17 April 2008

Commission on Safety Standards

Twenty-second Meeting

26-28 November 2007

IAEA Headquarters, Vienna

Report of the Meeting

1. Opening

Mr. Taniguchi opened the 22nd meeting of the Commission on Safety Standards. He referred to the IAEA Director General opening statement to the General Conference of the IAEA emphasizing that "The quality and relevance of the IAEA safety standards reflects an international consensus on what constitutes a high level of safety. The standards are increasingly recognized, adopted and implemented by Member States. Feedback from this broader application will be incorporated into the evolutionary improvement of the standards." and he took this opportunity to thank personally all the CSS members on behalf of the IAEA for their work.

Mr. Taniguchi particularly mentioned three important aspects of the Resolution adopted by the General Conference in September this year. The Resolution firstly recognizes the great value of the advice provided by the CSS to the Secretariat in establishing its safety priorities. This is an encouragement to the Committees and the Commission to maintain its support to the continuous improvement of the Safety Standards. The Resolution also welcomes the initiatives of the CSS in relation to the overall structure and looks forward to the better integration of the safety standards to be considered at this November meeting. And the GC resolution mentions the work form INSAG on the safety-security interface. This is addressed here below.

Mr. Taniguchi then reviewed the achievements of the Commission during this term. He highlighted the completion and issuing of the Safety Fundamentals publication on Fundamental Safety Principles as a major achievement of the Commission's 2004–2007 term and the successful completion of the Action plan, which has resulted in further enhancement of the global safety regime.

He noted the particular importance of the application of the safety standards in the States launching new nuclear programmes and the integration of these new countries into the global safety regime as parties to Conventions and other international instruments.

Among the success, he also mentioned the Agency's new Integrated Regulatory Review Service (IRRS) that is enjoying considerable success owing to its firm foundations of the Fundamental Safety Principles and the Safety Requirements publication GS-R-1 on Legal and Governmental Infrastructure. He also referred to several other important Safety Requirements published or endorsed during the third term relating to management system, research reactors, decommissioning of facilities, geological disposal and fuel cycle facilities.

He then listed the on-going and planned revision of safety standards mentioning the revision of the International Basic Safety Standards (the BSS) and its integration into the whole Safety Standards Series and the planned revision of the thematic Safety Requirements publication GS-R-1 on Legal and Governmental Infrastructure and of the two facility specific Safety Requirements publications on the Safety of Nuclear Power Plants: Design (NS-R-1) and Operation (NS-R-2), both issued in 2000.

In this regards he highlighted that another important result of this term was the progress so far on the preparatory work being done by the CSS task force on the long term vision for the Safety Standards Series.

In terms of process, Mr. Taniguchi mentioned the increased openness, transparency and quality of the review process with more involvement of the users and stakeholders, including industry are noted

more interaction between the Member States, the Committees and the Commission were facilitated by the use of modern information technologies and particularly the newly established interactive web site.

He informed the CSS that the IAEA Safety Glossary, which represents the international consensus on the terms used in the safety standards, has been published in English, Arabic and Chinese and that editions in the other three official languages, French, Russian and Spanish are being finalized.

After the review of the achievement of the third term, Mr. Taniguchi addressed the most important challenges for the future. He stressed that with the completion of the Safety Requirements almost achieved, there will now be a further evolution more focused on their revision and in doing so, there will be an opportunity to benefit from the increasing use of the standards by Member States and therefore an opportunity to better reflect the good and best practices in Member States as well as the feedback from the experience gained by individual users of the standards.

He further highlighted the need for safety standards to guide the States embarking on nuclear power programmes on the necessary safety infrastructure and for the coverage in the safety standards of issues such as regulatory control of multinational collaborative nuclear activities, outsourcing of operation and maintenance, new generation of nuclear reactor designs, quality of construction and commissioning of new plants and manufacturing of components, management of ageing structures, systems and components, seismic safety

With regards to the safety security interface, he mentioned that the question of how best to define and deal with the interface between safety and security was outlined in the introduction of the Safety Fundamentals and confirmed that the Department is committed to working within the framework established therein. He informed the CSS that INSAG is preparing a report on this subject, which is expected to be presented at the next CSS meeting.

For this meeting agenda, Mr. Taniguchi mentioned three key points:

The first priority is the completion of Step 1 with an evaluation of the progress on the revision of the BSS, and the review of DPPs for the revision of the Safety Requirements publication GS-R-1 on Legal and Governmental Infrastructure, and the two facility specific Safety Requirements publications on the Safety of Nuclear Power Plants: Design (NS-R-1) and Operation (NS-R-2).

The second point is the outlook and priorities for the next four years, including the discussion of the report by the CSS task force on the long term vision and structure for the Safety Standards Series.

Third is the report on the four year full term of the Commission to be prepared for submission to the Director General.

2. Introductions, Adoption of the Agenda and Approval of the Report of the 21st meeting

Mr. Lacoste, Chairman of the Commission, welcomed the participants and introduced three new members, Mr. Vinhas from Brazil, Mr. Fukushima from Japan and Mr. Adamchik from the Russian Federation. He reported apologies received from Mr. Li from China and Mr. Weightman from the UK. He welcomed Mr. Yu representing China, Mr. Barceló Vernet representing Spain and Mr. Hall representing the UK. Mr Pather, Chairman of WASSC is represented by Mr. Baekelandt.
With regard to the tentative agenda, Mr. Lacoste reported that request had been received from the USA and from Argentina for discussion of the Resolution adopted at the 51st General Conference and of the safety/security interface. He informed the Commission that he had already replied earlier by email that he would ensure that sufficient time would be dedicated to these issues during the meeting and confirmed this answer to the members. The approved agenda is provided in Annex I.

With regard to the draft report of the 21st CSS meeting, Mr. Delattre informed the Commission that comments had been posted on the CSS web site by the Chairman of TRANSSC and the USA. The report is approved with incorporation of the proposed changes. Mr. Delattre will upload the final report on the Safety Standards web page. [Annex II, 22.1].

At this occasion, Mr. Gonzalez requested once more that more time be devoted to the meeting, with a minimum of three days so as to allow in-depth discussion on important issues. Mr. Lacoste agreed and indicated that appropriate time will be dedicated to all items of the agenda and that a forecast for this meeting was that it might be possible to deal with all items by Wednesday lunch time.

3. Activities Related to Safety Standards and other Safety and Security Related Publications

All presentations made under agenda item 3 are kept available in an archive folder in the CSS web page in an archive file on the web page (http://www-ns.iaea.org/committees/css/) in the folder "Presentations provided by the Secretariat for information"

3.1 Nuclear Installation Safety

Mr P. Jamet summarized the most important activities in the NSNI Division, highlighting in particular the fourth CNS review meeting from 14 to 25 April 2008, the activities of INSAG on safety infrastructure, on operational experience feedback and on safety/securities synergies, the current and planned development of Safety Standards, the situation with regards to the safety review services and the mission following the earthquake at the Kashiwasaki-Kariwa NPP. He also mentioned the increasing number of request to assist countries considering launching a nuclear power programme and the need for guidance in this area (see below under items 3.5, 7 and 12).

The questions from the members of the CSS focused particularly on the exchange of operational experience. The cooperation with the NEA and INSAG was highlighted by Mr. Virgilio and Mr. Pereira recommended to consider as one of the key component for the revision of the Safety Standards the information collected in the Incident Reporting Systems (IRS and other databases). [Annex II, 22.2]. Mr. Sharma referred to the INSAG discussion on this issue and suggested to benefit form all experience feedback and not only from incident related experience feedback. He also mentioned that there were not enough resources devoted in the Member States to the operational experience feedback.

Mr. Hasmi mentioned the importance for countries considering the launch of a nuclear power programme to commit themselves to the international conventions. This issue was further developed under items 3.5, 7 and 12.

3.2 Radiation, Transport and Waste Safety

Ms. E. Amaral summarized a number of activities and achievements in the NSRW Division. She mentioned firstly the accreditation of Testing Dosimetry Laboratory as recognition of the quality and performance of the section. She then developed the activities related to the radiation protection of patients and the safety of radioactive waste management. With regards to the transport safety, she stressed the need for harmonization of regulation with the UN to be achieved with the issuance of a revised TS-R-1 at the end of 2008. Ms. Amaral also developed the contribution of NSRW to the IRRS as cross-cutting activities as well as the regional analyses of progress and needs in radiation safety infrastructure. She summarized the activities on decommissioning, on protection of the environment and the cooperation within the IAEA on the spent fuel management. She mentioned briefly the revision of the BSS, addressed here below under agenda item 6. Finally she highlighted the success of the International Meeting for States to Share Information about Implementation of the Code of Conduct on the Safety and Security of Radioactive Sources & Supplementary Import/Export Guidance (26-29 May 2007) and presented the recent re-organization of the Division.

3.3 Office of Nuclear Security

Ms. A. Nilsson concentrated on the document production within the NSNS division indicating the considerable strengthening of the platform of legally binging and non-binding international instruments. She informed the Commission that after consultation with a large number of Members States an advanced draft of the Nuclear Security Fundamentals is now available for discussion at an open-ended Technical Meeting after review of the whole set of legally binding and non-binding instruments. She also reported on the progress and process followed for the development of the three draft recommendations documents using a top-down approach, one of these being intended to serve as the 5th revision of INFCIRC225.

The discussion focused on the synergies between safety and security, in particular on the cooperation needed in the areas of classification/categorization so as to provide coherence in the use of the classification/categorization systems, in the transport area and on the security of sources area. Ms Nilsson informed the Commission on the cooperation mechanism in place, including the review of drafts by the internal Steering Committee.

With regards to the status of the security related publications and the process for their review, it was

clarified that so far, based on the consideration of the IAEA Statute and the consultation of Member States, the IAEA is not supposed to produce Standards in the field of Nuclear Security, but guidance for use on a voluntary basis by the Member States. It was also clarified that the review of the draft security series publications is not in the current scope of the CSS. Mr. Virgilio mentioned some examples in the USA where security measures had impact on safety. The Commission recognizes the interface between safety and security and the need to ensure that, as established in the Safety Fundamentals SF-1, "Safety measures and security measures must be designed and implemented in an integrated manner so that security measures do not compromise safety and safety measures do not compromise security". Therefore a step by step approach, using the work in progress within INSAG, is preferred. This was further discussed under item 12 for consideration for the next CSS term.

3.4 Incident and Emergency Centre

Mr. W. Stern reported on the review conducted by the Secretariat of the Safety Requirements GS-R-2, published in 2002, that concluded that there was no need to embark into its revision as the GSR-2 remains a fully valid requirement. He provided the Commission with updates on the Emergency Preparedness Review Mission and informed on the recent missions conducted as well as those planned in 2007. He presented in detail the Response Assistance Network and informed the Commission that the Director General to all Member States encouraging these Member States to register in RANET.

Mr. Stern then reported on the conclusions and recommendations of the meeting of the Competent Authorities held in July 2007. In particular he highlighted the recommendation made to the Secretariat to improve the involvement of emergency experts in the preparation and review of the relevant IAEA Safety Guides and IAEA Safety Standards and to establish an Emergency Preparedness and Response Standards Committee, under the Commission on Safety Standards (CSS).

Mr. Gonzalez noted that the meeting of the Competent Authorities has become a de facto meeting of the contracting parties to the Conventions. As such, he stressed that the purpose of the meeting should focus more on the implementation of the obligations of the Conventions and less on the development of Safety Standards, which is the role of the Safety Standards Committees and the Commission on Safety Standards.

Mr. Gonzalez therefore suggested to review the structure of the Safety Standards Committees and evaluate the proposal to create a specific new Committee on emergency preparedness and response. [Annex II, 22.3]. Mr Lacoste indicated that another option could be to envisage ad-hoc meetings of representatives of the existing Committees.

3.5 Safety Infrastructure

Mr. L. Lederman informed the Commission on an increasing number of countries considering launching a nuclear power programme and the resulting increasing number of requests for assistance from these countries. He mentioned the establishment of the Nuclear Power Support Group involving all concerned Departments of the IAEA to provide a coordinated response to the requests and informed on the recent publication of a brochure on "Considerations to Launch a Nuclear Power Programme" and of the guidance "Milestones in the Development of a National Infrastructure for Nuclear Power". These recent publications cover the overall infrastructure needed and are not specific to the safety infrastructure.

In this area, Mr. Lederman informed the Commission that a report is being prepared by INSAG on the nuclear safety infrastructure, based on the Safety Fundamentals. He stressed the importance of promoting an early engagement of the candidate countries in the global nuclear safety regime and the awareness needed that safety is a national responsibility that cannot be outsourced. Therefore, he sought the advice from the Commission on the proposal to complement the current set of Safety Standards with additional material to provide guidance on the progressive application of the safety standards and on Member States self-assessment of their infrastructure development.

The proposal was strongly supported by the Commission [Annex II, 22.4]. During the discussion of the agenda item 7.2, the CSS also recommended starting soon the preparation of a DPP and France, Japan, Pakistan and the USA indicated their readiness to participate or send representatives to the DPP drafting meeting.

The discussion highlighted that there are different situations in the different countries and also the complexity of these situations. Several important common issues were mentioned such as the need for early awareness of the time needed to implement a nuclear power programme to avoid shortcuts, the vendor countries responsibilities and the availability of sufficient qualified experts.

Mr. Gonzalez also commented that beside the safety infrastructure needed for nuclear power programme there is also currently a challenge on the safety infrastructure needed for medical application. It was clarified that I was not intended to be covered by the proposed additional guidance, but that this important issue remains for consideration for the future under agenda item 7.2

4 Status of the endorsed Standards and Response to Actions from the 21st Meeting

Mr. D. Delattre informed the Commission of the publication of Safety Standards endorsed by the CSS. He informed the members of the recent publication of the Fundamental Safety Principles SF-1 in all official languages and of the availability of the translation of the Safety Glossary. He referred to the improvements made to the 'Status of Safety Standards' file available on the Safety Standards web page at http://www-ns.iaea.org/downloads/standards/status.pdf. The file includes now direct links to the electronic versions of the published Safety Standards and the translations available. He then listed the recently published Safety Standards:
SF-1 Fundamental Safety Principles (Nov. 2006)
WS-G-6.1 Storage of Radioactive Waste (Nov. 2006)
WS-G-5.1 Release of Sites from Regulatory Control upon the Termination of Practices (Nov. 2006)
NS-G-4.1 Commissioning of Research Reactors (Nov. 2006)
NS-G-4.2 Maintenance, Periodic Testing and Inspections of Research Reactors (Nov. 2006)
RS-G-1.10 Safety of Radiation Generators and Sealed Radioactive Sources (Dec. 2006)
WS-G-3.1 Remediation Process for Areas affected by Past Activities and Accidents (March 2007)
GS-G-2.1 Arrangements for Preparedness for a Nuclear or Radiological Emergency (May 2007)
TS-G-1.3 Radiation Protection Programmes for the Transport of Radioactive Material (Oct. 2007)

Mr. D. Delattre then reported on the status of the actions listed following the 21st CSS meeting, which was attached to the tentative agenda for information. The final status is provided in Annex III.

In particular, Mr. Delattre summarized the progress report posted on the CSS web site on the development of a Management System for the planning, preparation, review/revision, approval and establishment of the Safety Standards (project name MANSYSS). He indicated that a draft 0.1 was being prepared collecting all currently available material. It will be complemented and reviewed internally by the Steering Committee. The objective is to have a draft ready for presentation at the Committees and the Commission in 2008. It is being developed using IT technologies so as to articulate all elements of the management system.

With regards to the long-term set of safety guide on Management Systems for facilities and activities, Mr. Delattre also summarized the report posted on the CSS web site and informed the Commission that the intent is to maintain only one general safety guide at the end of the step 2. The other safety guides would be incorporated in the relevant facilities/activities specific safety guides.

4.bis Presentation on the preparation of the 20/20 report

Mr. G. Andrew from the Director General's Office informed the CSS about the Director General's initiative, called "2020", to develop a vision concerning the role of the International Atomic Energy Agency in the 2020 timeframe to assist the Agency to respond to possible Member States needs in the future. This is being developed adopting a thematic cross-cutting approach involving all Departments and will include a reflection on ways to improve the Agency's overall effectiveness and efficiency through prioritization of future activities.

A background report is expected to be prepared by February 2008 and be submitted to a "Commission of Eminent Persons" (CEP) chaired by Mr. Ernesto Zedillo, former President of Mexico. It is envisaged that the CEP's recommendations and the Secretariat's background report will be available to the Board of Governors at its June 2008 meeting, and will inform future discussions about the Agency's priorities.

Mr. Gonzalez, noting that the process for the development of the Safety Standards is mature and well established, commented that an area where significant changes are expected to occur in the future is related to the application of the Safety Standards where the demand from Member States to the Agency in terms of services will significantly increase.

With regard to the development of Safety Standards, Mr. Lacoste commented that although the process is mature and well established, the observed increasing use of the Safety Standards by the Member States will result in new challenges for the Agency, such as the need to maintain regulatory stability while continuing to update the Safety Standards. This will require the establishment of a strong and sustainable feedback collection and analysis process with a view to benefiting in an effective manner from the actual feedback from the Member States. The revision process is therefore expected to become more difficult in the future.

CSS members also identified other challenges for the future such as the involvement of co-sponsors, the role of the Agency in promoting networking among regulators, and the need to continue to take into account technological developments."

5. Interaction with other International Groups

5.1 Report on the new ICRP recommendations

Mr. Holm made a comprehensive presentation on the proposed new ICRP recommendations, highlighting the main changes compare to the ICRP 60 recommendation and informed the Commission that it is not expected that this would result in significant changes in the Member States regulatory framework. The presentation covered in more details a number of information.

In order to answer questions from the CSS members, Mr. Holm clarified that the dose limit to the eye lenses is still being studied, that the new recommendations would not include numerical values for the exemption and clearance which are covered by IAEA Safety Standards and that the proposed new recommendations would include guidance on the appropriate use of the collective dose.

Mr. Holm indicated that it was expected to be issued before the end of 2007.

Note. At the date of this report, the publication is available.

6. Status report on the revision of the BSS

Ms. E. Amaral presented the status of the revision of the BSS. She mentioned that a draft 0.5 was available, based on initial topical drafting meetings completed in May 2007, recommendations of a Technical Meeting held in July 2007, on additional advice from a meeting of Cosponsoring Organizations in September 2007 and on the recommendations from RASSC/WASSC in their meeting in October 2007.

She then summarized the recommendations to the Secretariat from the Technical Meeting involving representatives of many Member States as follows:

- Ensure BSS remains the international benchmark for radiation protection in a regulatory format
- Maintain completeness of BSS across all circumstances of exposure to radiation
- Follow ICRP classification on exposure situations and adopt common structure for each Section
- Develop an introductory section to explain principles and concepts, before setting out the requirements
- Develop the concept and application of “constraints” but without setting numbers
- Request to try out a single sub-section on education and training and qualification of professionals
- Request to move generic material to general requirements as far as practicable, leaving only top specific items for later sections

- Review level of detail and suggest what could move to Safety Guides
- Retain a Glossary of terms

She presented additional recommendations to the Secretariat from the meeting with the potential co-sponsors as follows:

- Agreement with layout of sections (following new ICRP terminology for exposure situations)
- Appreciation of usefulness of Section 2 (explanatory)
- Request to move generic material to Section 3 as far as practicable, leaving only topic-specific items for later Sections
- Request to try out a single sub-section on education and training in Section 3
- Recognition of some duplication and untidiness resulting from the collation process to date which will require editing
- Recognition of the need to justify changes to SS115 and to track the 'fate' of all SS115 paragraphs
- Need to develop the definitions of terms and use them consistently, eg: source, responsible party, legal person, qualified expert
- Need to settle text for non-medical uses of radiation
- Review treatment of reference levels in existing exposure situations (contrast with action levels)
- Confirm requirements related to pregnant workers, including for emergency work
- Clarify transition from an emergency situation to an existing situation

Ms. Amaral presented the current content of the draft 0.5 resulting from the implementation of the above recommendations, which was submitted for first review at the WASSC and RASSC meeting in October 2007 and indicated the general support of RASSC for the directions being taken.

Finally, she informed the Commission on the next steps in the development of the draft with a drafting meeting in parallel to the CSS meeting, a progress report to the first meeting of the Safety Standards Committees in 2008, with a view to establishing a first draft 1.0 for submission for approval to the Committees before Member States consultation.

The Commission discussed in particular the following issues:

- The status of the introductory section was discussed since it differs significantly from the style of the other safety requirements (regulatory style) and includes mainly tutorial material with a risk of re-writing the Safety Fundamentals.
- The scope of the revised BSS was questioned, in particular its application for the safety of nuclear installations. NSNI is involved in the BSS Steering Group so as to address the issue.
- The status of the schedules was also considered as it seemed to be at the level of Safety Guides.
- The recommendations to maintain a specific glossary was considered but the general view was that, as established by a NS Department policy and implemented for the other Safety Standards, there should not be a glossary specific to the BSS but a reference to the Safety Glossary which can be updated based on the result of the BSS revision process. In this regards, it was suggested that one option could be to seek co-sponsorship of the Safety Glossary by the co-sponsors. In this regard, the need to adopt terms that can be easily translated was also mentioned.
- The need to establish a reliable tracking mechanism for the changes made to the current BSS during the revision process. It will be important to assess in the future the impact of the changes in the Member States. [Annex II, 22.5]. It was suggested that in addition to a reliable tracking mechanism, a justification should be included to document the rationale, costs,

impacts, and benefits to Member States associated with each change

7. Outlook: The next four years of the CSS

7.1 Long-term Structure for Safety Standards

Mr. Lacoste introduced the agenda item indicating that following the discussion at its June meeting, he was mandated by the Commission to "prepare a two-page paper as an input for a task force (CSS bureau, Chairs of the SSCs, Secretariat) to study the feasibility of achieving integration of the thematic requirements for the long-term structure of Safety Standards by extending the scope of the BSS" (see CSS 21 action 21.3 in Annex III).

He informed the Commission on the CSS task force composition, involving the informal CSS bureau (Mr. Pereira and Mr. Holm), volunteers from the CSS and/or their representatives (Mr. Virgilio, Ms. Astwood and Mr. Vaughan representing Mr. Weightman), the four chairs of the Safety Standards Committees and the management of the Nuclear Safety and Security Department.

He reported that a first draft roadmap was prepared and sent for consultation of the CSS task force on 21 June 2007. A revised draft roadmap taking into account the comments received was distributed on 12 July 2007 and was the main input for the first meeting of the CSS task force held on 13 September 2007. The meeting conclusions were provided to the Safety Standards Committees members, to the CSS members as well as to the potential co-sponsors of the revised BSS. A second meeting of the CSS task force was held on Monday 26 November 2007 before the CSS meeting where, after incorporation of additional clarification the revised draft received general support from all the CSS task force participants.

Mr. Lacoste then presented in a comprehensive manner all 11 items of the draft roadmap on the long-term structure for the Safety Standards and its three annexes on safety standards user friendliness, format for the safety requirements and strategy for dealing with the set of safety guides. With regards to the options for the establishment of the long-term structure, he reported that the preferred option of the CSS task force was to prepare a General Safety Requirements, integrating in one or more volumes the set of thematic Safety Requirements by expanding the scope of the revised BSS. The annex IV of the present report includes the revised roadmap, taking into account the discussion at the CSS meeting as summarized here below:

The discussion demonstrated a common view on the general strategy. Some specific issues were discussed and in particular the consideration of the safety and security.

The Commission also discussed the need for improved management systems for the development of IAEA Standards. There were also discussions on the stakeholders (e.g., industry) involvement in the development of Standards. The Commission also recognized that the regulatory authorities in the Member States are the principal users of the IAEA Safety Standards.

7.2 The next 4 years of the CSS. Future challenges and emerging issues and their implication for the future Safety Standards

In addition to the long-term structure for safety standards a number of new challenges and emerging issues having implication on the future safety standards were discussed.

With regards to the assistance to countries considering the launch of a nuclear programme (see also the discussion reported under item 3.5 above), the Commission supported the development of safety standards with a view to provide guidance to Member States embarking on nuclear power programmes on the necessary safety infrastructure taking into consideration the report being prepared by the International Nuclear Safety Group INSAG. The CSS highlighted the particular importance of start soon the preparation of a document on how to progressively apply the safety standards. In this regard the Commission also considered useful to further strengthen the exchange of information on the advising activities of INSAG and the CSS activities on the Safety Standards, which both aim at continuously enhancing the level of safety worldwide. [Annex II, 22.6].

The Commission discussed issues related to a new generation of nuclear reactor designs, the quality of construction and commissioning of new plants and the manufacturing of components and new

applications of radiation sources giving rise to new need in terms of Safety Standards, including an increased need for harmonization of the national regulation.

The Commission also noted that the extension of the operating lifetimes of NPPs beyond their planned design life, while preserving the safety margins and the issues relating to the ageing management of structures, systems and components are not really new but are giving rise to pressing concerns in a number of Member States to be well covered by the future safety guides on these issues.

Likewise, seismic safety issues and the need to consider the potential consequences of earthquakes in new designs and ageing management of operating NPPs' structures, systems and components was recognized as additional issues to be addressed in the future.

The Commission also discussed in depth the question on how best to deal with the interface between safety and security. The objective as established in the safety fundamental SF-1 is "to ensure that Safety measures and security measures must be designed and implemented in an integrated manner so that security measures do not compromise safety and safety measures do not compromise security". The Commission concluded that there was a need to identify and implement practical steps to further address the issues. It was suggested that a team of staff members from NSNI and NSNS should screen draft documents to identify safety and security interface issues. [Annex II, 22.7].

The CSS further identified the need for developing guidance on public exposures to natural sources of ionizing radiations (radon, NORM residues, …), uranium mining and recovery and also a crucial need to further improve promotion of the application of the safety standards on medical applications and to enhance these standards as appropriate.

The Commission welcomed the publication and translation of the IAEA Safety Glossary as a great achievement and recommended to pursued efforts to further harmonized the terminology used throughout the Safety Standards Series and ensure that these terms can be easily translated in different languages also considering the legal aspects involved.

Finally, the CSS role in promoting the use of the Safety Standards was addressed recommending that this should take an important place in the future CSS activities.

8. Developments in Member States

8.1 The Use of Safety Standards

Almost all presentations had been sent in advance to the meeting and were posted on the CSS web page. Several members summarized their presentations, highlighting the most important aspects. The material will remain available for all members in an archive file on the web page (http://www-ns.iaea.org/committees/css/) in the folder "Presentations provided by the CSS members"

8.2 Regulatory Issues in the Member States

As for item 8.1, almost all presentations on related regulatory issues had been provided in advance. The material will also remain available for all members in an archive file on the web page (http://www-ns.iaea.org/committees/css/) in the folder "Presentations provided by the CSS members"

Mr. Barceló Vernet from Spain informed the Commission on an event in fuel cycle facilities with important interaction between safety and security related issues.

9. Presentations and Discussion of the reports of the Safety Standards Committees

9.1 NUSSC

Mr. Reiman, Chairman of NUSSC, informed the Commission on the detailed results of the 24th NUSSC meeting. In addition to the report on the status with regards to the approval of drafts and DPPs, Mr. Reiman informed the Commission on the discussion on coverage of chemistry related issues for the research reactors, following the request of the CSS. It was concluded that the safety

related aspects are adequately covered by the set of safety guides for research reactors (five existing guides and one in preparation).

Mr. Reiman also summarized the preparation of the NUSSC three-year report. He reported in particular that during the last term a number of gaps in the Safety Standards Series were being filled with the publication of the Safety Requirements on Management Systems on the Safety of Research Reactors and the finalization of Safety Requirement on the Safety of Fuel Cycle Facilities and on Safety Assessment.

With regard to the long-term structure for safety standards, he summarized the issues raised by the Committee for clarifications on the justification for the changes of the structure and the format, while recognizing that these issues had been mainly addressed at the CSS task force that was held just before this CSS meeting. The CSS members discussed the need for future emphasis on advanced reactor technology. The CSS members also discussed the role of industry in developing safety requirements and guidelines.

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With regard to the procedure, he informed the Commission of the NUSSC recommendation to review the sequence of Safety Standards Committees meeting and Commission meetings to allow for sufficient time between the Committee's and the Commission's meeting so that draft approved by the Committees could be submitted for endorsement at the following CSS meeting. [Annex II, 22.8].

9.2 RASSC

Mr. Magnusson, Chairman of RASSC, reported on the status of drafts and DPP reviewed at the last meeting and on the main issues discussed and reported in the draft three-year report, in particular the CSS task force draft roadmap, the revision of the BSS and the report on the gap analysis for medical applications.

With regard to the draft roadmap, he indicated that the Committee appreciated the efforts being made to answer the previous concerns of RASSC and welcomed the submission of the revised draft roadmap and its annexes at the next RASSC meeting.

With regards to the revision of the BSS, Mr. Magnusson provided detailed information on the working procedure for the review of the draft and summarized the recommendations from RASSC for its further development, as already reported by Ms. Amaral under agenda item 6.

Mr. Magnusson also presented in detail the result of the gap analysis on medical exposures and its discussion at the meeting, concluding that the root causes of incidents and accidents were addresses in the current set of requirements and guides. He thus stressed that the main gap was related to the actual application of the related safety standards in the Member States. As a result, he suggested increasing the visibility of these requirements and guide and further promote their applications.

9.3 WASSC

On behalf on Mr. Pather, Chairman of WASSC, Mr. Baekelandt presented the report from the last WASSC meeting and the WASSC three-year report.

He presented the status of the review of drafts and DPPs at the last meeting, as well as an overall status of the waste related safety standards development with in particular two Safety Requirements being in the finalization phase after Member States consultation.

Mr. Baekelandt then informed the Commission on the discussion on the monitoring and surveillance set of publication following the request made at the last CSS meeting (Annex III action 21.8). WASSC concluded on the need to continue the development of the draft DS357 for publication at this stage before its integration at the occasion of the future revision of the facility specific safety guides.

9.4 TRANSSC

Mr. Duffy, Chairman of TRANSSC presented a comprehensive overview of the result of the last TRANSSC meeting. He provided the status of the draft and DPPs reviewed and informed in detail on the revision of the Safety Requirements TS-R-1. In this regard, he indicated that following its recent submission to the Member States for comment, the revised draft is expected to be submitted for approval at the next TRANSSC meeting in March 2008 and for endorsement at the following CSS

meeting in May, with the objective of publishing the revised TS-R-1 at the end of 2008. The final aim is the incorporation of the changes in the 16th revise edition of the UN Model Regulation.

Mr. Duffy also informed the Commission on the progress achieved on several transport related issues, such as the denial of shipment, the transport of NORM. Finally, he summarized the content of the draft three-year report.

Among the issue discussed, the Commission realized the need to ensure that the participation of the industry at the Committee's meeting doesn't jeopardize the Member States representation. [Annex II, 22.9].

10. Safety Standards for approval

10.1 Operational Limits and Conditions and Operating Procedures for Research Reactors (DS261)

Mr. A Shokr presented the draft Safety Guide for approval for publication and indicated the secretariat's proposal to address the comments that had been submitted by Japan and Australia. Further clarifications were provided to answer the requests from Mr. Loy. With these clarifications, the Commission endorsed the draft for publication.

10.2 The Operating Organization and the Recruitment, Training and Qualification of Personnel for Research Reactors (DS325)

Mr. A Shokr presented the draft Safety Guide for approval for publication and indicated the secretariat's proposal to address the comments that had been received from Australia and the USA. The Commission agreed with the proposal and endorsed the draft for publication.

10.3 Management Systems for the Safe Transport of Radioactive Material (DS326)

Mr. N. Bruno presented the draft Safety Guide for approval. No comments were submitted prior to the meeting. Following the request from Mr. Gonzalez, the list of interested parties mentioned in the paragraph 3.8 was modified and the introduction of the paragraph 3.9 was updated accordingly. Also for the paragraph 3.9 the Commission noted the use of the term "Safeguard" and requested its deletion Mr. Lacoste noted that the draft included a glossary which is contrary to the CSS request and the NS Department policy. The Commission requested therefore to remove the glossary indicating that this request is a global request for all future draft publications. The Commission recommended the secretariat to study a system for publication that would include hyperlinks to the Safety Glossary. (See also item 12)

The Commission endorsed the draft for publication with these requests.

10.4 Conduct of Operations at Nuclear Power Plants (DS347)

Mr M. Lipar presented the draft Safety Guide for approval and indicated the secretariat's proposal to address the comments that had been received from Australia and the USA. Following the discussion, the proposal to add a footnote on the term "importance to safety" was amended. With regards to the comments from the USA, Mr Virgilio indicated that the proposal addressed it partially through the additional text on emergency or off-normal procedures but requested that the training of the operators on conservative decision making be also covered. Mr. Lipar answered that this aspect is actually covered in another section of the draft. The Commission endorsed the draft for publication with the condition that this point being verified.

11. Document Preparation Profiles for Approval

11.1 Governmental and Regulatory Framework for Nuclear, Radiation, Radioactive Waste and Transport Safety (DS415), revision of GS-R-1

Mr. G. Caruso and Mr. K. Mrabit presented jointly the DPP. During the discussion, it was proposed to simplify the title and mention Governmental and Regulatory Framework for Safety. It was also suggested to replace the term global safety regime by global safety framework. The Commission also requested to avoid establishing shall statement on non-binding instruments.

The DPP was approved with these comments to be considered.

11.2 Safety of Nuclear Power Plants

Design (DS414), revision of NS-R-1

Mr. M. Gasparini presented the DPP. Mr. Gonzalez and Mr. Pereira requested to add a requirement on the need to establish a design authority and requirements on the role of such an authority.

The DPP was approved with these requests.

Operation (DS413), revision of NS-R-2

Mr. D. Dubois presented the DPP. The DPP was approved with a request to update the proposed schedule. The possible combination of the two drafts was discussed and the preferred approach was to maintain at this stage the separation while establishing a strong cooperation during their development.

11.3 Decommissioning: Revision of three existing Safety Guides

Decommissioning of Nuclear Power Plants and Research Reactors (DS402), revision of WS-G-2.1

Decommissioning of Nuclear Fuel Cycle Facilities (DS404), revision of WS-G-2.4

Decommissioning of Medical, Industrial and Research Facilities (DS403), revision of WS-G-2.2

Mr. P. O'Donnel presented the three DPPs. With regard to the structure of the Safety Standards Series, it was clarified that the separation of the three DPPs was the preferred option considering the differences between the facilities considered. It was also clarified that the common parts would be identical so as to avoid inconsistencies in the set of decommissioning safety guides. The Commission also requested to further consider the title of the suite of decommissioning related safety standards during their development with a suggestion to use the term termination of activities.

The DPPs were approved with these comments to be considered.

11.4 Hydrological and Meteorological Hazards in Site Evaluation for Nuclear Installations

(DS417), revision and combination of the Safety Guides NS-G-3.4 and NS-G-3.5

Mr. Godoy presented the DPP. It was approved with a request to remove the proposed specific glossary.

11.5 Protection of the Public against Exposure to Natural Sources of Radiation including NORM residues, DPP revised for the combination of the proposed Safety Guides DS352 and DS400

Mr. P. Waggitt presented the DPP. Mr. Virgilio commented that the scope might be very broad, which could lead to difficulties in the development of the safety guide. The Commission was informed that both drafts DS352 and DS400 were well advanced and that, during their development, it appeared that a lot of common issues were identified. The Commission also suggested simplifying the title of the proposed safety guide.

The DPP was approved with these comments to be considered.

11.6 Ageing Management for Research Reactors (DS412)

Mr. A. Shokr presented the DPP. It was suggested to emphasize the concept of graded approach considering the variety of research reactors and requested to remove the proposed specific glossary.

The DPP was approved with these comments to be considered.

11.7 Development of a national strategy for regaining control over orphan sources and improving control over vulnerable radioactive sources (DS410)

Mr. E. Reber presented the DPP. It was suggested to ensure cooperation between safety and security experts both during the development and the review of the draft safety guide. It was also requested to mention the prevention aspects and to simplify the title.

The DPP was approved with these requests to be addressed.

11.8 Criticality Safety (DS407)

Mr. P. Metcalf presented the DPP. The Commission noted the urgent need for such a safety guide and requested its fast development.

The DPP was approved.

11.9 Licensing Process for Nuclear Installations (DS416)

Mr. Caruso presented the DPP. With regard to the structure of safety standards it was clarified that the proposed safety guide is an intermediate step before the future combination of safety guides related to the regulatory control of nuclear installations. It was also clarified that the scope would cover all nuclear installations, thus including the nuclear power plants, the research reactors and the fuel cycle facilities. With regard to the variety of licensing approaches and licensing lifetime in the member States, it was requested to cover in the safety guide a wide spectrum of options.

The DPP was approved with these comments to be considered.

12. Discussion of the draft CSS Four-Year Report

Mr. Lacoste introduced the agenda item indicated that the CSS four-year report is a report from the Chairman that is not submitted for formal approval. Mr. Lacoste however clarified that he would seek an overall agreement on the draft at this meeting before its finalization for submission to the IAEA

Director General.

A draft table of content was submitted for comments to the CSS members. No comments were posted on the web site. The draft report was then developed with the support of the Secretariat, without the chapter 7 on future work. This chapter 7 has then been drafted on November 27 taking into consideration that discussion held under agenda items 7.1 and 7.2 on the next four years of the CSS (see above).

The discussion then focused particularly on this chapter 7, involving almost all the CSS members. Additional items were proposed as well as comments to improve the quality of the draft.

Among those, it was proposed to mention the need with regard to the long-term structure of Safety Standards to establish a dedicated project organization within the Secretariat and to start the project by an overall evaluation of its impact for the Member States and the Secretariat and of the resources needed for the implementation of the process. [Annex II, 22.10]. It was also proposed to further strengthen the exchange of information on the advising activities of INSAG and the CSS activities on the Safety Standards, one possibility being to invite the chair of INSAG at the CSS, as this is the case for the chair of the ICRP. [Annex II, 22.7]. Another element with regards to enhancing the user-friendliness of the Safety Standards in the future and in addition to what was addressed in the initial draft roadmap is to study the feasibility of using modern IT techniques to facilitate the managements of cross-references between the safety standards and firstly the link with the safety glossary.]. The CSS members discussed how the concepts of best practices and continuous improvement need to be balanced with stability in the Safety Standards. [Annex II, 22.11].

It was also noted with regard to the future challenges that they reflected more the nuclear power related issues. Proposal were therefore made to complement this part so as to address the radiation and waste safety related issues such as the need for guidance on the safety of uranium mining activities, for guidance on public exposures to natural sources of ionizing radiations (radon, NORM residues, …) and the crucial need to further improve promotion of the application of the safety standards on medical applications and to enhance these standards as appropriate.

With regards to the interface between safety and security, it was recognized that there was a need to identify a practical way for dealing with the verification of the compatibility between the two series. Mr. Lacoste suggested that a practical first step could be to implement a systematic review of draft safety standards by experts in the security area and of the draft security series publications by experts in the safety area.

With regards to the working method, the improvements during the third term were recognized as being significant, in particular with the use of the CSS web pages allowing the sharing of the comments. Mr. Gonzalez also requested to ensure that the duration of the meeting allows in-depth discussion on all agenda items.

Mr. Lacoste noted that there was no contradiction among the issues raised by the CSS members thus indicating a wide consensus on the future challenges and concluded that, in order to incorporate the proposals made, a revision of the draft four-year report will be prepared before its presentation to the IAEA Director General on November 28, 2007. The revision would also include as appendix 4 the latest revision of the draft roadmap. The report will then be finalized and formally be sent to IAEA Director General and distribution to the CSS members. [Annex II, 22.12].

13. Report of the Meeting, Date of the next Meeting

Mr. Delattre will prepare a draft to be sent to the current members of the Commission. [Annex II, 22.13].

The next meeting is planned to be held from: **21 to 23 May 2008**.

At the end of the meeting, Mr. Lacoste highlighted the two main achievements of the third CSS term, the unification of the Safety Fundamentals and the preparation for the long-term structure and format for the Safety Standards. He thanked the Secretariat's staff with a special mention of Mr. Karbassioun and Mr. Delattre.

Mr. Lacoste also thanked the members of the Committees and of the Commission recognizing the amount of work that the activities involve. He also thanked the four chairs of the Committees and Mr. Laurence William who was the chair of the beginning of the third term.

Finally he addressed a special thank to Mr. Holm and Mr. Pereira who, as a member of the CSS bureau, contributed largely to support his chairmanship.

ANNEX I

AGENDA

Twenty second Meeting of the
COMMISSION ON SAFETY STANDARDS
26 – 28 November 2007

Meeting Room H, Austria Center, Vienna

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

2. Introductions, Adoption of the Agenda and Approval of the Report of the Twenty first Meeting
   A-C. Lacoste

3. Activities Related to Safety Standards and other Safety and Security Related Publications

   3.1 Nuclear Installation Safety*; P. Jamet, DIR-NSNI*

   3.2 Radiation, Transport and Waste Safety*; E. Amaral, DIR-NSRW*

   3.3 Office of Nuclear Security*; A. Nilsson, DIR-NSNS*

   3.4 Incident and Emergency Center*; W. Stern, IEC*

   3.5 Safety Infrastructure; *L. Lederman, SSCS*

4. Status of the endorsed Standards and Response to Actions from the 21st Meeting*; D. Delattre*

4.bis At 16:00, a presentation on the preparation of the 20/20 report will be provided by the Director General Office; *G. Andrew*

5. Interaction with other International Groups

   5.1 Report on the new ICRP recommendations*; L.-E. Holm, Chairman of the ICRP*

6. Status report on the revision of the BSS*; E. Amaral*

7. Outlook: The next four years of the CSS.

   7.1 Long-term Structure for Safety Standards. CSS task force*; A.-C. Lacoste and the Chairs of NUSSC, WASSC, RASSC and TRANSSC*

NOTE: Following the meeting, a revised draft roadmap was established and attached to this meeting report [Annex 4].

   7.2 The next 4 years of the CSS. Future challenges and emerging issues and their implication for the future Safety Standards; *(CSS Members)*

8. Feedback on the application of Safety Standards and Regulatory Issues

   8.1 The Use of Safety Standards; *(CSS Members)*

   8.2 Regulatory Issues in the Member States; *(CSS Members)*

9. Presentations and Discussion of Reports, including three-year reports, of Safety Standards Committees

   9.1 Nuclear Safety Standards Committee
   L. Reiman, Chairman/G. Feige, Scientific Secretary - NUSSC

   9.2 Radiation Safety Standards Committee
   S. Magnusson, Chairman/T.J. Boal, Scientific Secretary - RASSC

   9.3 Waste Safety Standards Committee

T. Pather, Chairman/D. Louvat, Acting Scientific Secretary – WASSC

9.4 Transport Safety Standards Committee

J. Duffy, Chairman/M. Wangler, Scientific Secretary – TRANSSC

10. Safety Standards for Approval

10.1 Operational Limits and Conditions and Operating Procedures for Research Reactors (DS261)*; A. Shokr*

10.2 The Operating Organization and the Recruitment, Training and Qualification of Personnel for Research Reactors (DS325)*; A. Shokr*

10.3 Management Systems for the Safe Transport of Radioactive Material (DS326)*; N. Bruno*

10.4 Conduct of Operations at Nuclear Power Plants (DS347)*; G. Vamos*

11. Document Preparation Profiles for Approval

REVISIONS AND/OR COMBINATIONS

11.1 Governmental and Regulatory Framework for Nuclear, Radiation, Radioactive Waste and Transport Safety (DS415), revision of GS-R-1; *G. Caruso & K. Mrabit*

11.2 Safety of Nuclear Power Plants: Two Safety Requirements at step 1 for combination at step 2

- Design (DS414), revision of NS-R-1; *M. Gasparini*

- Operation (DS413), revision of NS-R-2; *D. Dubois*

11.3 Decommissioning: Revision of three existing Safety Guides; *B. Batandjeva*

- Decommissioning of Nuclear Power Plants and Research Reactors (DS402), revision of WS-G-2.1

- Decommissioning of Nuclear Fuel Cycle Facilities (DS404), revision of WS-G-2.4

- Decommissioning of Medical, Industrial and Research Facilities (DS403), revision of WS-G-2.2

11.4 Hydrological and Meteorological Hazards in Site Evaluation for Nuclear Installations (DS417), revision and combination of the Safety Guides NS-G-3.4 and NS-G-3.5; *A. Godoy*

11.5 Protection of the Public against Exposure to Natural Sources of Radiation including NORM residues, DPP revised for the combination of the proposed Safety Guides DS352 and DS400, whose DPP were already approved by the CSS; *P. Waggitt, T. Boal*

NEW DPPs

11.6 Ageing Management for Research Reactors (DS412); *A. Shokr*

11.7 Development of a national strategy for regaining control over orphan sources and improving control over vulnerable radioactive sources (DS410); *E. Reber*

11.8 Criticality Safety (DS407); *E. Warnecke*

11.9 Licensing Process for Nuclear Installations (DS416). To be combined at step 2 with the revisions of GS-G-1.1 to 1.4, WS-G-2.3 and WS-G-5.1; *S. Calpena*

12. Discussion of the draft CSS Four-year Report

13. Report of the Meeting, Date of the next meetings

ANNEX II

ACTIONS ARISING FROM THE 22nd MEETING OF THE COMMISSION

22.1. Issue the final report of the 21st meeting of the Commission (*ref. Item 2*). **[Action: Secretariat]**. Done

22.2. Include IRS in the feedback mechanism for the Safety Standards (*ref. Item 3.1*). **[Action: Secretariat]**.

22.3. Review the structure of the Safety Standards Committees and evaluate the option of creating a new Committee for the Emergency Preparedness and Response area (*ref. Item 3.4*). **[Action: Secretariat]**.

22.4. Present at the next CSS meeting information on the INSAG work on nuclear safety infrastructure and DPPs for safety guides on progressive application of the IAEA Safety Standards and on Member States self assessment of their infrastructure development (*ref. Item 3.5*). **[Action: Secretariat]**.

22.5. Enhance the methodology for tracking the changes to the BSS and documenting the rationale, impacts, and the costs/benefits to the Member States for each (*ref. Item 6*). **[Action: Secretariat]**.

22.6. Consider the invitation of the Chair of INSAG Chair at the CSS (*ref. Item 7.2*). **[Action: Secretariat in liaison with INSAG]**.

22.7. Enhancing Safety Security interface: cross-verification (*ref. Item 7.2*). **[Action: Secretariat]**.

22.8. Review and adjust as necessary the sequence of the meeting of the Committees and the Commission to allow for a 4 to 5 months period between the Committees and the CSS meetings (*ref. Item 9.1*). **[Action: Secretariat]**.

22.9. Review the involvement of the industry in the Safety Standards Committees to maintain appropriate representation of the Member States (*ref. Item 9.4*). **[Action: Secretariat]**.

22.10. Long-term structure for the Safety Standards: further general development of the outline of the GSR, establishment of a project management structure, evaluation of the workload and resources needed, evaluation of the impact in the Member States, updated list of Safety Standards in the long-term and transition phase (*ref. Item 12*). **[Action: Secretariat]**.

22.11. Study the possibility of implementing modern publication techniques for the Safety Standards that would include hyperlinks to the safety glossary and facilitate access to cross references (*ref Item 10.3.*). **[Action: Secretariat]**.

22.12. Finalize the Chairman four year report for presentation to the IAEA Director General an distribution to the CSS and the Committees members (*ref Item 12*). **[Action: Secretariat]**.

22.13. Prepare the draft report of the CSS 22nd meeting and submit for approval to the member of the 3rd CSS term. (*ref Item 13*) **[Action: Secretariat]**.

ANNEX III

STATUS ON ACTIONS ARISING FROM THE 21st MEETING OF THE COMMISSION

20.1. Issue the final report of the 20th meeting of the Commission. **[Action: Secretariat]**. Done

21.2. Provide at the 22nd CSS meeting information on the work from INSAG on the safety/security interface. **[Action: Secretariat]**. After consultation of the Chairman from INSAG on the progress on this activity, the presentation of the report is foreseen at the next CSS meeting.

21.3. The Chair to prepare a two-page paper as an input for a task force (CSS bureau, Chairs of the SSCs, Secretariat) to study the feasibility of achieving integration of the thematic requirements for the long-term structure of Safety Standards by extending the scope of the BSS. Date for the meeting of the task force to be determined. Report to be provided at the 22nd CSS meeting. **[Action: CSS Chair and the Secretariat**]. Draft roadmap sent for consultation on 21 June 2007. Revised draft roadmap taking into account the comments received distributed on 12 July 2007. Meeting of the CSS task force held on 13 September 2007. Meeting conclusions sent to the Safety Standards Committees and to the CSS. Meeting of the CSS task force on Monday 26 November 2007. A report was provided and discussed under agenda item 7.1 .

21.4. Further report to RASSC and the CSS on gap analysis for the Safety Standards on medical applications to ensure that they address issues identified as root causes of incidents and accidents (ref. *Item 5*). **[Action: Secretariat].** A report from the Secretariat has been posted on the CSS web site. It was discussed at RASSC. The report from RASSC under agenda item 9.2 included the views from RASSC on this issue.

21.5. Progress report and first review at the 22nd CSS meeting of the management system for the planning, preparation, review/revision, approval and publication of Safety Standards. **[Action: Secretariat].** A progress report from the Secretariat has been posted on the CSS web site. It provides information on the progress on the development of the system (project name MANSYSS). A draft 0.1 is being prepared collecting all currently available material. It will be complemented and reviewed internally by the Steering Committee. The objective is to have a draft ready for presentation at the Committees and the Commission in 2008. It is being developed using IT technologies so as to articulate all elements of the management system.

21.6. Report for the 22nd CSS meeting on the set of Safety Requirements and Guides on the Management System. **[Action: Secretariat].** A report from the Secretariat has been posted on the CSS web site. It proposes to maintain only one general safety guide at the end of the step 2. The other safety guides would be incorporated in the relevant facilities/activities specific safety guides.

21.7. Report for the 22nd CSS meeting on the meaning and implications of the concept of user friendly safety standards. **[Action: Secretariat].** This is included as an annex to the revised draft roadmap discussed under agenda item 7.1.

21.8. Report to WASSC and to the 22nd CSS meeting on the relationship between the draft DS357 on Monitoring and Surveillance of Radioactive Waste Disposal Facilities and the collection of associated Safety Reports and TECDOCs. **[Action: Secretariat].** A report from the Secretariat has been posted on the CSS web site. It was discussed at WASSC. The report from WASSC under agenda item 9.3 included the views from WASSC on this issue.

21.9. The Safety Standards Committees and the CSS to continue to be involved in the review of the draft safety framework for the use of nuclear power source applications in outer space. The process for the approval and publication and status of the final publication to be further investigated. **[Action: Secretariat].** A report from the Secretariat has been posted on the CSS web site. It was updated after

consultation of the Joint Expert Group participants. A first draft safety framework would be reviewed at a STCT meeting in February 2008 and then be presented at the Committees meetings in 1st Q 2008.

21.10. Prepare a proposal for the structure of the 4-year report for submission for comments by correspondence to the CSS and prepare a draft 4-year report for submission for approval at the 22nd CSS meeting. **[Action: Secretariat].** Structure for the 4 year report submitted to the CSS members on 5 September 2007 for comments. Draft report prepared by the Chair and posted on the CSS web site. It was addressed under agenda item 12. The Chairman then presented the draft report to the DG on Wednesday 28 November. The final four-year report was finalized in January 2008 and provided to the IAEA Director General and the CSS members

21.11 Prepare the draft report of the 21st CSS meeting to be submitted for approval at the 22nd CSS meeting. **[Action: Secretariat]. Done.** The draft report was approved under agenda item 2.

ANNEX IV

Follow-up Actions in Connection with Agenda Item 7

DRAFT ROADMAP for the CSS Task Force on the Long-Term Structure for Safety Standards

(30 November 2007)

1) The fundamental safety objective is to protect people and the environment from harmful effects of ionizing radiation.

2) Ten Safety Principles presented in SF-1 form the basis upon which Safety Requirements are developed and safety measures are implemented in order to achieve the fundamental safety objective.

3) Arriving at a unified set of Safety Fundamentals has been a difficult task. It constitutes an important evolution, and not a revolution, and must be considered as a key milestone in a continuous improvement process.

4) There is now a unique opportunity to draw the inferences from the publication of the single set of Safety Fundamentals and use a combination of a top-down approach and a Requirements gap analysis for the identification of the most efficient and effective structure for the set of Requirements needed to ensure their implementation. The long-term structure should keep the current hierarchy with three levels and take into account the need for stability in regulatory approaches.

5) The intention is to establish a General Safety Requirements integrating all thematic areas in a coherent and harmonized set of publications, complemented by a series of facilities and activities specific Safety Requirements. The complete set of Safety Requirements should address all radiation exposure situations (actual and potential). The General Safety Requirements should apply to any facility/activity (as defined in the footnote of the paragraph 1.9 of the Fundamental Safety Principles SF-1), whereas the others should apply to specific facilities/activities.

6) Integration of safety related security issues should also be considered. Safety measures and security measures must be designed and implemented in an integrated manner so that security measures do not compromise safety and safety measures do not compromise security.

7) The treatment of NORM, radon and medical activities needs to be carefully considered and enhanced as appropriate.

8) Future documents should be user friendly; therefore, the concept of "user friendliness" must be clarified, keeping in mind that in most cases the national authorities and in particular the regulators are the principal users of the Standards. The future collection of Safety Standards should also be manageable and therefore consist of a manageable number of publications each of them being as concise as possible and addressing the essence of the safety issues.

9) The final aim of the process is a clear and complete set of Safety Requirements. But the process itself should be stepwise and flexible. Sufficient time must be devoted to achieving a consensus on the long-term structure. A rigorous process must be in place to ensure a strong consensus and a clear benefit for all changes from the current structure. This should include an evaluation of the overall impact for the Member States and the Secretariat and of the resources needed for the implementation of the process.

10) The work to be done cannot just be given to the Secretariat. There must be a personal involvement and leadership of the members of the Committees and the Commission, as it was the case for the Safety Fundamentals. The Task Force (involving the CSS and Committee chairmen as well as the NS managers) should further study how to achieve the ultimate objective of establishing the General Safety Requirements.

11) The BSS is being revised. The result will be a key element among the thematic requirements. It will integrate the new ICRP recommendations. The revision of the BSS should be pursued according to the approved DPP. The possibility of further extending its scope in a second step should be considered so

that it can serve as the basis for the future General Safety Requirements. Like for the revision of the BSS, it will involve close consultation of, and collaboration with co-sponsoring organizations about the relationship between the revised BSS and the General Safety Requirements.

ANNEX A

Safety Standards User-Friendliness

With a view to facilitating the use of the Safety Standards by the Member States, the Safety Standards should be user-friendly. This involves the following main aspects:

- The users of Safety Standards in the Member States differ depending on the category of Safety Standards. In any case, the direct users are the regulatory bodies and other relevant national authorities. The Safety Standards are de facto also used by co-sponsoring organizations, many organizations that design, manufacture and operate nuclear facilities as well as organizations involved in the use of radiation related technologies;

- The structure of Safety Standards should be such that the users may easily identify among the whole collection of Safety Standards those that are particularly applicable to the specific facility or activity they are dealing with. The application of this concept is reflected by a Safety Standards Structure with thematic safety requirements and guides applicable to all facilities and activities complemented by a set of facility/activity specific safety requirements and guides;

- The overall number of Safety Standards should be manageable. The application of this concept is reflected through the proposal for the long-term collection of Safety Standards;

- The format and style of the Safety Standards and particularly the Safety Requirements should facilitate their use for the establishment of the regulatory framework in the Member States. The Safety Requirements in the future will therefore be written in regulatory style (shall statements) with a discrete set of requirements followed, when necessary by short explanations. To the extent practicable the structure and layout of the Safety Standards Series documents should be uniform;

- The use of cross-references should be optimized. When small parts of other Safety Standards publications are to be used, it will be preferred to copy these. When large parts of other Safety Standards are to be referenced, the cross-referencing without duplicating the text will be the preferred option. The application of this concept will be facilitated with the long-term structure through the integration of all the thematic Safety Requirements into one publication which will then prevent the need for many cross-references. It will also be facilitated by the use of a numbering system for each individual discrete requirement and modern IT techniques so as to help building a logical relationship between the set of safety requirements and the set of safety guides. Thus, after completion of the set of Safety Requirements, the subsequent revision of Safety Guides will refer to these numbers;

- The terminology used should be harmonized throughout the Safety Standards Series and such that the terms can be easily translated in different languages also considering the legal aspects involved; and

- The Safety Guides are currently complemented by TECDOCs and Safety Reports. Part of this material could be incorporated as annexes to the future Safety Guides.

ANNEX B

Format for the Safety Requirements

As indicated in the CSS Subgroup report part A, it is proposed to adopt for all Safety Requirements a format similar to the one used for the Fundamental Safety Principles with a discrete set of requirements followed by explanatory text, as necessary. It is expected that the level of detail in each chapter will be similar (annex IV of the CSS subgroup report par A elaborates on a better definition of the level of the Safety Requirements with some examples). The main reasons are as follows:

- In term of user-friendliness, the format and style of the Safety Standards should facilitate their use for the establishment of the regulatory framework (see annex A to the roadmap on user-friendliness). The Safety Requirements should be short enough to encourage their reading and actual use in the Member States;
- In the current set of Safety Requirements, references are often made to specific concepts but their explanation is given in many cases in the subsequent Safety Guides. In the future, it is expected that the explanation of the concepts will be provided in the Safety Requirements so as to facilitate their interpretation for use in establishing national regulatory requirements. The purpose of the Safety Guides will not be to explain these concepts but to focus on the recommendations on how the requirements can be implemented;
- In addition, each individual discrete requirement will be allocated a number which, by appropriate references in the Safety Guides, will help building a logical relationship between the set of safety requirements and the set of safety guides. Thus, after completion of the set of Safety Requirements, the subsequent revision of Safety Guides will refer to these numbers; and
- Requirements must address what must be achieved/done while the guides will address how this could be achieved/done.

ANNEX C

Strategy for work on Safety Guides

The following strategy has been established to guide work on Safety Guides. It was described in the CSS Subgroup report part B:

Goals:

• To be responsive to the needs of Member States;

• To limit the burden to the Secretariat, the members of the Committees, the Commission and the Member States as well as ensuring stability in the set of Safety Guides, the complete set proposed is established on the basis of recently published Safety Standards and those in development;

• To have a manageable number of standards by:
- Limiting the number of Safety Guides in the thematic areas to those of a generic nature;
- Developing Safety Guides in the facility specific areas that cover the whole lifetime of the facility (site evaluation, design, commissioning, operation and decommissioning);
- Identifying among the facility specific guides those that may be applicable to several types of facilities so as to avoid the establishment of guides addressing the same topical issue for different types of facilities/activities;
- Including, wherever possible, additional topics as part of the revision of existing Safety Guides, rather than by developing new Safety Guides.

Strategy:

Therefore, in terms of process for the decision to work on safety guides, separate consideration will be given to the revision of existing guides and to the proposal for of new guides. In the later case:

A report should be prepared to justify the need of additional topics to be addressed in Safety Guides. It should indicate to which Safety Requirements the proposed additions relates and presents the overall coverage (scope and issues addressed) of the current set of Safety Guides implementing these requirements.

The report should also review the status of these safety guides and indicate the time-frame expected for their next revision. In most cases, it will be possible to address the additional need by expanded the scope of an existing guide at its next revision.

Therefore, a proposal for the establishment of a new Safety Guides in the whole collection, together with a "SPECIAL DPP FOR ADDITIONAL PUBLICATION" will be considered by the Secretariat, the Committees and the Commission only if there is a justification for an urgent need and either:

1- This need cannot be achieved by expanding the scope of an existing Safety Guide; or

2- This need could be addressed by expanding the scope of an existing Safety Guide, but it is not expected to revise this Guide sufficiently soon to address the urgent need. In this case, the Special DPP will contain an additional line in the production section indicating to which Safety Guide the material will be later integrated and the related target date for integration so as to maintain as far as possible the initial closed set of Safety Guides.

A section should be added to each DPP on justification of the proposed publication in terms of member states need, result of gap analysis, expected safety improvements, overall cost/benefit. This should apply equally to documents being revised as well as new documents being proposed.

ANNEX V

PARTICIPATION

The Commission

A.J. González, Argentina
J. Loy, Australia
L.A. Vinhas, Brazil
J.K. Pereira, Canada
G. Li, China (sent apologies – unable to attend)
D. Drabova, Czech Republic
K. Ulbak, Denmark
S.B. Abdel-Hamid, Egypt
A-C. Lacoste, (Chairman) France
D. Majer, Germany
S. K. Sharma, India
I. Levanon, Israel (unable to attend)
A. Fukushima, Japan
J. Hashmi, Pakistan
Y-S. Eun, Korea, Republic of (unable to attend)
S. Adamchik, Russian Federation
M.T. Magugumela, South Africa (unable to attend)
G.A. Azuara, Spain (unable to attend)
L-E. Holm, Sweden
U. Schmocker, Switzerland
M. Weightman, United Kingdom (sent apologies – unable to attend)
M. Virgilio, United States of America

Participants from International Organizations

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L-E. Holm, International Commission on Radiological Protection
T. Tanaka, OECD Nuclear Energy Agency

Chairmen of Committees

L. Reiman, NUSSC
S. Magnusson, RASSC
J. Duffy, TRANSSC
T. Pather, WASSC (sent apologies and proposed to be represented by Mr. L Baekelandt)

Representatives and associated experts

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