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

Installations of Wismut GmbH in the Land of Saxony

Date: 27 to 31 August 2007

Verification team: Mr F. MacLean (Head of team)
Mrs Å. Wiklund
Mr P. Vallet

Reference of report: DE-07/05

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.

Within the Commission, the Radiation Protection Unit (TREN.H4) of Directorate-General Energy & Transport (DG TREN) is responsible for conducting 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 facilities (insofar as applicable in the Member State) for monitoring:

- liquid and airborne discharges of radioactivity into the environment by sites (and control thereof).
- levels of environmental radioactivity at site perimeters and in the marine, terrestrial and aquatic environment around sites, for all relevant pathways.
- levels of environmental radioactivity on the territory of Member States.

The team carried out verifications of monitoring systems and sampling facilities related to former uranium mining activities in the state of Saxony which are being remediated in the framework of the Wismut remediation project. (Note that some facilities visited during the verification are situated in the neighbouring state of Thuringia). Verifications covered both on-line and off-line environmental radioactivity monitoring provisions.

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

The recommendations presented are addressed to the German competent authorities through the Permanent Representative of Germany to the European Union.

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 analytical laboratories of UBG *(Staatliche Umweltbetriebsgesellschaft;* State Environment Management Company) **at Radebeul and Chemnitz**

The verification activities performed at these laboratories:

1.1 Confirmed that UBG carries out independent measurements to verify Wismut GmbH's statutory environmental programme. The two laboratories visited are involved in this control.

1.2 Confirmed that the laboratories have an adequate sample management and are satisfactorily equipped and staffed with adequately trained personnel. The laboratories have a common ISO 9001 QA programme and have ISO-17025 accreditations from DAR (*Deutscher Akkreditierungsrat*).

However,

1.3 With respect to point1.2 above, the verification team observed that Wismut and UBG employ the same make and model of instrument to measure the same types of samples and that these samples are very often common samples. Notwithstanding quality control measures intended to establish the absence of systematic measurement errors, such as the annual inter-method comparisons, the fact that the operator and the control authority use the same physical measurement principle, and the same make and model of measurement instrument to measure a common sample points to a reduced independence of this aspect of the control programme.

The Verification team therefore invites the authorities to examine means of increasing the indepence of the operator's programme and the control programme or to examine means of providing increased confidence in the absence of any significant systematic uncertainties associated with this measurement method.

2. Main findings with respect to the Wismut's central laboratory at Seelingstädt (Thuringia)

The verification activities performed at the laboratory:

2.1 Confirmed the laboratory's activities in relation to the Wismut's environmental control programme.

2.2 Confirmed, by means of spot checks on the purchasing, training and internal audit functions, as well as by spot checks on laboratory quality control, the operation of Wismut's quality management system.

2.3 Confirmed that the laboratory is satisfactorily equipped and staffed with adequately qualified and trained personnel.

Verification activities did not give rise to any particular remarks.

3. Main findings with respect to the Filter Measurement Station at Ronneburg

3.1 The verification activities performed at the station confirmed that the station is satisfactorily equipped and staffed in order to measure air filters.

However,

3.2 With respect to point 3.1 above, the team noted that the laboratory is housed in a building without a forced ventilation system, the only ventilation being windows. Given that the building is situated in an area where spoil heap remediation is still ongoing, the risk of exteral dusts entering the laboratory and interfering with measurements is not negligible.

The Verification Team recommends that the operator investigate infrastructure improvements to provide protection against the ingress of dust from outside at the Ronneburg measurement station.

4. Main findings with respect to the analytical laboratories of VKTA at Felsenkeller

The verification activities performed at the laboratory:

4.1 Confirmed that the laboratory is satisfactorily equipped, staffed with adequately qualified and trained personnel and has an ISO-17025 accreditation from DAR. At the Felsenkeller site the laboratory undertakes low level measurements and those linked to decommissioning. To reduce the effect of cosmic radiation upon measurements the laboratory is situated beneath 15 m of rock. This laboratory appeared to be "state of the art" concerning low level measurements.

Verification activities with repect to measurements did not give rise to any particular remarks.

5. Main findings with respect to the headquarters of Wismut GmbH in Chemnitz

The verification activities performed at the headquarters:

5.1 Established that relevant regulatory bodies exercise effective oversight of Wismut's operations.

5.2 Confirmed that Wismut operates high performance databases in order to manage all aspects of its environmental sampling programme, including sampling points, geological information, analytical methods, raw laboratory data, and measurement results.

Verification does not give rise to recommendations. The Verification Team takes note of the technical achievement of Wismut's database systems.

6. Wismut GmbH, Königstein

The verification activities performed:

6.1 Allowed the verification of a total of seven sampling points selected by the team in and around the Königstein site, representing the full range of sample types and sampling equipments deployed at Königstein. Verification activities included demonstrations of sampling equipment.

Verification activities with respect to the programme for monitoring of environmental radioactivity do not give rise to recommendations

7. Wismut GmbH, Crossen

The verification activities performed:

7.1 Allowed the verification of a total of five sampling points selected by the team in and around the Crossen site, representing the full range of sample types and sampling equipments deployed at Crossen.

Verification activities with respect to the programme for monitoring of environmental radioactivity do not give rise to recommendations.

8. Wismut GmbH Schlema

The verification activities performed:

8.1 Allowed the verification of a total of four sampling points, three locations and two mobile laboratories selected by the team in and around the Schlema site. Verification activities included the examination of the operation of licensing of operations by the *Landesamt für Umwelt und Geologie* (*LfUG*).

8.2 Allowed the team to form an appreciation of monitoring issues related to long-term monitoring of sites released after remediation for full or partial re-use.

Verification activities with respect to the programme for monitoring of environmental radioactivity do not give rise to recommendations.

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, was useful. The information provided and the outcome of the verification activities led to the following observations:

(1) The verification activities that were performed demonstrated that the facilities necessary to carry out continuous monitoring of levels of radioactivity in the air, water and soil in relation to Wismut operations in the Land of Saxony, Germany were in place. The Commission's Services could verify the operation and efficiency of these facilities.

(2) The verification team was able to verify that in the Land of Saxony discharge monitoring and monitoring of the environmental effects of releases from Wismut sites are part of a well established routine programme, which includes independent verification of the monitoring measurements.

(3) A recommendation and a suggestion have been formulated. They aim at improving some aspects of environmental surveillance. However, there is no suggestion that the environmental monitoring applied to the Wismut remediation project in Germany is not in conformity with the provisions laid down under Article 35 of the Euratom Treaty.

(4) The verification team acknowledges the excellent co-operation it received from all persons involved in the activities it performed.

[signed]

F. Mac Lean

Team Leader