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International Atomic Energy Agency

Agence internationale de l'énergie atomique

Международное агентство по атомной энергии

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2014-03-03

**Subject:** Invitation to a Regional Workshop on Modular Design of Processing and Storage Facilities including Disused Sealed Radioactive Sources, Safety Assessment (SAFRAN) Operating Principles and Procedures and Quality Assurance (Management System) for Low Volume of LLW in Chisinau, Republic of Moldova, 7 - 11 July 2014

Dear National Liaison Officer,

I am pleased to invite you to send nominations of suitable candidates to participate in the above-mentioned workshop under the framework of TC Project RER/9/107 – Strengthening Radioactive Waste Management Capabilities. The purpose of the workshop and related information are outlined in the attached Prospectus.

For candidates who are selected by the IAEA, the Agency will cover the cost of return international travel from the home country to Chisinau, Republic of Moldova and provide Daily Subsistence Allowance (DSA) for the duration of the workshop in line with Agency rules and procedures.

Please submit duly completed Nomination Form for Meetings/Workshops by the latest 16 May 2014. Please note that nominations received after the closing date will not be considered.

The completed nomination forms should be submitted to the IAEA online through the Technical Cooperation Department's InTouch system (<http://intouch.iaea.org>). Should this not be possible, forms may be sent to the Programme Management Officer for this project, Mr Andrejs Salmins, through IAEA Official Fax (+43-1-26007) or E-Mail (Official.Mail@iaea.org).

Yours sincerely,

Manase Peter Salema

Director

Division for Europe

Department of Technical Cooperation

Enclosures: Prospectus  
Nomination Form

# International Atomic Energy Agency

## Regional Workshop on Modular Design of Processing and Storage Facilities including Disused Sealed Radioactive Sources, Safety Assessment (SAFRAN) Operating Principles and Procedures and Quality Assurance (Management System) for Low Volume of LLW

### PROSPECTUS

- Project Number & Title:** RER9107 “Strengthening Radioactive Waste Management Capabilities”
- Place (City, Country):** Chisinau, Republic of Moldova
- Dates:** 7 – 11 July 2014
- Deadline for Nominations:** 16 May 2014
- Organizers:** The International Atomic Energy Agency (IAEA) in collaboration with Government of Republic of Moldova through the Civil Protection and Emergency Situations Service of MIA of Republic of Moldova
- Host Country Organizer:** Mr Iulian GISCA  
Head of Radioactive Waste Management Company  
SISP ”Special Objects no. 5101, 5102”  
Civil Protection and Emergency Situations Service of MIA  
210 Uzinelor str. Chisinau  
Republic of Moldova, MD2023  
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e-mail: giscaulian@gmail.com
- Language:** The Workshop will be held in English.
- Purpose:** The workshop objective is to discuss management schemes, procedures and management systems for low volume LLW including disused sealed radioactive sources involving modular design processing and storage facilities. It also aims to discuss on modular design option safety assessment operating principles (SAFRAN).
- Expected Output(s):** Assistance in determining optimal modular design option for waste processing and storage facilities. The expected outputs are from presentations aiming to share the experiences and best practices achieved.
- Scope and Nature:** This five-day Workshop will include overview lectures outlining the experience and best practices on management schemes, procedures and management systems for low volume solid and liquid LLW and disused

sealed radioactive sources involving modular design processing and storage facilities, as well as safety assessment operating principles (SAFRAN). These will be aligned to cover:

- Analysis of typical low volume solid and liquid LLW, and disused sealed radioactive sources requiring processing to produce conditioned waste packages for storage;
- Safety requirements for processing and storage of low volume solid and liquid LLW, and disused sealed radioactive sources;
- Management systems for low volume solid and liquid LLW, and disused sealed radioactive sources;
- Processing module options and selection of appropriate technical options for processing for small volumes of solid and liquid low level waste and disused radioactive sources;
- Design and specification information for processing modules for low volume solid and liquid LLW, and disused sealed radioactive sources;
- Description of typical processing modules including manual sorting and segregating solid waste cell, low force compaction, chemical treatment, ion exchange, reverse osmosis, filtration, sludge cementation, cement encapsulation, and shielded cell with remote handling facility for the dismantling and repackaging of high activity sources.
- Storage module options and selection of appropriate technical options for storage of small volumes of solid and liquid low level waste and disused radioactive sources;
- Design and specification information for storage modules for low volume solid and liquid LLW, and disused sealed radioactive sources;
- Guidance on preparing technical specification for procurement of modular waste processing and storage facilities;
- Overview of Safety Assessment Driving Radioactive Waste Management Solutions (SADRWMS) methodology and Safety Assessment Framework (SAFRAN) – software package for safety assessment in pre-disposal waste management;
- Overview of CRAFT – Complimentary Safety Reports, Development and Application to Waste Management Facilities.
- License applications for LILW predisposal facilities including modular design facilities;

Along with overview lectures the workshop programme will include discussions and participant presentations focused on MS specific experiences and problems encountered.

**Background Information:**

Every country that uses nuclear technology involving radioactive materials, including mining and milling of radioactive ores generates some quantities of radioactive waste. Such waste needs to be processed through segregation, treatment, conditioning and packaging to be either stored or disposed. Storage and disposal of radioactive waste need to be dealt with in all MS's. There is continuous need to improve technology and human resources to enhance and strengthen the technical capacity, efficiency and safety of existing or for building new predisposal waste management facilities related to waste processing or storage. Countries with small amounts of radioactive

waste usually do not have solutions for final disposal. Since predisposal management of radioactive waste needs to be aligned with the disposal solutions, timely determination of integrated national policy and strategy is essential for the safe and effective management of radioactive waste. There is a need to assist in defining efficient ways to improve existing waste management practices and to assist in the resolution of particular or common problems in MSs to address advanced approaches in radioactive waste management, such as integrated approach in planning and waste strategies implementation, waste minimization, recycling and reuse options, quality assurance and other requirements of predisposal waste management.

The main activities on this Project are group events to share experiences and on-job training for key staff to learn best practices. This project allows to strategically focus on training and other activities of groups of MS' s at similar levels of programme development, thus optimizing resources, delivering more deep than generic messages and also enhancing connections between the MS's. Relevant IAEA publications for the Workshop are:

- Predisposal Management of Radioactive Waste, IAEA Safety Standards Series No. GSR Part 5, IAEA, Vienna (2009).
- Management of Waste from the Use of Radioactive Material in Medicine, Industry, Agriculture, Research and Education, IAEA Safety Standards Series No. WS-G-2.7, IAEA, Vienna (2005).
- Predisposal Management of Low and Intermediate Level Radioactive Waste, IAEA Safety Standards Series No. WS-G-2.5, IAEA, Vienna (2003).
- The Safety Case and Safety Assessment for Predisposal Management of Radioactive Waste, IAEA Safety Standards Series No. GSG-3, IAEA (2013).
- Handling and Processing of Radioactive Waste from Nuclear applications, IAEA Technical Reports Series No. 402, IAEA, Vienna (2001).
- Selection of efficient options for processing and storage of radioactive waste in countries with small amounts of waste generation, IAEA-TECDOC-1371, IAEA, Vienna (2003).
- Modular Design of Processing and Storage Facilities for Small Volumes of Low and Intermediate Level Radioactive Waste including Disused Sealed Sources, NW-T-1.4 (to be published 2014).
- The Management System for the Processing, Handling and Storage of Radioactive Waste, IAEA Safety Standards Series No. GS-G-3.3, IAEA, Vienna (2008).
- Application of the Management System for Facilities and Activities, IAEA Safety Standards Series Safety Guide No. GS-G-3.1, IAEA, Vienna (2006).
- License Applications for Low and Intermediate Level Waste Predisposal Facilities: A Manual for Operators, IAEA-TECDOC-1619 (2009).

**Participation:**

Although the Workshop is designed for countries participating in the Regional Project RER9107 it provides an opportunity to engage group or individual fellowships from all national projects devoted to waste management, decommissioning and environmental remediation.

The target countries are: Albania, Armenia, Azerbaijan, Belarus, Bosnia and

Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Georgia, Greece, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Montenegro, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Tajikistan, The Former Yugoslav Republic of Macedonia, Turkey, Ukraine, Uzbekistan.

**Participants' Qualifications:**

The participants should be specialists in radioactive waste management. The participants should prepare in advance presentations outlining national experience and issues related to management schemes, procedures and management systems for low volume solid and liquid LLW and disused sealed radioactive sources.

**Nomination Procedure:**

Nominations for Meeting/Workshop should be submitted to the IAEA online through the Technical Cooperation Department's InTouch system (<http://intouch.iaea.org>). Should this not be possible, nominations may be submitted on the standard IAEA Nomination Form for Meeting/Workshop and National Consultant (available on the IAEA website: <http://www.iaea.org>). Completed forms should be endorsed by relevant national authorities and returned to the Agency through the official channels, i.e. the designated National Liaison Office for IAEA Matters.

The completed nomination forms should be sent to the Programme Management Officer for this project, Mr **Andrejs Salmins**, through IAEA Official Fax (+43-1-26007) or E-Mail ([Official.Mail@iaea.org](mailto:Official.Mail@iaea.org)), not later than **16 May 2014**. Nominations received after this date or which have not been routed through the established official channels cannot be considered.

**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.

Selected participants from countries eligible to receive technical assistance will be provided with a round trip economy class air ticket from their home countries to Chisinau, Republic of Moldova, and a Daily Subsistence Allowance (DSA) at the prevailing UN Rate. Shipment of accumulated workshop materials to the participants' home countries is not the responsibility of the IAEA.

The organizers of the workshop 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 workshop, 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.