



EUROPEAN COMMISSION

DIRECTORATE-GENERAL ENERGY AND TRANSPORT

Directorate H – Nuclear Energy

TREN.H.4 – Radiation Protection

Main Findings of the Commission's Article 35 verification in Finland

Finnish National Monitoring Network for Environmental Radioactivity

Date: 19 to 23 March 2007

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Reference of report: FI-07/02

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 Finland, from 19 to 23 March 2007. 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. Structure of the national environmental monitoring and sampling programme,
2. Analytical radioactivity laboratories of the Finnish Radiation and Nuclear Safety Authority (STUK) and the Finnish Meteorological Institute (FMI),
3. On-line automatic monitoring systems,
4. Environmental monitoring programmes in northern Finland.

The team carried out verifications of monitoring systems and sampling facilities at several locations in Finland. 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 Finnish competent authority, the Finnish Radiation and Nuclear Safety Authority in Helsinki.

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 STUK and the FMI:

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

However,

- 1.2 With reference to point 1.1 above, the verification team was informed that in addition to the national programme STUK carries out also the environmental monitoring programmes around the nuclear power plants in Finland. In this work STUK has the role of a contractor for the nuclear power utilities. This arrangement raises the question of independence of monitoring, since STUK acts both as a measurement contractor and a regulatory authority. The issue has been tackled by making sure the contractor and regulatory services are strictly separated within the STUK organisation. Even with these arrangements in place the situation is not fully compliant with requirements of independence and transparency. However, taking into account the limitations of expert staff and suitable laboratory resources, the situation can be understood.

Verification does not give rise to recommendations. However, the verification team points out that the role of STUK as an environmental measurement contractor for the nuclear power utilities and as a regulatory authority is problematic from the point of view of independence and transparency.

2. Main findings with respect to the analytical radioactivity laboratories of the Finnish Radiation and Nuclear Safety Authority (STUK) and the Finnish Meteorological Institute (FMI)

The verification activities performed at the analytical laboratories of the Finnish Radiation and Nuclear Safety Authority (STUK) and the Finnish Meteorological Institute (FMI):

- 2.1 Established that the laboratories are satisfactorily 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 STUK regional laboratory in northern Finland and the sample storage facility was disorganised.

As a matter of good laboratory practise, the verification team recommends STUK to formalise the arrangements for sample storage and improve the organisation of the sample archives in the Rovaniemi laboratory.

- 2.4 With respect to the point 2.2 above the verification team noted that the FMI 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 on-line automatic monitoring systems

The verification activities performed at Espoo, Vantaa, Sodankylä, Pelkosenniemi, Savukoski, Kemijärvi, Kotala and Salla:

- 3.1 Confirmed the existence of a national on-line automatic monitoring system.
- 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 3.1 above, the verification team was informed that the siting plan for the new generation automatic monitoring stations was to locate them at local fire departments and other places which are staffed on a daily, if not 24 h, basis. In northern Finland this seems problematic, since not all old stations fulfil this criterion.

The verification team recommends adapting the new network siting criteria in northern Finland in order to avoid reducing the number of automatic monitoring stations in the area.

4. Main findings with respect to environmental monitoring programmes in northern Finland

The verification activities performed at Rovaniemi:

- 4.1 Confirmed the existence and functionality of monitoring and sampling facilities as defined in the regulatory obligations.
- 4.2 Established that the STUK regional laboratory in Rovaniemi is satisfactorily equipped and staffed with adequately trained personnel for the collection, preparation and measurement of environmental samples. The laboratory has ISO 17025 accreditation for some of the measurement methods.

- 4.3 Established that quality assurance and control is implemented through a compilation of written procedures and working instructions.

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

A few recommendations have been formulated, mainly in relation to laboratory practice and general quality assurance.

These recommendations do not detract from the general conclusion that the Finnish 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.

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