



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

Technical Meeting on Decommissioning of Fuel Cycle Facilities

Hosted by the

Government of France

through the

Orano Group

Cherbourg, France

and virtual participation via Microsoft Teams

19 – 23 June 2023

Ref. No.: EVT2205137

Information Sheet

Introduction

The nuclear fuel cycle concerns a wide range of operations and associated facilities, including activities concerned with the processing of uranium and production of nuclear fuel (front-end activities) and activities concerned with management of spent fuel following its removal from nuclear power reactors, including reprocessing, conditioning, and storage (back-end activities). Many facilities, in both categories, have already reached the end of their useful life, or will do so over the next 1-2 decades, and need to be decommissioned. Indeed, decommissioning of major fuel cycle facilities has been underway for many years in different countries around the world, such that significant experience has already been gained and is being applied in ongoing and planned future decommissioning projects.

There are several significant differences between projects concerned with decommissioning of fuel cycle facilities and those concerned with nuclear power plant and research reactor decommissioning. In part these differences stem from the uniqueness of many fuel cycle facilities, such that standardized approaches, taking benefit from having several facilities with similar design features, are often not feasible. Accordingly, the potential involvement of specialist decommissioning contracting organizations is likely

to be more constrained than in the case of reactor decommissioning, given the higher levels of uncertainty about the condition of the facility to be dismantled.

The presence of radioactivity in fuel cycle facilities generally results from contamination of systems and structures, rather than from activation, and therefore inventories of radioactive materials generally have higher levels of uncertainty. A large diversity of radionuclides may be present, including plutonium and other emitters of alpha radiation. In addition, given the size and complexity of many types of fuel cycle facility, the quantities of waste produced can be extremely large, albeit much of this is not highly radioactive. Finally, fuel cycle facilities are often located on large, multifacility, sites, often combining facilities under permanent shutdown, facilities still under operation and, in some cases, new build projects. This brings additional complexity to the planning and implementation of decommissioning projects.

Despite the good progress achieved in decommissioning fuel cycle facilities in some countries since the turn of the century, it is inevitable that decommissioning of nuclear fuel facilities will continue for several more decades, with very significant liabilities remaining to be addressed. In this regard, it is very important that organizations involved in such decommissioning work are familiar with the experience gained from completed and ongoing projects.

Objectives

The objective of this Technical Meeting is to facilitate collection, sharing and analysis of good practices and experiences from decommissioning and related radioactive waste management of the fuel cycle facilities.

The materials presented at the meeting and the associated discussions will form the basis for development of a technical report on these issues.

Accordingly, the meeting will support needs of Member States involved in decommissioning of the fuel cycle facilities.

Target Audience

Target audience of this event includes professionals actively involved in preparation for decommissioning of the fuel cycle facilities and related radioactive waste management. This will include experts with practical experience as well as regulators.

Working Language(s)

The working language of the meeting will be English with no interpretation provided. All communications and presentations must be submitted in this language.

Expected Outputs

Preparation of the technical document will be considered based on the provided presentations and outcomes of the Technical Meeting.

Participants will be invited to propose Table of Contents of the eventual report and provide relevant inputs.

Topics

Discussions and exchanges are expected to focus on experience gained and current good practice concerned with decommissioning of the fuel cycle facilities, including on aspects relevant to management of the resulting materials and waste.

Specific topics to be covered include:

- **National Frameworks for Fuel Cycle Facility Decommissioning**

Topics to be addressed may include current regulatory approaches to oversight of planning and implementation of decommissioning of fuel cycle facilities, national policy considerations which impact on their decommissioning and institutional frameworks for management of the resulting materials and waste, together with funding mechanisms.

- **Developing a Decommissioning Strategy / Decommissioning Plan – End State Definition and Reuse Considerations**

Topics to be addressed may include definition of the major activities to be addressed in decommissioning plans and associated cost estimates, the selection of dismantling strategies, methodologies for establishing the anticipated radioactive and hazardous waste inventories and identification of expected waste streams, end state definition and involvement of stakeholders in the development of decommissioning strategies including considerations for the reuse of facilities and sites.

- **Post Shutdown Activities**

Topics to be addressed may include retrieval of historical and operational waste, chemical decontamination of circuits and tanks for overall reduction of exposure during decommissioning, conditioning of liquid waste, effluents and sludges, facility characterization to support detailed decommissioning planning, and construction of new facilities for management of waste.

- **Implementation of decommissioning activities**

Topics to be addressed may include project management and contracting strategies for decommissioning of the fuel cycle facilities, technology selection for facility characterization, decontamination techniques, in situ segmentation and removal of components, the emerging role digitalization and robotics, R&D needs, lessons learned from completed projects, and management of interfaces with facilities still in operation.

- **Management of Low Activity Materials and Waste**

Topics to be addressed may include the development of waste processing systems appropriate to the specific needs of materials and radioactive waste resulting from decommissioning of fuel cycle facilities, application of circular economy principles to their management, clearance and recycling or reuse of materials in applications outside of or within the nuclear industry, including materials of high strategic value, and specific considerations for management of hazardous waste.

- **Management of Medium and High Activity Radioactive Waste**

Topics to be addressed might include treatment options for waste not suitable for disposal in surface or near surface repositories including treatment options for waste in the absence of waste acceptance criteria for disposal, pre-treatment options for waste with the aim of achieving a lower waste classification, management of alpha-contaminated solid waste, including waste containing significant quantities of dust or powder, management of solid waste containing beta-gamma activity, and management options for liquid waste (including organics and alpha contaminated oils).

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend. Participants should be actively involved in the topics of the event.

In order to be designated by an IAEA Member State, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **31 May 2023**.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required.

Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed above.

Participants who wish to give presentations are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in A4 page format, should extend to no more than two pages (including figures and tables) and should not exceed 500 words. It should be sent electronically to the Scientific Secretaries of the event (see contact details below), not later than Submission Deadline. Authors will be notified of the acceptance of their proposed presentations by Acceptance Deadline.

In addition, participants have to submit the abstract together with the **Participation Form (Form A)** and the attached **Form for Submission of a Paper (Form B)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or their organization for onward transmission to the IAEA not later than **31 May 2023**.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made using the **Grant Application Form (Form C)**, which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **31 May 2023**.

Visas

Participants who require a visa to enter France should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of France.

IAEA Contacts

Scientific Secretary

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.

Participation Form

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To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary, Mr Sylvain Janski, Division of Nuclear Fuel Cycle and Waste Technology, Department of Nuclear Energy (Email: S.Janski@iaea.org) and to the Administrative Secretary, Ms Nichola Cannavan, (Email: N.Cannavan@iaea.org).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels: 31 May 2023

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms
Institution:		
Full address:		
Tel. (Fax):		
Email:		
Nationality:	Representing following Member State/non-Member State/entity or invited organization:	
If/as applicable:		
Do you intend to submit a paper?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Would you prefer to present your paper as a poster?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Title:		
I plan to attend virtually:	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate.

Form for Submission of a Paper

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Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels as per Conference: 31 May 2023

Title of the paper:		
If applicable: Abstract ID in IAEA-INDICO:		
Family name(s) and first name(s) of all author(s): e.g. Smith, John	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		
3.		
Family name and first name(s) of author presenting the paper: e.g. Smith, John	Mr/Ms:	
Mailing address:		
Tel. (Fax):		
Email:		
I plan to attend virtually:	Yes	No

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Furthermore, I herewith declare:

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that the material submitted to the IAEA does not contain any libellous or other unlawful statements and does not contain any materials that violate any personal or proprietary rights of any person or entity.

Date:

Signature of main author:

Grant Application Form

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Deadline for receipt by IAEA through official channels as per Conference Announcement: 31 May 2023

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yyyy/mm/dd):	Nationality:	

1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended	
			from	to

2. Recent employment record (starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years attended	
			from	to

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3. Description of work performed over the last three years:

4. Institute's/Member State's programme in field of event:

Date: _____ **Signature of applicant:** _____

Date: _____ **Name, signature and stamp of Ministry of Foreign Affairs,
Permanent Mission to the IAEA or National Atomic Energy
Authority**
