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Main Findings of the Commission's Article 35 Verification in Malta

Maltese National Monitoring Network for Environmental Radioactivity

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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 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 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 a number of locations involved in monitoring environmental radioactivity in Malta, from 25 to 27 April 2006. Considering the scope of the verification mission, and the types of sources of anthropogenic radioactivity in Malta, the main focus was placed on:

- the national environmental monitoring and sampling programme,
- the national programme for monitoring and sampling foodstuffs and drinking water,
- management of discharges from a hospital's nuclear medicine department.

The team carried out verifications of monitoring systems and sampling facilities at the Public Health Laboratory (Valetta and Guardamangia sites), St Luke's Hospital (Guardamangia) and the Malta Environment & Planning Authority. These verifications covered both on-line and off-line environmental and foodstuffs radioactivity monitoring provisions.

The team also made a visit to the new Malta National Laboratory, whose laboratory for performing measurements of radioactivity in the environment was in the process of being commissioned.

Recommendations are addressed to the Maltese competent authorities.

MAIN FINDINGS

The proposed verification programme was completed within the allocated time. The verification team is grateful for the information supplied in advance, as well as for the additional information received during and after the verification.

1. Main findings with respect to the overall monitoring of radioactivity in the environment

The verification:

- 1.1 Confirmed the existence of a monitoring programme for 2006-2008 relative to environmental radioactivity and of an annual monitoring programme for radioactivity in foodstuffs, drinking water and milk.

However,

- 1.2 With respect to the point above, the verification team noted that the number of samples taken under the monitoring programme for radioactivity in foodstuffs, drinking water and milk varies significantly from year to year.

The verification team suggests that, in view of the small number of actors involved in the monitoring of radioactivity in the Maltese environment, a common monitoring plan be produced.

It is recommended that sampling plans be broadly consistent from year to year.

2. Main findings with respect to the Nuclear Medicine Facility in Guardamangia

The verification activities performed at the Nuclear Medicine Facility:

- 2.1 Confirmed the existence of a system for control and discharges of radioactivity to the environment.
- 2.2 Established that the laboratory is satisfactorily equipped and staffed with adequately trained personnel.
- 2.3 Established that solid and liquid discharges are handled according to regulatory obligations and that quality assurance and control is implemented through written procedures and working instructions.

However,

- 2.4 With respect to the point 2.3 above the verification team noted that the actual radionuclide inventory of the discharge tank is estimated, but not measured, before discharge.

It is recommended that the discharge procedure for the liquid waste decay tanks be reviewed to ensure strict compliance with the discharge authorisation.

3. Main findings with respect to the Public Health Laboratory in Valetta and the laboratory facility at St Luke's Hospital in Guardamangia

The verification activities performed at the Public Health Laboratory facilities in Valetta and Guardamangia:

- 3.1 Confirmed the existence of a sampling and monitoring programme for milk, drinking water and mixed food diet.
- 3.2 Established that the laboratory in Guardamangia is satisfactorily equipped and staffed with adequately trained personnel for the preparation and measurement of the food and drinking water samples which are not sent elsewhere for measurement. The laboratory is in process of seeking ISO 17025 accreditation.
- 3.3 Established that the Public Health Laboratory is staffed with adequately trained personnel for carrying out the programme mentioned in 3.1.
- 3.4 Established that quality assurance and control is implemented through a combination of written procedures and working instructions.

However,

- 3.5 With respect to the points 3.2 and 3.4 above the verification team noted that the written procedures at the laboratory in Guardamangia focus on how to run the software and make no mention of measurement quality related matters.

The verification team therefore endorses the intention of introducing an accredited ISO 17025 Quality Management System.

4. Main findings with respect to external gamma dose rate, airborne radioactivity and other environmental sampling

The verification activities performed at the Malta Environment & Planning Authority (MEPA):

- 4.1 Confirmed the existence of a monitoring facility for ambient gamma dose rate as defined in the regulatory obligations.
- 4.2 Noted the existence of a monitoring facility for air sampling in case of an emergency situation.
- 4.3 Established that the monitoring facility for ambient gamma dose rate was not operational at the time of the verification, however it was scheduled to enter into operation early May 2006.
- 4.4 Established that at the time of verification there were no air-sampling instruments installed for continuous monitoring of radioactivity on the territory of Malta.
- 4.5 Established that no samples of soil or coastal waters had yet been taken.

However,

- 4.6 With respect to the point 4.1 above the verification team noted that the MEPA Environmental Monitoring Plan provides for the purchase of a second instrument for ambient gamma dose rate monitoring, for installation on the island of Gozo.

The verification team endorses the stated intention to install a second instrument on Gozo.

- 4.7 With respect to point 4.2 and point 4.4 above the verification team noted that the MEPA Environmental Monitoring Plan provides for the acquisition of a high-volume air sampler. Due to the Maltese climate there are difficulties in drawing up technical specifications.

It is recommended that MEPA rapidly establish technical contacts with their counterparts in Member States having similar climatic conditions in order to specify suitable equipment for monitoring airborne particulates.

It is furthermore recommended that high priority be accorded to expediting the operation of the monitoring arrangements for airborne particulates as described in the MEPA environmental monitoring plan.

- 4.8 With respect to point 4.5 above the verification team noted that the MEPA environmental monitoring plan provides for limited sampling of coastal waters and soil.

It is recommended that MEPA bring its sampling activities in line with its declared environmental monitoring plan.

CONCLUSIONS

All verifications that had been planned by the verification team were completed successfully. In this regard, the information supplied in advance of the visit, as well as the additional documentation received before the start and during the verification, were helpful. The information provided and the outcome of the verification activities led to the following observations:

- (1) The verification activities that were performed demonstrated that some of the monitoring devices necessary for carrying out continuous monitoring of levels of radioactivity in the air, water and soil in Malta are newly installed or in an advanced phase of planning.
- (2) The team noted that current monitoring campaigns are not yet part of a well established routine programme, and it strongly encourages the efforts undertaken to consolidate such a routine programme.
- (3) A number of recommendations have been formulated. These recommendations aim at improving some aspects of environmental surveillance in Malta. The recommendations do not detract from the fact that environmental monitoring in Malta is soon expected to be in conformity with the provisions laid down under Article 35 of the Euratom Treaty.

- (4) The Commission Services request the Maltese competent authorities to inform them of any progress with regard to the situation at the time of the verification. The full implementation of a routine environmental radioactivity monitoring programme, including the installation and functionality of all projected new equipment and of the recommendations issued by the verification team, should be confirmed.

signed

F. MacLean
Team Leader