



**TECHNICAL MEETING  
ON  
CURRENT ISSUES AND CHALLENGES IN  
FUEL QUALITY AND RELIABILITY ASSURANCE**

**13 - 15 December 2010  
IAEA, Vienna, Austria**

*Organized by the*  
International Atomic Energy Agency

**INFORMATION SHEET**

**I. BACKGROUND**

Nuclear fuel is a critical component for the core safety, and its robustness is essential for efficient power generation.

Reliable, safe and economical performance of nuclear fuel depends on its design, the processes used for its fabrication and the environment for its operation. Each of these three areas requires strict quality control (QC) and quality assurance (QA) to guarantee that the performance and safety goals are achieved. The factors that control the quality are quite different in each of these areas; nevertheless they are interactive, and both plant operator and fuel vendor have to be aware of them. The trend to more demanding performance parameters and the competitive reload fuel market have resulted in design evolution that could sometimes outpace practical experience. This has produced a renewed need for R&D, design reviews and associated audits to assure reliable fuel performance and maximize plant availability. New challenges also include fuel supply assurance and power sustainability concerns, which require new interdisciplinary managerial and organisational approaches.

The uniting principles for all stages of the nuclear fuel life - development, design, fabrication and operation – are fuel Quality and Reliability, and new tendencies have brought about recent introduction of new or modified safety and management standards, codes and models (ISO, IAEA, EFQM, RCC-C, etc).

**II. OBJECTIVES**

The purpose of the meeting is to provide an overview of the present status, issues and challenges of fuel QA/QC procedures and management practices that are critical for fuel quality and reliability, as well as to facilitate international exchange on best experience in these areas.

The meeting will cover both light and heavy water reactor fuels and will contribute to the preparation of the NE Series Guide on quality and reliability of fuels for water cooled power reactors.

### III. TOPICS TO BE COVERED

Papers are invited on the following aspects of fuel quality and reliability assurance:

- QA/QC in design & manufacturing of fuel assembly and their components:
  - Advancements in pellets manufacturing;
  - Improvement of fuel rod designs (for higher powers and burnups, accident conditions, intermediate storage);
  - Resolution of fuel assembly-related performance issues.
- Fuel Safety related aspects:
  - Performance feedback and fuel failure analysis;
  - Key characteristics to ensure adequate performance during normal operation and accidental conditions;
  - Current status of development of new acceptance criteria for licensing (e.g. LOCA/RIA).
- Management and organizational aspects:
  - Globalisation of relations between international and national utilities, vendors and regulators;
  - Role of human factor, organizational and management procedures;
  - Interactions among national QA/QC, regulatory and legal systems.

### IV. ORGANIZATION

**Meeting Chairman:** Mr Peter Rudling  
ANT International  
Krongjutarvagen 2C  
730 50 Skultuna, Sweden  
Phone: +46 21 700 20  
Fax: +26 21 702 66  
E-mail: [peter.rudling@antinternational.com](mailto:peter.rudling@antinternational.com)

**Scientific Secretaries:** Mr Victor Inozemtsev  
International Atomic Energy Agency (IAEA)  
Wagramer Strasse 5  
P.O. Box 100  
1400 Vienna, Austria  
Phone: +43 1 2600 22760  
Fax: +43 1 26007 22760  
E-mail: [v.inozemtsev@iaea.org](mailto:v.inozemtsev@iaea.org)

Mr Nicolas Tricot  
International Atomic Energy Agency (IAEA)  
Wagramer Strasse 5  
P.O. Box 100  
1400 Vienna, Austria  
Phone: +43 1 2600 25992

Fax: +43 1 26007 25992

E-mail: [n.tricot@iaea.org](mailto:n.tricot@iaea.org)

## V. DEADLINE FOR PAPERS AND PARTICIPATION IN THE MEETING

The meeting may be attended only upon official designation. Participants should complete the attached Form A and B (if applicable) and send them, together with an abstract of approximately 300 words to the appropriate national authority (Ministry of Foreign Affairs or National Atomic Energy Authority) for subsequent transmission to the IAEA, not later than **1 October 2010**, with copies to the IAEA Scientific Secretaries. The abstracts should summarize the content and principal conclusions of the paper the author intends to present during the technical meeting.

Prospective participants whose nominations have been received by the IAEA will be notified directly. Also the authors will be notified about the acceptance of their paper(s) and the preliminary programme will be issued by **1 November 2010**. As usually practiced in this type of meetings, the programme will include a panel session to permit participants to contribute to the summary and highlights of the meeting and to make recommendations to the IAEA on the on-going and future activities in this field.

Upon arrival to the meeting, the authors are requested to bring in electronic form (on a CD or a memory stick) their papers in MS Office Word format and their presentations in Power Point format.

## VI. VENUE AND ACCOMMODATION

The meeting will be held at the International Atomic Energy Agency, Vienna, Austria.

Delegates should arrange their accommodation directly with the hotels. A list of recommended hotels as well as further details regarding travel arrangements and social events will be provided to participants by meeting organizers at a later stage.

Designated participants who require a visa to enter Austria should submit the necessary application form in due time to the nearest diplomatic or consular representative of Austria.

## VII. EXPENDITURES

In accordance with the established rules, Governments or other national authorities are expected to bear the travel and other costs of designated participants in the Technical Meeting. Limited funds are, however, available to help cover the cost of participants from Member States eligible to receive technical assistance under the IAEA's Technical Cooperation Programme. Such assistance can be offered, upon specific request, to one participant per country provided that, in the IAEA's view, this participant will make an important contribution to the meeting. The application for financial support should be made at the time of designation of the participant.

The Secretariat wishes to state that compensation is not payable by the IAEA for any damage to or loss of the experts' personal property. However, for the period of their engagement with the IAEA, including travel between their residence and the duty station, the designated

experts will be covered under the IAEA's insurance policy for permanent total disablement or death resulting from service-incurred accidents or illness up to a maximum of €100 000, for permanent partial disablement resulting from service-incurred accidents or illness up to a maximum of €100 000 and for medical expenses up to a maximum of €20 000 plus €10 000 for supplementary travel and accommodation expenses in case of illness or injury resulting from service-incurred accidents or illness, in accordance with the terms of the IAEA's relevant insurance policy. This insurance coverage only covers accidents and illnesses insofar as they clearly result from attendance at an IAEA meeting. The IAEA recommends that the expert also make arrangements for private insurance coverage on an individual basis.

## **VIII. WORKING LANGUAGE**

The working language of the meeting will be English. All communications, abstracts, and papers must be sent in English.



**INTERNATIONAL ATOMIC ENERGY AGENCY**

**Technical Meeting on  
‘Current Issues and Challenges in Fuel Quality and Reliability Assurance’  
13 - 15 December 2010  
IAEA, Vienna, Austria**

To be sent to competent official authority (Ministry of Foreign Affairs, National Atomic Energy Authority) for transmission to the International Atomic Energy Agency, Vienna International Centre, Wagramer Strasse 5, P.O. Box 100, A-1400 Vienna, Austria

**PARTICIPATION FORM**

**DEADLINE FOR APPLICATION: 1 October 2010**

Family name:		All initials of given name:	Mr. Ms.
Institution:		Full address:	
		For urgent communications please indicate: Phone No.: Telefax No.: E-mail:	
Nationality:	Designating government or organization:		
Mailing address (if different from address of institution):			

Do you intend to present a paper?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Title of Paper .....		
.....		
An abstract of my paper is attached?	YES <input type="checkbox"/>	NO <input type="checkbox"/>



**INTERNATIONAL ATOMIC ENERGY AGENCY**

**Technical Meeting on  
'Current Issues and Challenges in Fuel Quality and Reliability Assurance'  
13 - 15 December 2010  
IAEA, Vienna, Austria**

**FORM FOR SUBMISSION OF A PAPER**

**DEADLINE FOR APPLICATION: 1 October 2010**

TITLE OF THE PAPER		
AUTHOR(S) INITIAL(S) AND FAMILY NAME(S)	SCIENTIFIC ESTABLISHMENT(S) IN WHICH WORK HAS BEEN CARRIED OUT	TOWN/COUNTRY
1.		
3.		
3.		
AUTHOR WHO WILL PRESENT THE PAPER		Mailing Address:
Mr./Ms.		
Initial(s):		
Family Name:		For urgent communications please indicate: Telefax No.: E-Mail: Telex No.:
I HEREBY AGREE TO ASSIGN TO THE INTERNATIONAL ATOMIC ENERGY AGENCY <input type="checkbox"/> THE COPYRIGHT OR <input type="checkbox"/> THE NON-EXCLUSIVE, ROYALTY FREE LICENSE TO PUBLISH THE ABOVE-MENTIONED PAPER, AND CERTIFY THAT NO OTHER RIGHTS HAVE BEEN GRANTED WHICH COULD CONFLICT WITH THE RIGHT HEREBY GIVEN TO THE AGENCY.		
DATE:		(SIGNATURE OF MAIN AUTHOR)