2004-12-10

Commission on Safety Standards
Sixteenth Meeting
15–17 November 2004
IAEA Headquarters, Vienna
Draft Report of the Meeting

1. Opening

Mr. Taniguchi, Deputy Director General, Head of the Department of Nuclear Safety and Security, opened the 16th Meeting of the Commission on Safety Standards, extending a warm welcome to all participants in particular to Mr. I. Levanon as a new member of the Commission. Mr. Taniguchi thanked Mr. Pereira for chairing the meeting in absence of Mr. Williams. Mr. Taniguchi presented an overview of recent activities of the Department and informed the Commission of the following:

- Results of activities relating to safety and security at the General Conference, including the Senior Regulators Meeting.
- Implementation of the Action Plan and feedback of information.
- Convention on Nuclear Safety.
- International Conference on Topical Issues on the Safety of Nuclear Installations.
- Recent meeting of the International Nuclear Safety Group (INSAG).
- New term for the Safety Standards Committees.
- International Design Certification.

In the discussion that followed, several members expressed concern regarding the scope and possible impact of the proposed initiative for development of a universal approach for certification of nuclear power reactor designs. There was also a view that international design certification could be best undertaken as an application of the IAEA safety standards.

2. Adoption of the Agenda and Report of the 14th Meeting

The Agenda for the 16th Meeting of the Commission was approved. The approved agenda is attached as Annex I. The draft report of the 15th Meeting was approved.

3. Overview of Activities in the Department of Nuclear Safety and Security

3.1. Division of Nuclear Installation Safety

Mr. Brockman, Director of NSNI, reported on the activities of the Division with emphasis on results of the Topical Issues Conference, evolutionary designs and safety requirements for research reactors. Mr. Brockman indicated that the Division had recently been restructured by eliminating four Units and creating two new Sections: the first deals with research reactors and fuel cycle facilities, the second with regulatory activities.

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3.2. Division of Radiation, Transport and Waste Safety

Mr. González, Director of NSRW, informed the Commission of a recent WHO meeting[1] at which a new draft of International Health Regulations (IHR) was considered. In the new draft of IHR, the definition of 'disease' had been revised to "an animal or human illness that presents a risk of significant harm to humans caused by biological, chemical, or radionuclear sources". The overwhelming majority of participants had little knowledge of radiation and its effects. Mr. González encouraged the Commission members to check on their own countries' participation in this meeting and to inform the appropriate authorities of the implications for radiation and nuclear safety of this type of revision to the IHR. A further meeting to review and finalise the IHR is to be held in February 2005. The proposed revised IHR, review and approval of proposed amendments to the IHR: relations with other international instruments and the list of participants were distributed to members of the Commission.

Mr. González also introduced a draft policy paper on the review, revision and publication of the IAEA Transport Regulations that was prepared for submission to the Board of Governors in February 2005. The Commission decided to discuss the draft policy later in the meeting, under agenda item 12.3.

3.3. Office of Nuclear Security

Ms. Nilsson, Head of the Office of Nuclear Security, informed the Commission of the activities of the Office including assistance missions conducted in the Member States and the outcome of recent AdSec meeting. Ms. Nilsson provided further information on security related reports in development and planned.

4. The Use of Safety Standards and Related Regulatory Issues

The members of the Commission reported on their national experience in using the IAEA safety standards. The use of standards varies from topic to topic and from country to country. The majority of members reported that they applied the IAEA standards as benchmarks, reference documents, or as sources for the development of national regulatory documents and regulations. The extensive use of the standards by the Members States was noted. The Secretariat through the implementation of the action plan will intensify its efforts to promote their use and to find means of informing other Member States of the extensive use made of the safety standards.

5. Status of the IAEA Safety Standards and Actions from the 15th CSS Meeting

The Scientific Secretary informed the Commission that seven safety standards have been published since the last meeting. These include five safety guides related to the design nuclear power plants that had been approved by the Commission in November 2003 (NS-G-1.7, 1.8, 1.9, 1.10, 1.11), the Transport Regulations that were approved by the Board of Governors in June 2004 and the safety guide on 'commodities' (RS-G-1.7) that was approved by the Commission in June 2004. Two additional safety guides (NS-G-3.6 and GS-G-1.5) are in the final stages of production and another three safety standards (NS-R-4, NS-G-1.12 and WS-G-2.7) are being prepared for publication.

The Commission was also informed that all actions agreed during the 15th CSS Meeting have been addressed. A paper by the Secretariat "Radiation Safety Standards; The Way Forward" was distributed in connection with Action 15.1 (see Annex II of the report on the 15th Meeting of the CSS).

[1] World Health Organization Intergovernmental Working Group on revision of the International Health Regulations.

6. Activities of the Committees on Safety Standards

6.1. Nuclear Safety Standards Committee (NUSSC)

Mr. Reiman informed the Commission that NUSSC, after consideration of its own comments and those of other committees, has approved submission to Member States for comment of the draft Safety Fundamentals (DS298), the draft Safety Requirements on Management systems (DS338) and Decommissioning of Nuclear facilities (DS333). The Commission was also informed that NUSSC will consider how to proceed with the risk informed issue in its future meetings. The three-year report of NUSSC is being finalized for submission to the DDG-NS.

6.2. Radiation Safety Standards Committee (RASSC)

Mr. Boal reported on the activities of RASSC, including the approval of a Safety Guide on Categorization of Radioactive Sources; the approval of four draft safety standards to be submitted to Member States for comment; and the status of the development of safety standards in relation to emergency preparedness and response.

In relation to the request from the CSS to review the suite of publications in the Radiation Safety Standards Series (Action 15.1, Annex II, report on the 15th Meeting of CSS), Mr. Boal reported that RASSC has agreed a proposal from the Secretariat that as the review and revision of the IAEA International Basic Safety Standards (BSS) is about to commence, an overall structure of the radiation safety standards is to be developed in parallel, taking into account the wishes of the CSS for facility specific safety standards and the relevant standards of international organizations such as ISO. A Document Preparation Profile for the review and revision of the BSS and the proposed overall structure will be presented to the CSS in June 2005 [Annex II, 16.1].

6.3. Waste Safety Standards Committee (WASSC)

Mr. Baekelandt reported on the activities of WASSC, including the Joint session with RASSC to review common documents and to discuss issues of common interest. The Commission was also informed that a joint meeting with WATEC (Waste Technology Committee) was held to discuss areas of possible future co-operation.

6.4. Transport Safety Standards Committee (TRANSSC)

Mr. Young presented an overview of the comments received from the Member States on the IAEA Transport Regulations, 2005 Edition. The review of comments was conducted in a technical committee meeting held at the end of September. The review is part of the process leading to an agreement on the 2007 Edition of the Transport Regulations.

Mr. Abe expressed concern regarding inconsistencies between the Transport Regulations and the Basic Safety Standards, requesting the Secretariat to ensure that TRANSSC would address the harmonization of the Transport Regulations and the BSS during the development of the next edition of the Transport Regulations. In a follow up discussion between Mr. Yoda and Mr. González, it was agreed that RASSC should be directly involved in the review and approval of the future editions of Transport Regulations [Annex II, 16.2].

7. Policy on Consideration of Security Related Issues in the Safety Standards

Mr. Taniguchi introduced the topic by outlining the overall policy behind the Secretariat's work on nuclear safety and security, indicating that aspects of security that were essential to safety should be covered within safety documents. In the discussion that followed, a number of members strongly supported this view, pointing out that national regulatory bodies in many countries deal with both nuclear safety and security in an integrated way and this was necessary in order to avoid security

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measures compromising safety. The development of a parallel series of publications on essentially security matters should take into account the confidentiality nature of the subject.

In conclusion, the Chairman indicated that the issue of security publications, which, of necessity, should provide clear guidance, must remain a matter for Member States. Nevertheless, it would be entirely reasonable to indicate in a safety standard dealing with design or operation that reference should be made to the need for physical protection. The Commission requested the Secretariat to prepare a draft policy on safety and security related publications for consideration at the next meeting [Annex II, 16.3]. The records of discussion will be used for preparing the draft policy.

7.1. Safety of Research Reactors, Safety Requirements (DS272)

Mr. Brockman presented the status of this safety requirements publication that had been approved by the Commission in its November 2003 Meeting. The requirements had been scheduled for discussion by the Board in September but consideration was deferred due to concerns about certain paragraphs dealing with Security. Mr. Brockman introduced a revision to these paragraphs that had been prepared in consultation with the Office of Nuclear Security.

The Commission considered the revised version and decided on a new text that was distributed later at the meeting. The changes introduced are to replace existing paras 7.79 to 7.81 by two new paragraphs: "7.79 *Appropriate measures shall be taken, in accordance with national laws and regulations, to prevent unauthorized actions, including acts of sabotage that could jeopardize safety at research reactors and their associated facilities, and respond to such actions should they occur. 7.80 International recommendations on the physical protection of nuclear material and nuclear facilities are provided in* Ref. [24]."

8. Implementation of the Action Plan for the Development and Application of the IAEA Safety Standards

The Scientific Secretary presented a progress report on the activities relating to the Action Plan, informing the Commission of the status of activities related to actions that were due for reporting at this meeting. A full report on the status of activities was distributed in advance of the meeting. A list of education and training materials prepared on the basis of the safety standards was distributed during the meeting. The Commission expressed satisfaction with the significant work done to date both in implementing the action plan and in identifying areas where additional effort was needed. The Commission made a number of suggestions including:

- Decision criteria for revision of safety standards should be developed [Annex II, 16.4].
- Comments from operators, researchers etc. should be brought to the attention of the national authorities before their consideration.
- Consideration should be given to developing an alternative, more simplified, process for the revision of safety standards whenever the proposed changes are considered to be purely of an editorial nature [Annex II, 16.5].

9. Providing for the Use of the Safety Standards

Mr. Lederman presented the topic and emphasized the need for strengthening the promotion of the use of the standards in Member States and the means to collect and analyse international experience in the use of the standards. It was pointed out that the large number of activities relating to the action plan, particularly the maintenance of the complex process put in place, are resource intensive.

The Commission pointed out there is a need to take a closer look at priorities and to re-organize activities with the aim of better dealing with the additional workload. However, considering that a real

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zero growth budget has been in place for many years now and that the budget for the safety programme has remained around 6%–7% of the total budget, it was suggested that the Chairman should write to the Director General, requesting participation in the February 2005 meeting of the Board to emphasize the important role that the IAEA safety standards play globally. In addition, it would be desirable that the Chairman draws the Board's attention to the importance of safety matters and the role of the Commission and the committees in connection with the IAEA safety standards.

10. Safety Standards

10.1. Geological Disposal of Radioactive Waste, Safety Requirements (DS154)

Mr. Metcalf, Technical Officer for the development of this safety requirements publication, presented the draft and outlined its development. These Safety Requirements had been reviewed by WASSC. The Commission was informed that NEA/OECD intends to co-sponsor the requirements.

The Commission considered the document and had before it the written comments of Mr. Abe and Mr. Hashmi. A number of additional comments were made at the meeting including the following:

- The format and contents of the document were different from the approved DPP and the format was different from the version that had been sent to Member States for comment.
- The table of contents lists 23 requirements related to the topic. However, the actual number of requirements presented in the draft is 41 (some of the requirements listed are in fact multiple sets of requirements).
- Issue of retrievability has not been covered.
- The use of terms such as 'must', 'it is required to', 'has to', 'is necessary', etc. was to be avoided. Some of the statements made in the explanations are actually written as 'shall statements' (i.e. requirements) in other safety requirement publications.
- The first sentence of paragraph 1.6 to be deleted.
- There is no link between Sections 2 and 3.
- Requirement 8, 2nd line, delete 'especially' and 4th line avoid use of vague words such as 'significantly'.
- Requirement 16,1st line 'according to the assessed design', should be modified.

The Secretariat was requested to review the draft in the light of the written comments and the comments made at the meeting and to prepare a revised draft. The members of the Commission gave the Chairman the authority to approve the revised draft for submission to the Board of Governors for approval.

The Commission requested the Secretariat to prepare a model format for safety requirements for presentation at the next meeting [Annex II, 16.6].

10.2. Strategies for Environmental and Sources Monitoring for Public Protection Purposes (DS62), Safety Guide

Mr. Balonov, Technical Officer for the development of this Safety Guide, presented the draft and outlined its development. This draft had been reviewed by RASSC and WASSC. The Commission endorsed the publication of this Safety Guide.

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10.3. Radiation Protection Aspects of Design for Nuclear Power Plants (DS313), Safety Guide

Mr. Nogueira, Acting Technical Officer for the development of this Safety Guide, presented the draft and outlined its development. This draft[2] had been reviewed by NUSSC and RASSC. The Commission endorsed the publication of this Safety Guide with the following changes:

Delete para. 2.9 and insert the following:

"DESIGN TARGET FOR ACCIDENTS

2.9. The adequacy of the design provisions for the protection of the public and site personnel against postulated accident conditions should be judged by comparison of calculated doses with specified exposure criteria, which are the design targets for accidents. In general, the higher the probability of the accident condition, the lower the specified design target should be. The regulatory body may recognize this principle by setting different design targets for accidents with different probabilities of occurrence. In addition, the regulatory body may define design targets by specifying frequency criteria for all accidents in specified dose bands. For design basis accidents, it is required that there is only a minor radiological impact outside the site boundary or the exclusion area, depending on the national regulatory requirements. The definition of minor radiological impact may be set by the regulatory bodies. Typically it corresponds to very restrictive dose levels in order to exclude the need for evacuation.

It is beneficial to separately address:

- *design basis accidents (DBAs)*
- *beyond DBAs (including severe accidents).*

"For severe accidents, the regulatory body may specify a risk criterion or a criterion associated with specified releases of radioactive substances."

Insert in para. 4.79, a reference to *"WS-G-2.5 Predisposal Management of Low and Intermediate Level Radioactive Waste*".

10.4. Categorization of Radioactive Sources (DS343), Safety Guide

Mr. Wheatley, Technical Officer for the development of this Safety Guide, presented the draft and outlined its development. The draft[2] had been reviewed by RASSC. The Chairman pointed out that the draft was developed from an existing TECDOC and was completed in record time, it presents a good example of how readily existing TECDOCS, if considered appropriate, could fill identified gaps in the suite of safety standards. The Commission endorsed the publication of this Safety Guide.

11. Document Preparation Profiles

11.1. Safety Assessment and Verification (DS348), Safety Requirements

Mr. El-Shanawany, Technical Officer, presented the DPP for these Safety Requirements. This was a response to an action from the 15th Meeting of the Commission (see the Report of the 15th Meeting of the CSS, Item 9.1). The Commission approved the DPP.

[2] The Commission had before it the written comments of Mr. Hashmi, these comments are to be considered by the Secretariat.

11.2. Radioactive Waste Management (DS353), Safety Requirements

Mr. Jova Sed, Technical Officer, presented the DPP for these Safety Requirements. The DPP had been approved by WASSC. The Safety Requirements is intended to supersede part of the existing publication WS-R-2. The structure of the document should reflect the decision to be made by the Commission in June 2005. The Commission approved the DPP.

11.3. Disposal of Radioactive Waste (DS354), Safety Requirements

Mr. Metcalf, Technical Officer, presented the DPP for the preparation of the Safety Requirements. The DPP had been approved by WASSC. The Safety Requirements is intended to supersede the existing publications WS-R-1 and DS154. The structure of the document should reflect the decision to be made by the Commission in June 2005. The Commission approved the DPP.

11.4. Safety Guide: Safe Management of Wastes Containing Naturally Occurring Radioactive Material (NORM) (DS352), Safety Guide

Mr. Waggitt, Technical Officer, presented the DPP for this Safety Guide. The DPP had been approved by RASSC and WASSC. The Commission approved the DPP with the following changes:

- Section 4 'Interfaces', reference should be made to '*RS-G-1.7*'.
- Section 5 'Overview', end of the 1st para., delete "*which may then be released from unrestricted use*".

12. Other Business

12.1. Status of the ICRP's Draft 2005 Recommendations

Mr. Holm presented an overview of the ICRP recommendations on radiological protection including the structure of ICRP; its current projects; the recommendations ICRP has issued since 1990; the updating of ICRP 60; the features of ICRP's forthcoming set of recommendations; the aim of the recommendations on dosimetric quantities; effective dose, biological aspects and nominal risk coefficients; the 1990 recommendations on optimization constraints and on the systems of protection. Mr. Holm informed the Commission that the adoption of new recommendations by the ICRP was planned for 2006.

The Commission thanked Mr. Holm for his comprehensive presentation. It was generally agreed that adoption of the new recommendation by the ICRP in 2006 should not affect the start of the process in 2005 for the revision of the BSS.

12.2. Safety of Innovative Reactor Designs

Mr. Gasparini presented an overview of the topic and the related IAEA activities. The presentation included definitions for advanced, evolutionary and innovative designs including the objectives, output and outcome of the current project on safety of innovative designs. Mr. Gasparini also informed the Commission of the publication of a TECDOC on characteristics of a new safety approach for small and medium size reactors and preparation of a TECDOC on development of technology neutral safety requirements for innovative reactors.

12.3. Draft Policy on review and revision of Transport Regulation

Mr. González in his opening remarks (Agenda Item 3.2) introduced a proposed future policy for reviewing and revising the transport regulations. The Commission discussed the proposals: it was pointed out that criteria were needed for deciding what is a significant change and what is not. The Members of the Commission were requested to send their views to the Chairman by the end of

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November. The Chairman will review the proposal on the basis of the comments from the members and will prepare a draft for consultation with CSS members and the Secretariat (by e-mail). Mr. Virgilio and Mr. Baekelandt will provide the Chairman with their written views. A final draft should be made ready by 15 December for submission in order to present the agreed policy at the February Session of the Board of Governors.

12.4. Letter to the Director General

The Commission asked the Chairman to write to the Director General for bringing to his attention the important issues discussed at the meeting including:

- Support for the safety standards, maintaining the focus of the Agency on safety related issues and the possibility of a presentation by the Chairman to the February Session of the Board.
- Revising the IAEA Transport Regulations.
- Resolving the issues relating to the Safety Requirements for research reactors.
- Developing a safety and security policy.

13. Dates and Agenda for the next Meeting

The schedule of the meetings of the Commission and committees for 2005 is:

Commission: 6–8 June and 28–29 November

Committees

NUSSC:	16–20 May, 17–19 October
RASSC:	25–28 April and 10–14 October
WASSC:	25–28 April and 10–14 October
TRANSSC:	7-11 March

The tentative lists of standards to be reviewed at the next meeting of the Commission include review of draft safety standards:

DS288 A System for the Feedback of Experience from Events in Nuclear Power Plants.

DS105 Arrangements for Preparedness for a Nuclear or Radiological Emergency.

And DPPs for DS351, DS260, DS355, DS356, DS357

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ANNEX I

AGENDA
Sixteenth Meeting of the
COMMISSION ON SAFETY STANDARDS
15 – 17 November 2004

Meeting Room CO7-II, IAEA Headquarters, Vienna

1. Opening of the Meeting (14:00)
   T. Taniguchi, DDG-NS

2. Introductions, Adoption of the Agenda and Approval of Report of the Fifteenth Meeting
   J.K. Pereira / L.G. Williams

3. Overview of the Activities in the Department of Nuclear Safety and Security
   - 3.1 Nuclear Installation Safety Division; *K.E. Brockman, DIR-NSNI*
   - 3.2 Radiation, Transport and Waste Safety Division; *A. J. Gonzalez, DIR-NSRW*
   - 3.3 Office of Nuclear Security; *A. Nilsson*

4. The Use of Safety Standards and Related Regulatory Issues
   (CSS Members)

5. Status of the endorsed Safety Standards and Response to Actions from the Fifteenth Meeting
   A. Karbassioun

6. Presentations and Discussion of Reports of Safety Standards Committees
   - 6.1 Nuclear Safety Standards Committee
     L. Reiman, Chairman/G. Feige, Scientific Secretary - NUSSC
   - 6.2 Radiation Safety Standards Committee
     T.J. Boal, Scientific Secretary - RASSC
   - 6.3 Waste Safety Standards Committee
     L. Baekelandt, Chairman/K. Hioki, Scientific Secretary – WASSC
   - 6.4 Transport Safety Standards Committee
     C.N. Young, Chairman/M. Wangler, Scientific Secretary – TRANSSC

7. Policy on Consideration of Security Related Issues in the Safety Standards
   T. Taniguchi, DDG-NS
   - 7.1 Safety of Research Reactors, Safety Requirements (DS272)
     K.E. Brockman, DIR-NSNI

8. Implementation of Action Plan: Progress Report
   A. Karbassioun

9. Providing for the Use of Safety Standards
   L. Lederman

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10. Safety Standards for Approval

10.1 Geological Disposal of Radioactive Waste (DS154), Safety Requirements
P. Metcalf, *Technical Officer*

10.2 Strategies for Environmental and Sources Monitoring for Public Protection Purposes (DS62), Safety Guide, *M. Balonov, Technical Officer*

10.3 Radiation Protection Aspects of Design for Nuclear Power Plants (DS313), Safety Guide
C. Nogueira, Acting Technical Officer

10.4 Categorization of Radioactive Sources (DS343), Safety Guide
J. Wheatley, Technical Officer

11. Document Preparation Profiles for Approval

11.1 Safety Assessment and Verification (DS348), Safety Requirements
M. El-Shanawany, Technical Officer

11.2 Radioactive Waste Management (DS353), Safety Requirements
L. Jova Sed, Technical Officer

11.3 Disposal of Radioactive Waste (DS354), Safety Requirements
P. Metcalf, Technical Officer

11.4 Safety Guide: Safe Management of Wastes Containing Naturally Occurring Radioactive Material (NORM) (DS352), Safety Guide *P. Waggitt, Technical Officer*

12. Other Business

12.1 Status of the ICRP 2005 Draft Recommendations
L.-E. Holm

12.2 Safety of Innovative Reactor Designs
M. Gasparini

12.3 Draft Policy on review and revision of Transport Regulation

13. Report of the Meeting, Date of the Next Meetings.

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ANNEX II

ACTIONS ARISING FROM THE MEETINGS OF THE COMMISSION

16.1. A Document Preparation Profile for the review and revision of the BSS and the proposed overall structure will be presented to the CSS in June 2005 (Re*f. Item 6.2).* **[Action: Secretariat, RASSC]**.

16.2. RASSC should be directly involved in the review and approval of the future editions of Transport Regulations (Re*f. Item 6.4).* **[Action: Secretariat, RASSC]**.

16.3. The Commission considered the topic and requested the Secretariat to prepare a draft policy on safety and security related issues for consideration at the next meeting. (Re*f. Item 7).* **[Action: Secretariat]**.

16.4. Decision criteria for revision of safety standards should be developed (Re*f. Item 8, 1st bullet).* **[Action: Secretariat]**.

16.5. Consideration should be given to developing an alternative, more simplified, process for the revision of safety standards whenever the proposed changes are considered to be purely of an editorial nature (Re*f. Item 8, 3rd bullet).* **[Action: Secretariat]**.

16.6. The Commission requested the Secretariat to prepare a model format for safety requirements for presentation at the next meeting (Re*f. Item 10.1).* **[Action: Secretariat]**.

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PARTICIPATION

The Commission

A. Oliveira, Argentina
J. Loy, Australia
A. Souza de Assis, Brazil
J.K. Pereira (Chair), Canada
G. Li, China
D. Drabova, Czech Republic
K. Ulbak, Denmark
S.B. Abdel-Hamid, Egypt (sent apologies – unable to attend)
A-C. Lacoste, France
D. Mayer, Germany
S. Sukhatme, India (sent apologies – unable to attend)
I. Levanon, Israel
K. Abe, Japan
Y-S. Eun, Korea, Republic of
J. Hashmi, Pakistan
A. Malyshev, Russian Federation (sent apologies – unable to attend)
G.A. Azuara, Spain
L-E. Holm, Sweden
U. Schmocker, Switzerland
L.G. Williams, (Chair), United Kingdom
M. Virgilio, United States of America

Participants from International Organizations

C. Waeterloos, European Commission
L-E. Holm, International Commission on Radiological Protection
K. Shimomura, OECD Nuclear Energy Agency

Chairmen of Committees

L. Reiman, NUSSC
I. Robinson, RASSC (sent apologies – unable to attend)
C.N. Young, TRANSSC
L. Baekelandt, WASSC
L. Biro, AdSec

Representatives and associated experts

P.R. Costa Borges, J. Gauvain, S. Akimoto, M. Kuroki, H. Mizuma, N. Yoda, M.S. Rahman, V. Bezzubtsev, Ms. I. Kaliberda, Ms. M. Ivanova, L. Santoma, A. Hall, P. Dickenson, I. Schoenfeld

IAEA Staff Members

T. Taniguchi, Deputy Director General, Department of Nuclear Safety and Security
K.E. Brockman, Director, Division of Nuclear Installation Safety (NSNI)
A.J. González, Director, Division of Radiation, Transport & Waste Safety (NSRW)
A. Nilsson, Head, Office of Nuclear Security (NSNS)
L. Lederman, Head, Safety and Security Co-ordination Section
G. Feige, Safety Assessment Section (NSNI)
K. Hioki, Waste Safety Section (NSRW)
M. Wangler, Radiation Safety Section (NSRW)
T. Boal, Radiation Safety Section (NSRW)

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M. Balonov, Waste Safety Section (NSRW)
P. Metcalf, Waste Safety Section (NSRW)
C. Nogueira, Policy and Programme Support Section (NSRW)
J. Wheatley, Radiation Safety Section (NSRW)
L. Jova Sed, Waste Safety Section (NSRW)
P. Waggitt, Waste Safety Section (NSRW)
M. El-Shanawany, Safety Assessment Section (NSNI)
M. Gasparini, Engineering Safety Section (NSNI)
A. Karbassioun, Scientific Secretary, Safety and Security Co-ordination Section

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