IAEA
International Atomic Energy Agency
Atoms for Peace

Technical Meeting on the International WWER Radioactive Waste Operations Benchmarking System

IAEA Headquarters
Vienna, Austria

19–21 December 2017

Ref. No.: T2-TM-55713; EVT1700164

Information Sheet

A. Background

The web-based International WWER Radioactive Waste Operations Benchmarking System was established in response to the International Atomic Energy Agency (IAEA) Technical Document entitled *Improvements of radioactive waste management at WWER nuclear power plants* (IAEA-TECDOC-1492, Vienna, 2006), which highlights the importance of establishing industry-wide standards and guidelines for waste minimization, including source reduction, reuse, and volume reduction. Benchmarking leverages the natural tendency of all plant operators to pursue the goal of being ranked among the top performers and, similarly, to avoid being a low performer. Application of benchmarking principles to radioactive waste management activities tends to drive down waste volumes generated and the size and number of contaminated areas industry-wide. In addition, benchmarking among similar plants promotes inter-plant communication and cooperation, thereby

transferring good practices for waste minimization and enhanced waste safety measures related to waste generation, handling, storage, transport and disposal.

The status of the web-based benchmarking system was reviewed at an IAEA regional workshop on benchmarking of the generation, processing and disposal of low and intermediate level operational waste from nuclear power plants (NPPs), held in Paks, Hungary, from 15 to 19 July 2013. At this workshop, the most important parameters (reports) were identified to focus the benchmarking of operational radioactive waste generated by water cooled, water moderated power reactor (WWER)-type reactors. In October–November 2013, specifications were compiled to update the benchmarking system in order to address the deficiencies that had previously been identified. In early 2014, the IAEA's Division of Information Technology updated the benchmarking system, which was tested at a consultancy meeting held at the IAEA's Headquarters from 26 to 30 May 2014 to ensure that it could generate the reports on performance.

The launch of the fully operational benchmarking system occurred on 21 July 2014, and users were invited to update their national reports using the new system with the intent of publish the reports there. The web-based benchmarking system is used to collect, analyse and report on waste management information from WWER-type NPP sites and enables member organizations to share their data and to determine how they rank amongst all participants in terms of commonly agreed and accepted waste management parameters. Data collection is conducted annually, but benchmarking reports and analyses can be accessed throughout the year. The web-based benchmarking system is available on the IAEA's NUCLEUS portal at https://nucleus.iaea.org/wwer/. However, it is currently restricted to designated IAEA staff and officially registered benchmarking project participants; it is not available to regular public users of NUCLEUS.

Based on the operating web-based benchmarking system, the IAEA published, in June 2017, a new IAEA Technical Document entitled *Use of the Benchmarking System for Operational Waste from WWER Reactors* (IAEA-TECDOC-1815, Vienna, 2017). The document identifies and defines the benchmarking parameters selected for WWER-type reactors, including a discussion of why those parameters were selected and their intended benchmarking benefits. It also discusses the IAEA's WWER benchmarking database and provides an overview of data input and reporting as benchmarking is performed against all operational waste while used fuel and activated parts are excluded. The attachments to TECDOC-1815 contain Member State reports prepared with the use of the web-based benchmarking system. The TECDOC provides end users in Member States with the knowledge and information needed to understand and effectively use the International WWER Radioactive Waste Operations Benchmarking System.

Sharing the progress achieved in utilizing the web-based International WWER Radioactive Waste Operations Benchmarking System and identifying further activities aimed at improving waste management practices are of interest to the Members States involved in the project, including various countries that are planning the construction and operation of power stations with WWER-type reactors.

B. Objectives

The purpose of the meeting is to discuss the status of the web-based International WWER Radioactive Waste Operations Benchmarking System using the national (plant) reports prepared by participants in the project. The IAEA Technical Document entitled *Use of the Benchmarking System for Operational Waste from WWER Reactors* (IAEA-TECDOC-1815) will form the basis for discussions at the meeting as well as for further refinement of the web-based benchmarking system by the participants.

By using the web-based benchmarking system participants will share their data and will also be able to determine how they rank amongst all participants in terms of commonly agreed and accepted waste management parameters in addition to identifying recognized good practices. The Technical Meeting will be augmented through a consultancy meeting scheduled for the same dates which will facilitate implementation of the Technical Meeting and prepare a report on the status of the benchmarking system and its further utilization by current and prospective users.

C. Expected Output

The meeting is expected to provide current and future users of the web-based International WWER Radioactive Waste Operations Benchmarking System in Member States with the knowledge and information needed to understand and effectively use the system, as well as to share experiences with use of the system.

Radioactive waste management experts, including planners, designers, operators and regulators involved in the management of operational radioactive waste from NPPs with WWER-type reactors are the main beneficiaries of the web-based benchmarking system.

D. Scope

It is envisaged that the meeting will address:

- Presentation of key reports that participants in the benchmarking project have prepared;
- Discussion of the use and benefits of benchmarking reports;
- Qualifying information concerning the benchmarking parameters while highlighting differences between sites;
- Determining status and trends in the generation of specific wastes, forecast of storage capacity usage under normal operating conditions, etc.;
- Recommendations for effectiveness of benchmarking activities, such as:
  - defining the deadline for annual updates;
  - recommending key parameters for inter-plant comparisons;
  - providing feedback to the IAEA.

Prior to the meeting, participants are expected to have prepared and submitted updated information to the web-based International WWER Radioactive Waste Operations Benchmarking System (https://nucleus.iaea.org/wwer/), and to have generated relevant reports which will then be used at the meeting. Participants are also expected to prepare in advance concise overview reports (presentations) that include data and/or charts prepared using the web-based benchmarking system.

E. Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

F. Working Language

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

G. Venue

The meeting will start on Tuesday, 19 December 2017 at 09:30 a.m. in Room C5 of the C Building of the Vienna International Centre (VIC). Meeting participants are requested to arrive at Checkpoint 1/Gate 1 of the VIC half an hour before the start of the meeting on the first day, in order to allow sufficient time for issuing of grounds passes, which are necessary for official visitors to the VIC.

H. Organization

Official correspondence with regard to the technical aspects of the meeting should be addressed to the Scientific Secretary:

Mr Michael Ojovan
Division of Nuclear Fuel Cycle and Waste Technology
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100
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AUSTRIA

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Fax: +43 1 26007
Email: M.Ojovan@iaea.org

Official correspondence with regard to administrative issues should be addressed to the Administrative Secretary:

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Division of Nuclear Fuel Cycle and Waste Technology
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
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1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 21968
Fax: +43 1 26007
Email: M.Tolstenkova@iaea.org

Relevant publications:

1. *Use of the Benchmarking System for Operational Waste from WWER Reactors* (IAEA-TECDOC-1815, IAEA, Vienna, 2017)
2. *Predisposal Management of Radioactive Waste* (IAEA Safety Standards Series No. GSR Part 5, IAEA, Vienna, 2009)
3. *Improvements of radioactive waste management at WWER nuclear power plants* (IAEA-TECDOC-1492, IAEA, Vienna, 2006)

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Form A
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Participation Form

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IAEA Headquarters, Vienna, Austria

19–21 December 2017

To be completed by the participant and sent to the competent official 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), Vienna International Centre, PO Box 100, 1400 Vienna, Austria, either electronically by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Kindly send also a copy to the Scientific Secretary, Mr Michael Ojovan (Email: M.Ojovan@iaea.org), and to Ms Marina Tolstenkova (Email: M.Tolstenkova@iaea.org).

Deadline for receipt by IAEA through official channels: 22 September 2017

<table>
<tr><td>Family name:</td><td>Given name(s):</td><td>Mr/Ms</td></tr>
<tr><td colspan="3">Institution:</td></tr>
<tr><td colspan="3">Full address:</td></tr>
<tr><td>For urgent communications please indicate:</td><td colspan="2">Tel.:
Fax:
Email:</td></tr>
<tr><td>Nationality:</td><td colspan="2">Designating Government or organization:</td></tr>
<tr><td colspan="3">Mailing address (if different from address indicated above):</td></tr>
</table>

Do you intend to present a paper? Yes ☐ No ☐

Title:

An abstract of the paper is attached? Yes ☐ No ☐

Please select up to three thematic issues for discussion and rank them in order of priority (1, 2, 3), where 1 is the highest priority:

- Balancing decommissioning and RWM strategies ☐ PRIORITY No. ☐
- Safety/risk aspects ☐ PRIORITY No. ☐
- Research needs and international cooperation ☐ PRIORITY No. ☐
- Characterization strategies and inventory management ☐ PRIORITY No. ☐
- Skills needs and training ☐ PRIORITY No. ☐
- Project/supply chain management ☐ PRIORITY No. ☐
- Decommissioning of laboratories and small facilities ☐ PRIORITY No. ☐
- Other topics: _____ ☐ PRIORITY No. ☐

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Form C
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Grant Application Form

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To be sent to the competent official authority (Ministry of Foreign Affairs or National Atomic Energy Authority) for transmission to the International Atomic Energy Agency, Vienna International Centre, PO Box 100, 1400 Vienna, Austria (Fax: +43 1 26007).

To be completed only by participants from developing countries on whose behalf a grant is requested.

Deadline for receipt by IAEA through official channels: 22 September 2017

Full name:	Mr/Ms:
Postal address:	Phone:
	Fax:
	Email:
Date of birth (year/month/day):	Nationality:

1. EDUCATION (post-secondary)

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

3. DESCRIPTION OF WORK performed over the last three years:

4. INSTITUTE'S/MEMBER STATE'S PROGRAMME IN FIELD OF MEETING

....
Date Signature of applicant

....
Date Name and title (printed) and signature of responsible Government official