

WELCOME TO EN-TRAP

In the early 1980's the European Commission (EC) recognised the importance of soundly based Quality Assurance (QA) for providing confidence in the safe management of radioactive waste. Successful QA requires application by responsible operators within an effective regulatory régime implemented by national authorities.

The IAEA has specified the key elements in its publication Safety Series No. III-S-1 which includes

- establishing and implementing a legal framework
- establishing a regulatory body
- enforcing compliance with legal requirements
- implementing the licensing process

A key element of effective regulatory control is the quality checking of radioactive waste packages by an organisation independent of the operator. In 1989 an ad-hoc group of European experts concluded that national regulators, licensing authorities and laboratories carrying out checking of wastes would benefit from European collaboration.

In 1992, following an initiative from the EC, the "European Network of Testing Facilities for the Quality Checking of Radioactive Waste Packages" – EN-TRAP – was formed to promote such collaboration.

Through its four Working Groups (see inside) EN-TRAP pursues

- information exchange via specialist meetings, circulation of statistical data and e-mail contact
- identification of R&D requirements
- joint evaluation of test methods, proficiency testing and inter-laboratory comparisons
- co-ordination of national and international standardisation of test methods
- provision of training services
- promotion of the availability of testing and analytical services

MEMBERSHIP OF EN-TRAP

Chairman : Elected Biennially

Secretary : EC DG Research



The **Steering Committee** consists of representatives from the following **Member Laboratories**:

CEA Cadarache and Valrhô, CIEMAT Madrid, ENEA Casaccia, ENRESA Córdoba, FZ Jülich, JRC Ispra, NE Seibersdorf, AMEC Winfrith, NRG Arnhem, SCK-CEN Mol, TU München and VTT Espoo

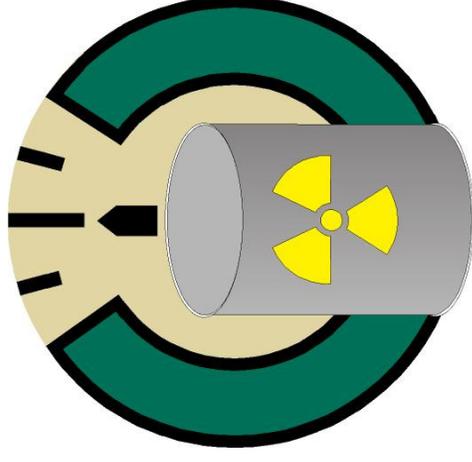
as well as representatives of their respective **Regulatory Bodies**

Subject to payment of an annual fee, other parties are welcome to participate in the Working Groups as **Associate Members**

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EN-TRAP



THE EUROPEAN NETWORK OF TESTING FACILITIES FOR THE QUALITY CHECKING OF RADIOACTIVE WASTE PACKAGES

Please visit our **WEBSITE** on

www.en-trap.eu

for
Information and Downloads

WORKING GROUP 'A'

NON-DESTRUCTIVE METHODS

Conventional gamma measurements are the most widely used NDT method for routine quality checking of Radwaste packages. Neutron assay is less commonly applied than gamma measurements but its capabilities in characterising packages are recognised.

- WG 'A' was established to
- evaluate analytical data
 - improve the quality, efficiency and cost-effectiveness of NDT methods
 - exchange information on new developments
 - promote harmonisation of measurement procedures



Gamma Assay

The Group has reviewed existing gamma and neutron assay systems and has produced synopses detailing the set up, modes of operation and general information on the techniques.

Members of the Group also participated in EC-funded projects including a major 'Round Robin' Inter-Laboratory Comparison of Non-Destructive Assay.

Collaboration between laboratories has enabled the transfer of state of the art technology and knowledge.

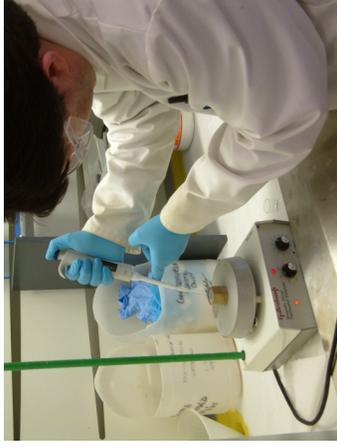
An updated Inter-Laboratory Comparison of Gamma Assay is being planned.

WORKING GROUP 'B'

DESTRUCTIVE METHODS

Chemical and radiochemical analytical methods are widely used to characterise raw and conditioned wastes – particularly for those nuclides that are important for the evaluation of safe disposal and, at the same time, are difficult to measure by NDT.

- WG 'B' provides a forum to
- establish a compilation of DT methods by isotope and matrix
 - determine the reliability of measurements through inter-laboratory comparisons
 - promote the systematic use of correct reference materials
 - harmonise methodologies
 - evaluate sampling problems
 - stimulate co-operation and collaboration
 - assist laboratories seeking formal accreditation
 - influence R&D programmes regarding fast analytical methods and fingerprinting of waste



Radiochemical Analysis

The Group has produced a comprehensive review of methods for DT entitled "Destructive Analyses for the Quality Checking of Radioactive Waste Packages". It has participated in several EC-funded research projects including a major inter-comparison exercise on α - and β -emitters in two waste streams. A second inter-comparison exercise has begun.

WORKING GROUP 'C'

QA and QC

Laboratories must have satisfactory QA and QC procedures in place to ensure reliable non-destructive and destructive checks on radioactive waste packages.

WG 'C' concentrates on

- identifying the requirements for quality checking radioactive waste packages
- reviewing procedures, testing and control methods employed by Member Laboratories and investigating common features
- evaluating uncertainties in assessing isotopic inventories of radioactive waste packages



Coring a Waste Package

WORKING GROUP 'D'

ILW and HLW

This Working Group focuses on Intermediate and High Level Wastes and, in particular, the

- harmonisation of existing characterisation methodologies taking into account Waste Acceptance Criteria
- stimulation and development of R&D in characterisation methods
- standardisation of NDT and DT methods for ILW and HLW