Article-35 of the Euratom Treaty: Overview of national radioactive discharge and environmental monitoring requirements in the European Union

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Introduction

This poster describes work in progress on a study being carried out by the Centre for Environment, Fisheries and Aquaculture Science (Cefas) on behalf of the European Commission in furtherance of the objectives of Article 35 of the Euratom Treaty. This Article stipulates that "Each Member State shall establish the facilities necessary to carry out continuous monitoring of the level of radioactivity in the air, water and soil and to ensure compliance with the basic standards. The Commission shall have the right of access to such facilities; it may verify their operation and efficiency". The Commission therefore carries out a verification programme in Member States (MSs) of the European Union under Article 35 (Euratom). The primary objective of these verifications is to establish the effectiveness of all facilities installed for the measurement of environmental radioactivity and of radioactive discharges and the adequacy of the environmental monitoring programmes carried out by both the operator and the competent authority in each MS.

The Commission's Questionnaire

In order to further the objectives of Article 35 (Euratom) and to investigate the need for any harmonisation measures in support of its implementation, the Commission has issued a questionnaire to the competent authorities in each MS. This questionnaire requests the following information to be provided for each MS:

(a) A list of facilities that are subject to regulatory control with regard to discharges of radioactive substances into the environment;
(b) The regulatory requirements on which the discharge authorisations for the facilities in (a) are based;
(c) The name, type of practice and authorisation details;
(d) The discharge reporting obligations of the operator and sampling details;
(e) Details of environmental monitoring programmes and devices used by the operator;
(f) Details of operators' quality assurance and control measures;
(g) Details of discharge monitoring by the regulator;
(h) Details of environmental monitoring by the regulator;
(i) Details of regulators' quality assurance and control measures.

For each monitoring and sampling device, details are requested of radionuclides measured and other technical characteristics.

Method

The study requires Cefas to process the responses to the questionnaire and supplement them with other information and expert opinion. The responses are currently being compiled into a uniform format. The facilities in each country that are subject to regulatory control of discharges of radioactivity to the environment are being ordered into the following proposed list:

1. Reprocessing Plants
2. Mining, milling etc. of U and Th
3. Enrichment of uranium
4. Fabrication of nuclear fuel
5. Nuclear power stations
6. Large research establishments (including research reactors)
7. Industrial processing, including radiopharmaceuticals
8. Radioactive waste facilities
9. Facilities processing natural radioactive materials
10. Medical facilities
11. Small research establishments

For each Member State (MS), the information from the questionnaire is being compiled into a regulatory overview and tables containing a list of facilities as follows:

Table 1 : Authorised limits of discharges

Facility	Radioactive waste discharge authorisation		
(Geographical co-ordinates)	(Annual equivalent - TBq/y unless stated)		
	Radionuclide	Liquid	Airborne

Table 2 : Regulatory environmental monitoring by Operators

Facility	Media monitored	Location	Sample or continuous	Frequency	Radionuclides/dose rates measured	Equipment/method used	Accreditation

Table 3 : Environmental monitoring by Regulators

Facility	Media monitored	No. of locations	Sample or continuous	Frequency	Radionuclides/dose rates measured	Equipment/method used	Accreditation

Table 4 : National environmental monitoring programme

Authority	Media monitored	Location	Sample or continuous	Frequency	Radionuclides/dose rates measured	Equipment/method used	Accreditation

Table 5 : Regulatory discharge monitoring by Operators

Facility	Discharge monitored	Location of sampling	Batch or continuous	Frequency	Type of device	Radionuclides analysed	Accreditation	Other details

Table 6 : Discharge monitoring by Regulators

Facility	Discharge monitored	Location of sampling	Batch or continuous	Frequency	Type of device	Radionuclides analysed	Accreditation	Other details	Witnessed?

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Results

The results of the study will be reports for each MS, assembling the data into a common format, enabling information to be compared and contrasted. In addition to these reports the study will aim to:

- provide an overview of the status of regulatory provisions and their use for implementing Article 35 (Euratom) and the means by which these are enforced;
- establish the current technical provisions in place in MSs for measurement of discharges and concentrations of radionuclides in the environment;
- propose technical guidance on monitoring requirements for measuring aerial and liquid discharges to comply with Article 35 (Euratom);
- propose technical guidance on monitoring requirements for environmental surveillance to comply with Article 35 (Euratom);
- propose main considerations which could form the basis of proposals for harmonisation of approaches by MSs in implementing Article 35 (Euratom);
- propose elements of transparent methodologies for verifying operator and regulatory authority compliance with Article 35 (Euratom).

Environmental monitoring and analysis in progress

Lastly, a request please!

In order to fulfil this study, Cefas will need to rely on the goodwill and cooperation of competent authorities, regulators and operators in all the MSs in providing the necessary information; it will no doubt be necessary to follow up the responses of the questionnaires and to fill any gaps in information received. Therefore, in publicising this study, it is also one of the objectives of this paper to elicit the good offices of the many respondents with whom we will need to make contact.

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