

As a matter of good laboratory practice, the verification team recommends DTU to formalise the arrangements for sample archiving.

- 2.4 With respect to the point 2.2 above the verification team noted that the DTU laboratory is not formally accredited for radioactivity measurements.

The verification team suggests that the laboratory should proceed towards a formal accreditation.

3. Main findings with respect to the monitoring systems and environmental sampling arrangements at selected locations

The verification activities performed at Risø, Haderslev, Fredericia, Askov, Møn, Abed and Falster:

- 3.1 Confirmed the existence of a national on-line and off-line monitoring system and sampling provisions.
- 3.2 Established that the network is satisfactorily equipped and maintained.
- 3.3 Established that quality assurance and control is implemented through a compilation of written procedures and working instructions.

However,

- 3.4 With respect to the point 3.2 above the verification team noted that some of the monitoring equipment was easily accessible.

Verification does not give rise to recommendations. It is suggested to locate the measurement equipment in a place restricted from public access or well hidden in order to avoid unwanted tampering.

4. Main findings with respect to discharge monitoring at the Copenhagen Rigshospitalet

The verification activities performed at the Rigshospitalet:

- 4.1 Confirmed the existence and functionality of monitoring and sampling facilities as defined in the regulatory obligations.
- 4.2 Established that quality assurance and control is implemented through a compilation of written procedures and working instructions.

Verification does not give rise to recommendations.

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 Denmark are adequate. The Commission could verify the operation and efficiency of these facilities.

A few recommendations and suggestions have been formulated, mainly in relation to laboratory practice and general quality assurance. These recommendations do not detract from the general conclusion that the Danish national monitoring network is in conformity with the provisions laid down under Article 35 of the Euratom Treaty.

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

V. TANNER

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