



INTERNATIONAL ATOMIC ENERGY AGENCY

**TECHNICAL MEETING ON
SAFETY CULTURE DURING PRE-OPERATIONAL PHASES —
PRACTICAL WORKING METHODS TO INCREASE SAFETY**

Cape Town, South Africa

26–30 November 2012

INFORMATION SHEET

1. INTRODUCTION

Safety culture is seen as a key contributor to safe operations. We know that severe accidents have root causes related to nonsufficient safety culture. We also know that strong safety culture is of high importance for the whole life cycle of nuclear facilities. The International Atomic Energy Agency (IAEA) is specially addressing the safety culture challenges related to new nuclear facility construction projects and has developed a new Safety Report on the subject. Lessons learned and new insights were captured during the development of this Safety Report. The IAEA has chosen an integrated approach to safety in order to eliminate goal conflict and to ensure that safety has an overriding priority. In the IAEA's safety standards the fundamental principle underlying leadership and management for safety is to have an integrated approach which covers both management systems and safety culture. Naturally, this is also valid for new construction projects. The present meeting will disseminate information about the lessons learned through the work with the new Safety Report and also address the wider context of leadership and management for safety during pre-operational phases. The Safety Requirements publication *The Management System for Facilities and Activities* (IAEA Safety Standards Series No. GS-R-3, Vienna, 2006) is currently under revision and the new developments related to leadership and management for safety, which are relevant for new construction projects, will also be shared during the meeting.

One of the insights gained during the development of the Safety Report *Safety Culture during Pre-Operational Phases*¹ is that safety culture is often treated as a concept relevant mostly for the operation of a nuclear facility and that it is disregarded elsewhere. Lessons have been learned during new construction projects showing that not only safety has been jeopardized, but also additional costs and prolonged project times have been incurred due to insufficient attention having been given to safety culture aspects.

In general, project management's main focus is on completing the project in time and within the allotted budget. This can sometimes lead to a goal conflict with regard to the necessary safety precautions during the project execution stage. Some contractors involved in the project may have limited or no experience of working in the nuclear industry and may therefore not be properly aware of the rigorous safety requirements necessary to maintain the high standards of nuclear safety that are so important for the industry. A strong safety culture and effective safety leadership and management, supported by an efficient integrated management system, are crucial for the successful implementation of new construction projects. This has been understood by important stakeholders — such as main vendors, regulators, and power companies — involved in new construction projects, and they have accordingly expressed an interest in IAEA guidance in this area. Some of the recognized challenges associated with safety culture, as well as with leadership and management for safety, during the pre-operational phases are listed below:

- The project involves organizations with insufficient direct experience and, in some cases, not enough knowledge of nuclear safety requirements.
- The project involves many different organizations the actions of which need to be coordinated and managed.
- The project may involve many different nationalities and cultures, which can result in interpersonal and communication challenges.
- General lack of experience of staff involved in new construction projects since for many years there has been limited investment in nuclear facilities.
- Insufficient development and implementation of an integrated management system.

¹ The term 'pre-operational phase' includes the following phases: pre-project, design, construction and commissioning of a nuclear facility.

- Future nuclear facility construction projects may take place in countries where there is not a mature nuclear industry (and hence a concomitant deficit in nuclear knowledge), or in countries with a mature industry but with limited or no recent construction experience in this field.
- Goal conflict between time and safety, which can affect the willingness of staff to adopt/maintain a questioning attitude; or the difficulty of perceiving a link between a short term action and a longer term serious consequence.
- Lack of practical experience of nuclear safety in newcomer countries.

This meeting will address the above issues. The aim is to increase the understanding of important practical aspects of safety culture, as well as of leadership and management of safety, for everyone involved in the pre-operational phases of new nuclear facility construction projects to ensure long term safe operation of these facilities.

2. OBJECTIVES

The meeting has the following primary objectives:

- To provide an international forum for the exchange of experience related to safety culture, leadership and management for safety, and integrated management systems during pre-operational phases;
- To disseminate the experience that was captured while developing the new Safety Report entitled *Safety Culture during Pre-Operational Phases*; and
- To discuss how the IAEA can assist Member States in fulfilling their needs for specific training, techniques and tools for safety culture during pre-operational phases.

3. WORKING MATERIAL

The new Safety Report entitled *Safety Culture during Pre-Operational Phases* will be provided to participants in advance of the meeting. The Safety Report will serve as the basis for dialogues at the meeting. It is anticipated that the meeting will be split up into working groups to cover specific topic areas, with plenary sessions for reporting back.

4. REQUESTS TO PARTICIPANTS/PARTICIPATION

Participation is solicited from representatives of new nuclear facility construction projects, nuclear energy programme implementing organizations, nuclear power plants and regulatory authorities, utility organizations, as well as technical support organizations, vendors, research centres, and international organizations engaged in activities related to new construction projects. In order to enrich the dialogue, the IAEA welcomes the participation of experts from various disciplines, including researchers and practitioners from other high reliability organizations outside the nuclear industry. To ensure maximum effectiveness in the exchange of information, participants should be persons actively involved in the subject of the meeting.

Participants will be requested to:

- submit together with the application a short summary of their personal experience related to the topic of the meeting (maximum: one A4 page; 600 words);

- actively participate in the dialogue during the meeting; and
- provide any other input useful to the IAEA's activities in this field.

Participants should complete the Participation Form (see Attachment A) as soon as possible and send it to the competent official authority (Ministry of Foreign Affairs or National Atomic Energy Authority) for transmission to the IAEA Secretariat to arrive no later than **21 September 2012**. Designations of participants will be accepted only if forwarded by the Government of an IAEA Member State or by an organization invited to participate.

The meeting is, in principle, open to all officially designated persons. The IAEA, however, reserves the right to limit participation due to limitations imposed by the available facilities. It is, therefore, recommended that interested persons take the necessary steps for the official designation as early as possible.

5. VISAS

Designated participants who require a visa to enter South Africa should submit the necessary application to the nearest diplomatic or consular representative of South Africa as soon as possible.

6. EXPENDITURE

The costs of the meeting are to be borne by the IAEA. There is no registration fee. Travel and subsistence expenses of participants will not be borne by the IAEA. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of participants from certain Member States. Such assistance may be offered, upon specific request, to one participant per Member State provided that, in the IAEA's view, the participant on whose behalf assistance is requested will make an important contribution to the meeting. The application for financial support should be made at the time of designating the participant.

7. PAPERS

Papers should be submitted through the same official channels as the Participation Form. The submission of a paper implies that the author intends to participate in the meeting if it is accepted. Papers should not exceed 3000 words and should contain an abstract of about 400 words. Papers should be prepared according to the guidelines included in Attachment B. It is not mandatory for all participants to submit a paper. However, the IAEA welcomes and encourages contributions from those who are willing to submit a paper on the topic of the meeting.

A completed Participation Form (see Attachment A), with an indication of the intention to present a paper must be sent to the IAEA through the competent official authority by **21 September 2012** together with two copies of an abstract (400 words). See *Sample A* for presentation guidelines.

Thirty hard copies of the full paper should be brought by the author for distribution to participants during the meeting.

In addition to the master (paper) copy, an electronic version of the paper is necessary to ensure quality and timely issuance of the proceedings to be prepared and distributed in electronic form (CD-ROM).

8. WORKING LANGUAGE

The working language of the meeting will be English.

9. LOCAL ARRANGEMENTS

The meeting will be held at the Southern Sun Cape Sun Hotel in Cape Town, South Africa, and will start on Monday, 26 November 2012 at 9.30 a.m. and end at 1.00 p.m. on Friday, 30 November 2012.

The meeting agenda and local details, together with information on local arrangements, will be sent to designated participants when the completed participation forms have been received.

10. SECRETARIAT

The Scientific Secretaries of the meeting are Ms Monica Haage of the Division of Nuclear Installation Safety and Mr Jeannot Boogaard of the Division of Nuclear Power.

Addresses: **Ms Monica Haage**
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 Vienna, AUSTRIA
Tel.: +43 1 2600 22551
Fax: +43 1 2600 7
Email: M.Haage@iaea.org

Mr Jeannot Boogaard
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 Vienna, AUSTRIA
Tel.: +43 1 2600 22794
Fax: +43 1 2600 29598
Email: J.Boogaard@iaea.org

Administrative assistance:

Ms Yuliya Yushko
Tel.: + 43 1 2600 26069
Email: Y.Yushko@iaea.org

Ms Olga Arkhipova
Tel.: + 43 1 2600 22804
Email: O.Arkhipova@iaea.org



INTERNATIONAL ATOMIC ENERGY AGENCY

**Technical Meeting on
Safety Culture during Pre-Operational Phases —
Practical Working Methods to Increase Safety**

**IAEA Headquarters
Vienna, Austria**

26–30 November 2012

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 (IAEA), Vienna International Centre, PO Box 100, 1400 Vienna, Austria (Fax: +43 1 26007).

Representatives of invited organizations can submit this form to their organization for subsequent transmission to the IAEA.

ATTACHMENT A: PARTICIPATION FORM

FAMILY NAME:	ALL INITIALS OF GIVEN NAMES:	MR MS
INSTITUTION:	FULL ADDRESS: TEL.: FAX: EMAIL:	
NATIONALITY:	DESIGNATING GOVERNMENT OR ORGANIZATION:	
MAILING ADDRESS (IF DIFFERENT FROM ADDRESS OF INSTITUTION):		
DO YOU PLAN TO SUBMIT A PAPER: YES NO		

ATTACHMENT B: INSTRUCTIONS FOR THE PREPARATION OF PAPERS

Length

Papers should not exceed 3000 words.

Copyright

Authors are responsible for ensuring that nothing in their papers infringes any existing copyright. If previously copyrighted material is included, authors must provide evidence that the copyright holder has given permission for its use.

Manuscript

The original manuscript should be printed on one side of the paper only. The desired *layout* is shown in *Sample A* below. An electronic copy should be supplied with the original.

Margins: Top 2 cm. Bottom 2.7, right and left 2.5 cm.

Font: Times New Roman 12 or 11.

The paper must begin with an *abstract*. The abstract should be typed as one paragraph not exceeding 400 words and should not contain references or footnotes.

[1] References and bibliography for background reading should be numbered in Arabic numerals in square brackets, and listed at the end of the paper.

Figures and tables should be clear and reproducible. All figures and tables should be placed as near as possible to the place where they are first mentioned, but do not wrap text around them.

TITLE OF THE PAPER IN BOLD CAPITAL LETTERS

N. SURNAME 1, N. SURNAME 2

Organization 1

City, Country

N. SURNAME 3

Organization 2

City, Country

Abstract

This abstract should present a brief outline of the contents of the paper. It should not exceed four hundred (400) words.

1. INTRODUCTION

It is suggested that a brief introduction of the topic(s) discussed further in the following Sections of this paper be included.

2. SECTION TWO

2.1. Section two point one

2.1.1. Section two point one point one

2.1.1.1. Section two point one point one point one