

**PRELIMINARY DRAFT PROGRAMME**  
Limited Circulation

Revised: 7 February 2006

**United Nations / International Atomic Energy Agency**

**Joint Technical Workshop**

**ON THE OBJECTIVES, SCOPE AND GENERAL  
ATTRIBUTES OF A POTENTIAL TECHNICAL SAFETY  
STANDARD FOR NUCLEAR POWER SOURCES IN  
OUTER SPACE**

**20-22 February 2006**

Conference Room I  
Building C  
Vienna International Centre

## **Background Information**

The technical workshop on the objectives, scope and general attributes of a potential technical safety standard for nuclear power sources in outer space is organized jointly by the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space and the International Atomic Energy Agency (IAEA) in accordance with paragraph 16 of General Assembly resolution 60/99 of 8 December 2005.

Over the past years, formal and informal discussions within the Working Group on the Use of Nuclear Power Sources in Outer Space of the Subcommittee, and between the Working Group and representatives of IAEA, have led to the conclusion that further work on any of the potential options for cooperating with IAEA in developing technical safety standards for nuclear power sources in outer space (NPS) would be assisted significantly by holding a joint workshop. The joint workshop would facilitate an exchange of views between the Working Group and IAEA on the objective, scope and general attributes of a potential safety framework for NPS. Such an exchange would improve mutual understanding of the respective roles and methods of working of IAEA and the Committee and assist in examining the main issues that would arise in carrying out such a joint exercise successfully.

The main objectives of the Workshop are: a) to enhance the proposed outline of objectives, scope and attributes for an international technically based framework of goals and recommendations for the safety of planned and currently foreseeable NPS applications in outer space; and b) to enhance the definition of potential implementation options for establishing an international technically based framework of goals and recommendations for the safety of planned and currently foreseeable NPS applications in outer space.

**MONDAY  
20 FEBRUARY 2006  
OPENING**

08h30-10h30  
Registration at Gate I of the Vienna International Centre

**08h30-10h30**  
10h30-10h55  
Opening of workshop and introductory remarks

10h55-11h10  
A Review of the Activities of the Working Group on the Use of Nuclear Power Sources in Outer Space  
*Chairman, Working Group on the Use of Nuclear Power Sources in Outer Space*

**SESSION 1. Background**

**10h40-13h00**  
*Chair*  
*Chairman, Working Group on the Use of Nuclear Power Sources in Outer Space*

*Rapporteurs*  
*Representative of the International Atomic Energy Agency*  
*Representative of the United Nations Office for Outer Space Affairs*

11h10-11h30  
Current Process for the Development of International Standards for Radiation Protection and Nuclear Safety  
*Representative of the International Atomic Energy Agency*

11h30-11h40  
Discussion

11h40-11h55  
Break

11h55-12h15  
Ongoing, Planned and Currently Foreseeable NPS Applications in Outer Space and their Scope and Rationale  
*Representative of the United States of America*

12h15-12h25  
Discussion

12h25-12h45  
Ongoing, Planned and Currently Foreseeable NPS Applications in Outer Space and their Scope and Rationale  
*Representative of the Russian Federation*

12h45-12h55  
Discussion

12h55-13h15

Paper or presentation on ongoing, planned and currently foreseeable NPS applications in outer space and their scope and rationale (including rationale for use of space nuclear power rather than other space power sources)

*Representative of the European Space Agency*

13h15-13h30

Discussion

**13h30-15h00** Lunch

## **SESSION 2. Background (continued)**

**15h00-18h00**

*Chair*

*Representative of the International Atomic Energy Agency*

*Rapporteurs*

*Representative of the International Atomic Energy Agency*

*Representative of the United Nations Office for Outer Space Affairs*

15h00-15h20

Unique Design Considerations for NPS Applications in Outer Space

*Representative of the United States of America*

15h20-15h30

Discussion

15h30-15h50

Unique Design Considerations for NPS Applications in Outer Space

*Representative of the Russian Federation*

15h50-16h00

Discussion

16h00-16h15

National Perspectives on the Development of Nuclear Power Source Designs for Space with Respect to Safety Considerations: Reactor Systems

*Representative of the United States of America*

16h15-16h30

National Perspectives on the Development of Nuclear Power Source Designs for Space with Respect to Safety Considerations: Radioisotope Systems

*Representative of the United States of America*

16h30-16h45

Discussion

16h45-17h00

Break

17h00-17h20

Paper or presentation on national perspectives on the development of NPS designs for space with respect to safety considerations (high-level design philosophies and their evolution driven by experience, technology and political/institutional developments (for example, high-altitude dispersion versus containment)

*Representative of the Russian Federation*

17h20-17h30

Discussion

17h30-17h50

Status and Needs in Space Nuclear Safety. The Designer's Point of View

*Representative of France*

17h50-18h00

Discussion and concluding remarks for the 1<sup>st</sup> day

**TUESDAY  
21 FEBRUARY 2006**

**SESSION 3. Presentations pertinent to objective I.A**

**10h00-13h00**

*Chair*

*Representative of France*

*Rapporteurs*

*Representative of the International Atomic Energy Agency*

*Representative of the United Nations Office for Outer Space Affairs*

10h00-10h20

Review of international documents and national processes potentially relevant to the peaceful uses of nuclear power sources in outer space" (A/AC.105/781)

*Representative of the Working Group of the Scientific and Technical Subcommittee on the Use of Nuclear Power Sources in Outer Space*

10h20-10h30

Discussion

10h30-10h45

Design Safety Considerations for Launch, Normal Operations and Mission Accidents: Reactor Systems

*Representative of the United States of America*

10h45-11h00

Design Safety Considerations for Launch, Normal Operations and Mission Accidents: Radioisotope Systems

*Representative of the United States of America*

11h00-11h15

Discussion

11h15-11h30

Break

11h30-11h50

Design Safety Considerations for Launch, Normal Operations and Mission Accidents

*Representative of the Russian Federation*

11h50-12h00

Discussion

12h00-12h20

Outline of objectives, scope and attributes for an international technically based framework of goals and recommendations for the safety of planned and currently foreseeable nuclear power source applications in outer space  
(A/AC.105/L.253/Rev.2)

*Representative of the Working Group of the Scientific and Technical Subcommittee on the Use of Nuclear Power Sources in Outer Space*

12h20-12h30

Discussion

12h30-12h50

Minimum Essential Elements of a Safety Framework

*Representative of the International Atomic Energy Agency*

12h50-13h00

Discussion

**13h00-15h00**

Lunch

#### **SESSION 4. Presentations pertinent to objective I.A (continued)**

**15h00-17h00**

*Chair*

*Representative of Argentina*

*Rapporteurs*

*Representative of the International Atomic Energy Agency*

*Representative of the United Nations Office for Outer Space Affairs*

15h00-15h20

Minimum Essential Elements of a Safety Framework

*Representative of the United States of America*

15h20-15h30

Discussion

15h30-15h50

Minimum Essential Elements of a Safety Framework

*Representative of the Russian Federation*

15h50-16h00

Discussion

16h00-16h15

Break

16h15-16h35

Minimum Essential Elements of a Safety Framework  
*Representative of the European Space Agency*

16h35-17h00

Discussion and concluding remarks for the 2<sup>nd</sup> day

**WEDNESDAY**  
**22 FEBRUARY 2006**

**SESSION 5. Presentations pertinent to objective I.B**

**10h00-12h15**

*Chair*

*Representative of the International Atomic Energy Agency*

*Rapporteurs*

*Representative of the International Atomic Energy Agency*

*Representative of the United Nations Office for Outer Space Affairs*

10h00-10h20

IAEA Processes for Preparation and Adoption of Safety Standards  
*Representative of the International Atomic Energy Agency*

10h20-10h30

Discussion

10h30-10h50

Overview of Implementation Plan Options 1 and 3, Including Sub-Options, as Specified in A/AC.105/L.254/Rev.2

*Representative of the Working Group of the Scientific and Technical Subcommittee on the Use of Nuclear Power Sources in Outer Space*

10h50-11h00

Discussion

11h00-11h15

Break

11h15-11h35

Key Issues in Harmonizing IAEA and COPUOS/STSC Processes

*Representative of the Working Group of the Scientific and Technical Subcommittee on the Use of Nuclear Power Sources in Outer Space*

11h35-11h45

Discussion

11h45-12h05

Nuclear Power Sources and Space Debris

*Representative of the Working Group of the Scientific and Technical Subcommittee on Space Debris*

12h05-12h15  
Discussion

**12h10-15h00** Lunch

**Panel discussion on workshop objectives**

15h00-16h20  
Discussion and inputs from delegates to a draft report of the Joint Technical Workshop

**15h00-16h45**

16h20-16h45  
Closing remarks