



Department of Nuclear Sciences and Applications
IAEA Environment Laboratories, Monaco and Seibersdorf

ALMERA
(Analytical Laboratories for the
Measurement of Environmental Radioactivity)
Training Course on
Rapid Assessment Methods for Environmental Radioactivity

Ref: KX-TM-49985

Prospectus

- Title:** ALMERA (Analytical Laboratories for the Measurement of Environmental Radioactivity) Training Course on Rapid Assessment Methods for Environmental Radioactivity
- Host Institute:** Argonne National Laboratory, Argonne, Illinois, United States of America
- Dates:** 4–15 May 2015
- Deadline for Nominations:** 1 April 2015
- Organizers:** The International Atomic Energy Agency (IAEA) and the Argonne National Laboratory (ANL), USA.
- Host Country Organizer** Ms Sunaree Hamilton
Program Manager, International Programs
Nuclear Engineering Division
Argonne National Laboratory
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UNITED STATES OF AMERICA
Email: IAEA-ANLCourse@anl.gov
- Language:** English
- Background Information:** The course is developed to support the interest expressed by many laboratories participating in the ALMERA (Analytical Laboratories for the Measurement of Environmental Radioactivity) in developing their rapid assessment capabilities. It

is part of the specific support provided to these laboratories, which includes methodological developments, proficiency tests and targeted training. It is the second in a series of courses organised in collaboration with the ANL.

Purpose: The course addresses the needs of ALMERA network laboratories interested in enhancing their rapid analytical capabilities to support the assessment of environmental contamination in emergency situations. The purpose of the course is to provide participants with intensive training on selected relevant topics, including: a rapid radiochemical laboratory procedure validated by ALMERA laboratories and published by the IAEA; field detection and sampling in case of environmental contamination; quality aspects of sampling and analytical work; data evaluation and management; and specific applications of the RESRAD dose assessment codes.

Expected Outputs: The course will enable the participants to learn about state-of-the art methods, which they will apply in their laboratories in situations where a rapid assessment of radionuclides in the environment is required. The course will result in dissemination of these methods and harmonization amongst ALMERA laboratories.

Scope and Nature: The course will take place over a two-week period, providing lectures, laboratory hands-on practical work and field work. Laboratory safety instruction will be provided in preparation of laboratory work. The training programme includes discussions of the materials presented and a session where the participants will briefly introduce their laboratory, their work and their expectations and goals for the training. Course materials and, where applicable, IAEA documents, will be provided on adequate information support.

Over the two-week period the following topics will be addressed:

- Rapid determination of plutonium isotopes and americium-241 in soil and sediment samples by alpha spectrometry (laboratory exercise);
- Field detection and sampling in case of environmental contamination (field exercise);
- Critical response elements in accidental radioactive contamination of the environment;
- Sample chain of custody, laboratory quality assurance, data quality and data management;
- Specific applications of the RESRAD dose assessment codes (practical exercise); and
- Evaluation of complex gamma-ray spectra of environmental samples (practical exercise).

A technical visit of selected facilities at the ANL is included in the programme.

Participation: The course is open for **24 participants from ALMERA network laboratories** which have expressed their interest in developing their rapid response capabilities and in participating in related methodological, analytical and preparedness activities.

Participants' Qualifications: The participants should be specialists in environmental radiochemistry, analytical chemistry, radio-analytical techniques, environmental radioactivity or environmental assessment. They should have a university degree and possess a minimum of two years' experience in one of the fields mentioned above.

Nomination Procedure: Nominations should be submitted using the attached Participation Form (**Form A**). The completed form should be endorsed by relevant national authorities and returned to the IAEA through the established official channels, i.e. the designated National Liaison Office for IAEA Matters. Applications must be received by the IAEA **not later than 1 April 2015**. Nominations received after this date or which have not been routed through the established official channels cannot be considered.

Prospective participants are encouraged to send an advance application to the Scientific Secretary of the course, Ms Iolanda Osvath, IAEA Environment Laboratories, Department of Nuclear Sciences and Applications, 4A Quai Antoine 1er, MC-98000 Monaco, Principality of Monaco, preferably by email at: ALMERA-Network.Contact-Point@iaea.org, with a copy to the Administrative Secretary for the course, Ms Julie Le Normand (Email: J.Le-Normand@iaea.org).

Administrative and Financial Arrangements: Nominating Governments will be informed in due course of the names of the candidates who have been selected and will, at that time, be given full details of the procedures to be followed with regard to administrative and financial matters.

A limited number of grants will be made available by the host institute, to **non-local participants from developing countries**. The Grant Application Form (**Form C**) should be submitted together with the Participation Form (**Form A**) through the established official channels as soon as possible and no later than **1 April 2015**. Selected participants will be provided by the ANL with a round trip air ticket from their home countries to Chicago, Illinois, USA, and a stipend sufficient to cover the cost of their accommodation, food, and minor incidentals.

The organizers of the course do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in nominating participants, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks. A copy of the insurance policy will be requested for the issuance of the visa.