45th Meeting of the Commission on Safety Standards

8–9 April 2019, IAEA Headquarters, Vienna

Report of the Meeting

Overview of main results of the meeting

A. The following draft safety standards were endorsed:

- DS419: Draft Safety Guide on Radiation Safety in Well Logging.
- DS420: Draft Safety Guide on Radiation Safety in the use of Nuclear Gauges.
- DS434: Draft Safety Guide on Radiation Safety of Accelerator Based Radioisotope Production Facilities.
- DS440: Draft Safety Guide on Design of Auxiliary Systems and Supporting Systems for Nuclear Power Plants.
- DS449: Draft Safety Guide on Format and Content of the Safety Analysis Report for Nuclear Power Plants.
- DS459: Draft Safety Guide on Management of Residues Containing Naturally Occurring Radioactive Material from Uranium Production and other Activities.
- DS475: Draft Safety Guide on Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency.
- DS487: Draft Safety Guide on Design of Fuel Handling and Storage Systems for Nuclear Power Plants.
- DS489: Draft Safety Guide on Storage of Spent Nuclear Fuel.

B. The following DPPs were approved:

- DS516: Draft Safety Guide on Criticality Safety in the Handling of Fissile Material (revision of SSG-27).
- DS517: Three draft Safety Guides for the revision of: SSG-5 on Safety of Conversion Facilities and Uranium Enrichment Facilities; SSG-6 on Safety of Uranium Fuel Fabrication Facilities; and SSG-7 on Safety of Uranium and Plutonium Mixed Oxide Fuel Fabrication Facilities.
- DS518: Two draft Safety Guides for the revision of: SSG-42 on Safety of Nuclear Fuel Reprocessing Facilities; and SSG-43 on Safety of Nuclear Fuel Cycle Research and Development Facilities.

C. Policy discussion:

- There is no immediate need to revise the Safety Fundamentals, but there are reasons why this will be necessary in future. The conclusions of the Safety Standards Committees from their reviews of SF-1 are to be collated in a systematic way, and captured using the NSS-OUI feedback mechanism.
- The end of term report on the 6th term of the CSS will be prepared for finalization at the next CSS meeting in December 2019. At this meeting, recommendations for the 7th term of the CSS should be identified and agreed.

1. Opening session

1.1 Opening of the meeting

Mr Juan-Carlos Lentijo, Deputy Director General and Head of the Department of Nuclear Safety and Security, opened the 45th meeting of the Commission on Safety Standards: he welcomed all members and thanked them for their efforts. Before addressing the agenda, Mr Lentijo encouraged all participants to give priority to the CSS meeting schedule when planning to attend other events.

Mr Lentijo noted that the Safety Requirements on Site Evaluation for Nuclear Installations, SSR-1, had been established as a safety standard by the Board of Governors, and that the complete set of requirements was now in place, in line with the revised long-term structure of the standards. He also noted that work to revise the Safety Guides that support the requirements is underway, and that some of these were on the agenda of this CSS meeting.

Mr Lentijo noted that the agenda also included three important policy discussions on the following:

- The Consultancy Meeting held in March to prepare a DPP for a Safety Report on the implications of the 2012 UNSCEAR report (Agenda Item 5.1).
- The results of the review of the Safety Fundamentals conducted by all Safety Standards Committees (Agenda Item 5.2).
- The end of term report to be prepared for finalization at the next CSS meeting in December (Agenda Item 5.3).

Finally, Mr Lentijo informed the Commission about the following important events:

- International Conference on the Management of Spent Fuel from Nuclear Power Reactors, Vienna, Austria, 24–28 June 2019.
- 5th International Conference on Effective Nuclear and Radiation Regulatory Systems, The Hague, Netherlands, 4–7 November 2019.
- International Conference on Research Reactors: Addressing Challenges and Opportunities to Ensure Effectiveness and Sustainability, Buenos Aires, Argentina, 25–29 November 2019.
- Ministerial-level International Conference on Nuclear Security: Sustaining and Strengthening Efforts (ICONS 2020), Vienna, Austria, 10–14 February 2020.

Mr Lentijo concluded by thanking all participants for their efforts and wished them a very productive meeting.

Ms D. Drábová, Chair of the Commission noted that, due to scheduling conflicts, this was a short duration CSS meeting, which should only be allowed under exceptional circumstances. Ms Drábová agreed with Mr Lentijo that CSS members should make attending the CSS meetings a priority.

Mr A. González also welcomed the remarks made by Mr Lentijo, and noted that the Commission needed time in the agenda to properly discuss issues of policy in relation to the safety standards. He suggested that these issues included standards for radionuclides in food and water, recent UNSCEAR reports on the risks from exposures to radon, and the TECDOC being developed on assessing the practical application of the Vienna Declaration on Nuclear Safety to existing nuclear power plants. To adequately address these and other issues, Mr González suggested that a longer CSS meeting should be held in December.

Mr J. Powell also agreed that the short meeting was not ideal, and suggested that it could give a false impression that the only role of the CSS was to ‘rubber stamp’ the approval of drafts and DPPs.

Mr D. Delattre confirmed that a full week had been reserved for the next CSS meeting.

1.2 Introductions; Adoption of the agenda; Adoption of the 44th CSS meeting report

Ms Drábová welcomed all participants, including the new CSS member from India, Mr G. Nageswara Rao. Mr Nageswara Rao confirmed that he was very pleased to be a member of the Commission. A complete list of participants is provided in Annex I.

The agenda for the meeting was approved – and is reproduced in Annex II.

Ms Drábová informed the Commission that the draft report of the 44th CSS meeting had been made available. Comments received form the Chair of NUSSC and the Vice-Chair of NSGC were incorporated in a revised version posted for final approval. No further comments had been received from the CSS members. The report of the 44th CSS meeting was approved and would be posted on the CSS web site **[Annex III, Action 45.01]**.

Mr González congratulated Mr P. Shaw and Ms K. Asfaw from the Secretariat for the high quality of the CSS meeting reports: Ms Drábová supported this statement.

1.3 Administrative arrangements for the meeting; Status of the overall structure; Status of the endorsed standards; Response to actions from the previous CSS meetings

Mr D. Delattre informed the Commission of the administrative arrangements for the meeting.

Mr Delattre presented the status of the roadmap for the long term structure of the General Safety Requirements and the Specific Safety Requirements, as well as the status of the endorsed safety standards. He informed the Commission that three Specific Safety Guides (SSG-45, SSG-48 and SSG-54) had been published since the last CSS meeting, including a Safety Guide that had been approved at the previous CSS meeting. He also noted that three safety standards endorsed by the Commission were in the final stages of the publication process, and that five other approved Safety Guides were in the process of being edited.

Mr Delattre presented information on timescales for publication, which showed that these had reduced significantly. The total number of published safety standards has remained at 125, consistent with the long term structure.

Comprehensive, up-to-date information on the status of all standards (published and in draft), as well as on the status of drafts of the Nuclear Security Series that are interface documents, is available at: http://www-ns.iaea.org/committees/files/CSS/205/status.pdf.

Mr Delattre described the progress with the actions from the 44th CSS meeting: see Annex IV.

Mr González noted that the Word files containing the versions of the safety standards (as available in all official languages) were very valuable, and it would be useful to indicate when future translations might be expected. He also suggested that issuing the 2018 Edition of the Safety Glossary as a multi-language edition should be considered.

Mr Delattre confirmed that he updated the files whenever there has been a new publication (including any new translations) and whenever a DPP has been approved by the CSS.

Mr P. Webster (NUSSC) noted that the timescales for publication would be likely to increase again due to a lack of resources in MTCD, and suggested that the CSS members should encourage the Secretariat management to look at this issue.

Mr R. Lewis enquired about the process for reviewing the development of the Safety Report on the UNSCEAR conclusions (Action 44.02). Mr Delattre replied that the draft DPP, and then regular progress reports, will be presented to the Review Committees and the Commission for information.

2. Reports from the Safety Standards Committees and the Nuclear Security Guidance Committee

2.1 Emergency Preparedness and Response Standards Committee (EPReSC)

Ms A. Heinrich, EPReSC Chair, reminded the Commission that the most recent EPReSC meeting had already been reported at the previous CSS meeting. Since then EPReSC had undertaken an additional review of DS475 (draft Safety Guide on Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency) following the Technical Editorial Review by the Standards Specialists. Comments were also invited from RASSC and WASSC.

Ms Heinrich's presentation is available on the CSS web site.

2.2 Nuclear Safety Standards Committee (NUSSC)

Mr P. Webster, NUSSC Chair, reported on the 46th NUSSC meeting at which four draft standards had been approved for submission to the CSS (with some limited changes agreed in NUSSC), and four draft standards had been approved for submission to Member States. NUSSC had also approved three DPPs (for revisions of Safety Guides on criticality safety and nuclear fuel cycle facilities) with the proviso that the reviews by Member States would be staggered, and the overall publication timescales would be reduced.

NUSSC also discussed the revision of the DPP for DS513 (draft Safety Guide on Leadership, Management and Culture for Safety), and the report of the NUSSC Working Group on the review of SF-1 was revised and issued. NUSSC was also briefed on developments related to SMRs, and discussed and agreed their priorities for the NUSSC 8th and 9th terms.

Mr Webster's presentation is available on the CSS web site.

Mr R. Jammal enquired about the NUSSC views on developing safety standards on SMRs. Mr Webster replied that work was currently being undertaken that might form the basis of future safety standards. Mr G. Rzentkowski indicated that the challenge was to provide technology-neutral standards when there was already a wide variety of individual designs, and that the current priority was to explore the application of current NPP standards to SMRs using the graded approach. Ms C. Spitzer confirmed that work was being undertaken to develop Safety Reports and TECDOCs to address this issue, but the development of safety standards describing best practice will only be possible when the technology and processes are more mature.

Mr Jammal noted that SMRs also raise issues with respect to nuclear security and safeguards, and asked what was being done to collaborate in these areas. Mr Lentijo confirmed that the Secretariat appreciated the need for a prudent approach to SMRs, and would focus on collecting information suitable for publication until such time that safety standards for SMRs based on collective experience could be considered. He accepted that issues of safety and nuclear security should be considered together, and indicated that greater efforts at internal coordination within the Secretariat would be pursued: as an example, a Task Force on this subject had been established in response to the General Conference resolution[1] on this topic. Mr Jammal and Mr Powell expressed support for any measures taken to ensure a harmonized approach to safety and nuclear security.

Mr González agreed that this was a very important issue that should be discussed at the 46th CSS meeting. He noted the tendency to refer to 'SMRs and transportable reactors' in a single phrase, and stressed that these were two different technologies, each of which needed to be considered separately.

Ms K. Alm-Lytz agreed that this topic should be discussed at the next CSS meeting, and suggested that the views of the other Review Committees and NSGC should be taken into account. Mr Webster pointed out that one of the "Challenging mid term priorities" for NUSSC was to "Work more closely

[1] Resolution on Nuclear and Radiation Safety, GC(62)/RES/6, Operative paragraph 65.

with other Review Committees, such as holding joint sessions or establishing joint working groups" on both Transportable Reactors and Small Modular Reactors.

2.3 Radiation Safety Standards Committee (RASSC)

Ms R. Bly, RASSC Chair, reported on the 45th RASSC meeting at which two draft standards had been approved (including DS475, which was approved after the meeting) for submission to the CSS. In addition, RASSC had approved one draft standard for submission to Member States for comment, and three DPPs.

The meeting had included a joint session with WASSC, as well as a topical session on health effects at low doses and dose rates and their implications for the safety standards. RASSC had discussed projects with Argentina on secondary cancers following radiotherapy, and on radionuclides in food, water and other consumer goods. RASSC had also agreed to develop publications on occupational exposure to radon (Safety Guide) and on control of radionuclides in building materials (Safety Report).

Ms Bly's presentation is available on the CSS web site.

Mr Jammal noted that care was needed when referring to secondary cancers, in order that the clear benefits of radiotherapy were not questioned. Mr González confirmed that the work was focused on regulatory requirements for monitoring, i.e. to help reduce the risk of such effects. Mr González reported that the work undertaken on radionuclides in food, drinking water and other goods had been extremely useful, and, in consultation with the Standards Specialists, had resulted in a promising new definition for 'consumer goods'. He did, however, note that there were several issues still to be resolved, including confusing definitions for different types of drinking water.

2.4 Transport Safety Standards Committee (TRANSSC)

Mr P. Hinrichsen, TRANSSC Chair, reported on the 37th TRANSSC meeting at which two draft standards had been approved for submission to the CSS. TRANSSC had also approved one draft standard for submission to Member States for comment, and one DPP.

A large part of the TRANSSC meeting had been devoted to discussing the Technical Editorial Review of DS496, and two consultancy meetings (in March and July 2019) have been arranged to resolve all the outstanding issues. Mr Hinrichsen summarized the work undertaken by the various TRANSSC Working Groups. Mr S. Whittingham then presented a description of the new e-learning training course on the safe transport of radioactive material.

Mr Hinrichsen's and Mr Whittingham's presentation is available on the CSS web site.

Several members of the Commission offered their congratulations on the e-learning course, which was considered to be an impressive achievement. Mr M. Markovits also commented that the TRANSSC Working Groups were very efficient.

Mr González noted that the IAEA Regulations for the Safe Transport of Radioactive Material were a significant success, but suggested that denial of shipment was an issue that should be further discussed by the Commission. Mr Hinrichsen replied that TRANSSC were very aware of the problem and had formed a Transport Facilitation Working Group to consider this further.

Mr J. Dies Llovera encouraged the dissemination of information on the e-learning course, to expand its use. Mr L. Vinhas (AdSec) also expressed his support for the course, and suggested that the Transport Safety Unit could work with the Division of Nuclear Security to develop a module on security in transport. Mr Whittingham confirmed that a collaboration had already taken place and that a module on the safety–security interface was planned, and that this would contain links to relevant e-learning courses on nuclear security.

Mr M. R. M. Ezz El-Din enquired about the number of TRANSSC members from Africa. Mr Hinrichsen replied that only a few representatives from Africa attended the TRANSSC meetings, and that more would be welcome.

2.5 Waste Safety Standards Committee (WASSC)

Ms M. Golshan, WASSC Chair, reported on the 46th WASSC meeting at which four draft standards had been approved for submission to the CSS. In addition, WASSC had approved three draft standards for submission to Member States, and three DPPs. The meeting included a joint session with RASSC.

WASSC had discussed its priorities for 2018–2020, and had agreed that a number of these were not urgent. WASSC had also received presentations from the Secretariat on recent ARTEMIS missions, upcoming events, and updates on the development of draft standards being led by WASSC. WASSC had also received presentations from Australia and the United States of America on the use of the safety standards and recent regulatory developments.

Ms Golshan's presentation is available on the CSS web site.

Mr González suggested that the approach to dealing with legacy sites was an important topic for WASSC to consider. Ms Golshan agreed with this, and said that priorities were scheduled to be discussed at the next WASSC meeting. Ms S. Geupel noted that the remediation of legacy sites is covered by DS468 (draft Safety Guide on Remediation Process for Areas with Residual Radioactive Material from Past Activities and Accidents).

2.6 Information on the meetings of the Nuclear Security Guidance Committee (NSGC)

Mr J. Facetti, Vice-Chair of NSGC, reported on the 14th NSGC meeting at which one draft Nuclear Security Series publication had been approved for submission to DDG-NS for approval for publication, and one draft publication had been approved for submission to Member States for comment. One DPP (NST029) had been submitted for approval, but there are still outstanding comments from NSGC to be resolved. In terms of interface documents, NSGC had cleared four draft safety standards for submission to the CSS, one draft standard for submission to Member States for comment, and two DPPs. It was noted that there had been typically very few comments from NSGC members on interface documents.

NSGC had held discussions on a variety of topics, including the publication of the Security Glossary, the NSS Roadmap, the review process for Nuclear Security Fundamentals and Recommendations, feedback on the use of nuclear security guidance, and the results of recent meetings on safety–security interfaces.

Mr Facetti's presentation is available on the CSS web site.

Ms A.-C. Rigail asked whether the draft publication on the detection at state borders of nuclear and other radioactive material out of regulatory control (NST016) would be an interface document. Mr I. Barraclough replied that this was a Technical Guidance publication that did not, therefore, require clearance through the Safety Standards Committees. However, Mr Barraclough indicated that the Secretariat would be happy to distribute the draft to any interested Committees. Ms Bly and Ms Heinrich indicated that RASSC and EPReSC would appreciate receiving copies of the draft.

Ms Alm-Lytz encouraged NSGC to arrange joint sessions with the Safety Standards Committees, if necessary by agreeing the dates well in advance. Ms Alm-Lytz also encouraged the issue of joint safety–security publications. Mr Delattre reported that it had been agreed that publications addressing safety–security interfaces would be issued via the Technical Reports Series (starting from number 1000). Mr A. Hart asked whether it would be possible to summarize all the current initiatives for such publications, for example, in a 'roadmap'. Mr Delattre agreed to arrange for this to be produced for the CSS **[Annex III, Action 45.02]**.

Mr G. Caruso suggested that the publication on the safety–security interface being planned by AdSeC and INSAG might also be included in the roadmap. Mr Vinhas (AdSec) confirmed that the intention was to produce a high level document on the safety–security interface, but that this was still at an early stage.

Mr Lentijo supported the CSS proposals, and noted that consensus on the way forward still needs to be built. Consequently, the focus of the Secretariat is to create suitable conditions for this to happen. Mr González suggested that the reasons for a lack of consensus should be considered. Mr Lentijo responded that a pragmatic approach was needed to ensure a mutual benefit, and currently this was to be achieved by focusing on the coordination of safety and security.

2.7 Information on the Meeting of the Chairs on 8 April 2019

Mr Delattre reported that the meeting of the Chairs of the Review Committees and of the Commission had addressed the following topics:

- Finalization of the executive summary presentation on the reviews of SF-1 by the Committees, for Agenda Item 5.2;
- Information on the recent revisions of SPESS C and SPESS E;
- Summary of the Consultants' Meeting held in March 2019 on the implication of the UNSCEAR 2012 Report;
- Format for Member State comment resolution tables;
- Status of the DPP for DS513;
- Future CSS meeting dates.

Mr González noted that there were still discrepancies between SF-1 and the more recent Safety Requirements publications. Ms Drábová replied that the Committees had noted this, but had agreed that an immediate revision of SF-1 was not justified.

3. Approval of draft publications and DPPs

Mr Delattre reminded the Commission that (as with the previous CSS meeting) the drafts submitted to the Commission at this meeting would be subsequently posted as a final edited version on the CSS web site. CSS members would be notified of this and given a period of two weeks to provide comments; at the end of this period, if there were no objections, the draft would be considered to be endorsed (i.e. by 'silent approval') **[Annex III, Action 45.03]**.

3.01. Draft Safety Guide DS419 on Radiation Safety in Well Logging

Mr H. Pappinisseri Puthanveedu presented the draft Safety Guide, including the scope of the publication and the structure. He also summarized previous reviews on the text, including additional efforts to ensure that the text gave specific practical guidance on well logging. Mr Pappinisseri Puthanveedu indicated that CSS comments had been received: three from the Republic of Korea, six from India, and one from Pakistan. All the comments had been accepted and clarification was provided, as requested.

Mr Pappinisseri Puthanveedu's presentation is available on the CSS web site.

Ms Bly confirmed that RASSC supported the draft publication. In terms of the resolution of CSS comments, Ms Bly requested the deletion of "female" from Pakistan comment on para. 6.7, and the deletion of "and photon energies" from Indian comment on para. 7.6. Mr Pappinisseri Puthanveedu agreed to take these suggestions into account.

Mr González suggested that the draft could include more references to GSR Part 3 and GSG-7. He also suggested that DS419 and DS420 (see Agenda Item 3.02) could be augmented by practical checklists for workers in the field.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final

edited version.

3.02 Draft Safety Guide DS420 on Radiation Safety in the use of Nuclear Gauges

Mr Pappinisseri Puthanveedu presented the draft Safety Guide, including the scope of the publication and the structure. He also summarized previous reviews on the text, including additional efforts to ensure that the text contained practical guidance on the use of nuclear gauges. Mr Pappinisseri Puthanveedu indicated that CSS comments had been received: four from the Republic of Korea, and two from India. All the comments had been accepted and clarification had been provided, as requested.

Mr Pappinisseri Puthanveedu's presentation is available on the CSS web site.

Ms Bly confirmed that RASSC supported the draft publication.

Mr Powell commended that the recommendations from Australia to make the draft more practical had been implemented in the Technical Editorial Review and subsequent reviews.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final edited version.

3.03. Draft Safety Guide DS434 on Radiation Safety of Accelerator Based Radioisotope Production Facilities

Mr Pappinisseri Puthanveedu presented the draft Safety Guide, including the scope, background and structure of the publication. He also summarized previous comments on the text. Mr Pappinisseri Puthanveedu confirmed that no comments had been received from the CSS.

Mr Pappinisseri Puthanveedu's presentation is available on the CSS web site.

Ms Bly confirmed that RASSC supported the draft publication.

Mr González said that this was an excellent draft, and suggested that references to GSG-8 and GSG-10 could be included in paragraph 10.4. Mr Pappinisseri Puthanveedu agreed to address this comment.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final edited version.

3.04. Draft Safety Guide DS440 on Design of Auxiliary Systems and Supporting Systems for Nuclear Power Plants

Mr A. Amri presented the background to the draft Safety Guide, and the scope and status of the draft publication. Mr Amri indicated that CSS comments had been received from India (2), the Republic of Korea (1), and the Russian Federation (13). Editorial comments and proposals for clarification had been accepted; justification for the rejection of somme of the comments was also provided.

Mr Amri's presentation is available on the CSS web site.

Mr Webster confirmed that NUSSC supported the draft publication, and also supported the rejection of the technical comments, as described by Mr Amri.

Mr González noted that the application of new safety standards to existing nuclear power plants was an important issue, and supported the Secretariat in developing a TECDOC containing Member States' experiences from implementing the Vienna Declaration on Nuclear Safety in respect of existing plants.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final edited version.

3.05. Draft Safety Guide DS449 on Format and Content of the Safety Analysis Report for Nuclear Power Plants

Mr P. Villalibre presented the background to the draft Safety Guide (a revision of GS-G-4.1), and the scope and status of the draft publication. He congratulated the Standards Specialists for their detailed Technical Editorial Review of the draft text. Mr Villalibre indicated that 27 CSS comments had been received, of which 21 editorial comments and proposals for clarification had been accepted, and six other comments had been rejected with justifications provided.

Mr Villalibre's presentation is available on the CSS web site.

Mr Webster confirmed that NUSSC supported the draft publication.

Mr González suggested that some changes to the Annex could be made in the final editing, including replacing the phrase 'radiological aspects' with 'radiation protection aspects', deleting 'ventilation' in 6.4.7 and finding a better title for Chapter 12.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final edited version.

3.06. Draft Safety Guide DS459 on Management of Residues Containing Naturally Occurring Radioactive Material from Uranium Production and other Activities

Mr Z. Fan presented the background and history of the draft Safety Guide (a revision of WS-G-1.2), and the scope and status of the draft publication. Mr Fan summarized the resolution of comments from Member States and from the Review Committees. Mr Fan confirmed that no comments had been received from the CSS.

Mr Fan's presentation is available on the CSS web site.

Ms Golshan confirmed that WASSC supported the draft publication.

Ms Rigail commended the draft document. She also noted that geological injection of NORM residues was included as a disposal option, but that it could be difficult to demonstrate the safety of this approach.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final edited version.

3.07. Draft Safety Guide DS475 on Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency

Mr P. Kaiser presented the scope and background of the draft Safety Guide. He indicated that two comments had been received from the CSS member from the Republic of Korea; both of these had been accepted. Comments had also been received from the Publications Committee, and these had also been accepted. He also mentioned that WHO was considering co-sponsoring the safety guide and suggested to insert additional references. Several other co-sponsorships are expected to be confirmed after this CSS meeting.

Mr Kaiser's presentation is available on the CSS web site.

Ms Heinrich confirmed that EPReSC supported the draft publication.

Mr González stated that translatability was an important consideration, and suggested that consideration should be given to replacing the phrase 'plain language'.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final edited version.

3.08. Draft Safety Guide DS487 on Design of Fuel Handling and Storage Systems for Nuclear Power Plants

Ms C. Toth presented the background, scope and status of the draft Safety Guide (a revision of NS-G-1.4). Ms Toth stated that five comments had been received from the CSS member from the Republic of Korea; all of these had been accepted.

Ms Toth's presentation is available on the CSS web site.

Mr Webster confirmed that NUSSC supported the draft publication.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final edited version.

3.09. Draft Safety Guide DS489 on Storage of Spent Nuclear Fuel

Mr A. Guskov presented the background and development process for the draft Safety Guide (a revision of SSG-15 by amendment). Mr Guskov described the objectives of the revision, and summarized the resolution of comments from Member States and from the Review Committees. Comments had been received from CSS members from Pakistan (1), India (1), and Spain (3). The comment from Pakistan related to the interchangeable use of the terms 'spent nuclear fuel' and 'spent fuel', and Mr N. Maqbul suggested a resolution to this at the meeting. The comment from India had been accepted with modification. One of the comments from Spain had been accepted with modification, but the other comments had been rejected.

Mr Guskov's presentation is available on the CSS web site.

Ms Golshan confirmed that WASSC supported the draft publication.

The Commission endorsed the draft for publication, subject to subsequent silent approval of the final edited version.

3.10. Draft DPP DS516 for a Safety Guide on Criticality Safety in the Handling of Fissile Material (revision of SSG-27)

Mr J. Rovny presented the background to the DPP, which, together with the DPPs for DS517 and DS518 (see below), represent the revision of six Specific Safety Guides for nuclear fuel cycle facilities. These revisions have been prompted by the publication of SSR-4, and also the need to take into account operating experience and feedback on the use of the existing standards. Mr Rovny noted that the scope and structure of the Safety Guide would remain the same as in SSG-27. Two comments had been received from the CSS members from India and Israel; both of these comments had been accepted.

Mr Rovny's presentation is available on the CSS web site.

Mr Webster confirmed that NUSSC supported the draft publication, after having agreed to a shortened timescale and a staggered submission of the drafts covered by DS516, DS517 and DS518 to Member States.

Ms Rigail asked how the Safety Guide could describe a graded approach to criticality. Mr Rovny replied that a Technical Meeting had been held on this subject and this had indicated that a graded approach could be applied in terms of scope of the criticality safety assessment methodologies.

The Commission approved the DPP.

3.11 Draft DPP DS517 for the revision of the Safety Guides SSG-5 on Safety of Conversion Facilities and Uranium Enrichment Facilities, SSG-6 on Safety of Uranium Fuel Fabrication Facilities, and SSG-7 on Safety of Uranium and Plutonium Mixed Oxide Fuel Fabrication Facilities

Mr Rovny presented the background to the DPP (see DS516 above), and explained that the three Safety Guides in this group would need significant revisions. A total of four comments had been received from the CSS members from Israel and the Republic of Korea; all of these comments had been accepted.

Mr Rovny's presentation is available on the CSS web site.

Mr Webster confirmed that NUSSC supported the draft publication.

Ms Rigail commended the DPP (and the DPP for DS518) for their focus on ageing management, and asked whether chemical risks would also be covered. Mr Rovny confirmed that this subject would be covered and that a Technical Meeting on ageing management for nuclear fuel cycle facilities is planned.

Mr Lewis approved of the planned revisions of the three Safety Guides, but queried why they should not be combined into one publication. Mr Delattre replied that the approach for nuclear fuel cycle facilities was to have facility-specific Safety Guides. Mr Webster noted that there were different opinions on the value of combining such guides, and reported that NUSSC had asked the Secretariat to report back on the experience from doing this. Mr Hart confirmed that the UK supported attempts to consolidate Safety Guides, and asked whether NUSSC intended to keep this under review. Mr Webster reported that lessons will be learned from ongoing projects to revise simultaneously multiple Safety Guides, in order to inform future proposals of this kind.

The Commission approved the DPP.

3.12 Draft DPP DS518 for the revision of the Safety Guides SSG-42 on Safety of Nuclear Fuel Reprocessing Facilities, and SSG-43 on Safety of Nuclear Fuel Cycle Research and Development Facilities

Mr Rovny presented the background to the DPP (see DS516 above), and explained that the two Safety Guides in this group were expected to require only minor modifications. Three comments had been received from the CSS member from the Republic of Korea; all of these comments had been accepted.

Mr Rovny's presentation is available on the CSS web site.

Mr Webster confirmed that NUSSC supported the draft publication.

Ms Rigail noted that it would be very important to get contributions during the drafting on the application of the graded approach, i.e. to facilities ranging from small research facilities to large reprocessing plants.

The Commission approved the DPP.

4. DPPs and Draft Nuclear Security Series publications for information

None submitted.

5. Policy discussions

5.1. Progress report on the preparation of a Safety Report to address the conclusions of the 2012 UNSCEAR Report (see action 43.03 from the 43rd CSS meeting)

Mr Delattre reported that a Consultants' Meeting had been held in March 2019 to prepare the DPP for a Safety Report to provide practical guidance, including case studies, on how to apply the concepts of:

- Retrospective attribution of radiation health effects;
- Prospective inference of health risks from radiation exposures;
- Prediction of notional health effects for comparative purposes (e.g. the use of collective dose).

Ms G. Hirth, Chair of the Consultants' Meeting, presented a progress report from Australia via Skype. Ms Hirth listed the participants at the meeting, including representatives of UNSCEAR, ICRP, the Review Committees, the CSS and the Secretariat. She then summarized the presentations given at the meeting and the extensive discussions that followed.

An annotated DPP had been produced at the Consultants' Meeting, including suggested structure and content for the Safety Report. The Secretariat would use this as the basis for preparing a more concise draft DPP. The meeting also recommended that consideration be given to preparing an internal document (for example as working material or a SPESS document) for the Secretariat to guide the future development of Safety Standards with respect to attribution of health effects and inference of risk. Progress reports on the development of the Safety Report would be provided to future meetings of the Safety Standards Committees and the CSS **[Annex III, Action 45.04].** Further support for the recommendations from the meeting was subsequently provided by Ms Hirth via Skype.

Ms Drábová thanked Ms Hirth for the presentation and stated that the outcomes from the Meeting were a step forward. Mr Jammal asked about the proposed project plan for the development of the Safety Report. Mr Caruso confirmed that this would be part of the DPP. Ms Alm-Lytz stated that the suggested scope was appropriate, but that it was still not clear that a Safety Report was required, especially if this took resources away from the revision of Safety Guides. Mr I. Lund supported the work of the Consultants' Meeting, and was pleased to see the involvement of all of the Committees. He suggested that the Safety Report might be co-sponsored by UNEP.

Mr Markovits enquired about the coordination of this project with the review of SF-1. Ms Drábová replied that these were now separate projects, but would be undertaken in parallel. Mr Lewis asked whether the same individuals as attended the Consultants' meeting were expected to be involved in the drafting of the Safety Report. Mr Caruso replied that there were no specific plans — the objective was to involve the most suitable experts.

Mr H. Wanner stated that more information on attributing health effects from low doses of radiation would be helpful, and cited a recent court case in Switzerland where this would have been useful. Ms Golshan added that there had also been a court case in the UK where such information would have been helpful. Mr Caruso stated that it was important that the Safety Report had a scientific basis, but noted that it was not being written to address legal issues. Mr Lund supported this statement.

Mr González gave a presentation (available on the CSS web site), in which he reviewed the implications of the 2012 UNSCEAR Report, and suggested that these were, in fact, a stabilizing force on both the ICRP linear non-threshold theory and the IAEA safety standards. He also noted that, from a legal perspective, the concept of 'imputation' (not 'attribution') was the main issue.

5.2. Final reports from the Committees on the action 43.04 from the 43rd CSS meeting related to the review of the Safety Fundamentals SF-1

Mr Delattre confirmed that the reports from the Committees on the review of SF-1 had been posted on the CSS web page. He then presented an executive summary of the conclusions from these reports, which has also been posted on the web page.

Ms Heinrich noted that, although there had been no overall consensus in EPReSC for a revision of SF-1, the review process itself was considered to have been very valuable.

Ms Bly noted that there will be a point in the future when a revision of SF-1 is necessary, and that the arrangements for the involvement of co-sponsors should be considered in advance of this. Mr González recalled that GSR Part 3 had been developed through a joint Secretariat of potential co-sponsors, and perhaps this might be considered for a future revision of SF-1.

Mr González also noted that the principles in SF-1 were not wholly consistent with more recently issued Safety Requirements publications such as GSR Part 3 and GSR Part 7; for example Principle 4 on Justification did not address the justification of protective actions. Ms Drábová responded that this was addressed to some extent by Principle 10 on Protective Actions.

Mr Webster suggested that perhaps it would be useful to set a timescale for the revision of SF-1, noting that one reason NUSSC had opposed revision of SF-1 was the current heavy workload on the Safety Guides revision to bring them into line with the revised Safety Requirements, but that should ease in about three years. Mr Powell noted that SF-1 would need updating to include concepts such as communication and consultation, and agreed that it would be useful to discuss a timescale, given that the revision of the top level safety standard was a lengthy process.

Ms Rigail agreed that parts of SF-1 do not closely align with the ICRP system of protection, but considered that the text of SF-1 was sufficiently flexible to avoid any major discrepancies. Ms Rigail said that SF-1 was still fit for purpose, and noted that the target audiences for ICRP recommendations and for the IAEA Safety Standards were not the same. Ms Alm-Lytz supported the conclusions of the Committees, noting that the first priority is the revision of the Safety Guides, after which a complete revision of SF-1 might be warranted. Mr M. Sakurada agreed that the Commission had to consider the appropriate allocation of resources, and also agreed with the conclusions of the Committees.

Mr Hart stated that it was important to preserve the work undertaken in the review of SF-1, so that this could be taken forward in future. Mr González agreed that it was important to collate the conclusions to help in the analysis of issues to be addressed in a future revision of SF-1. Ms Drábová proposed that the conclusions of the Review Committees from their reviews of SF-1 should to be collated in a systematic way, and should be captured using the NSS-OUI feedback mechanism. In addition, the Review Committees, including observer organizations, should to continue to document any additional comments on SF-1 via NSS-OUI **[Annex III, Action 45.05]**. Ms Bly again stressed the need to have a decicated process that involves co-sponsors. Ms Drábová agreed that this is important, and Mr Delattre noted that co-sponsors also have access to the NSS-OUI feedback mechanism.

Mr Lentijo closed the discussions by noting that there is no immediate need to revise SF-1, but there are reasons why this will be necessary in future. He suggested that a pragmatic approach was needed, with the first priority being the completion of the revision of the Safety Guides. In the meantime, collation of the feedback accumulated from the review process was an appropriate next step.

5.3 Preparation of the end of term report

Mr Delattre distributed the draft Progress Report on the CSS interests for its 6th term. He noted that the end of term report needed to capture these interests, describe the progress made during the 6th term, and provide recommendations for the 7th term of the CSS.

Mr González stated that there were a number of important strategic issues for the CSS to consider at the next meeting, including the application of new safety standards to existing nuclear power plants, the approach to protection against radon, the attributability of health effects, the approach to combining safety standards, legacy sites and new medical technologies.

Ms Golshan noted that the role of the CSS in approving DPPs and draft standards was very important, but agreed that the Commission should also discuss policy and topical issues, such as decommissioning, new nuclear build and the introduction of innovative techniques. Ms Alm-Lytz suggested that the Review Committees might also supply topics for the CSS to consider, and that the application of the graded approach and the establishment of standards for SMRs should be included.

Mr Lewis expressed support for the Commission to consider strategic issues. He noted that the report on the interests for the 6th term was useful, but perhaps overstated some of the progress made. Ms Rigail agreed that the Commission should concentrate more on strategy, and that the current focus on improving processes was no longer needed. Ms Rigail suggested that topics of interest for the 7th term included radon, decommissioning, the application of the graded approach, and the interfaces between safety and security.

The Commission agreed that a set of policy discussions be held at the next CSS meeting, based on a selection from the above list of proposal **[Annex III, Action 45.06].**

The draft end of term report should be prepared with three main parts: 1) factual main results of the sixth CSS term; 2) progress report on the CSS main interests for its sixth term; and 3) CSS recommendations for its seventh term **[Annex III, Action 45.07].**

Mr Lentijo thanked the members of the Commission for providing suggestions on topics that might be focused on in the 7th term. He then closed the discussion by noting that any new activities undertaken by the CSS needed to be consistent with the Terms of Reference.

5.4 Updates on NSS-OUI

Mr Delattre informed the Commission about the updates in SPESS E which describes the purpose, architecture and rationale behind NSS-OUI functionalities. He emphasized updates in the descriptions of the tagging approach, versioning control, tagging with Safety Glossary definitions, the documentation of relationships among publications, the feedback mechanism, as well as providing a simplified graphic of the entire architecture. Mr Delattre underlined the role of SPESS E as a knowledge management document that could help Member States in adopting a similar approach for managing national regulations.

He reported that a new self-learning file is available on the NSS-OUI homepage, which can also be used for 'train-the-trainers' purposes in Member States.

Mr Caruso stressed that NSS-OUI is an essential tool for effectively revising the publications in the safety standards and nuclear security guidance publications, and encouraged members of the Commission to actively use it. Ms D. Drábová also encouraged Chairs of the Review Committees to promote the use of NSS-OUI among members and observer organizations.

6. Use of IAEA safety standards in Member States

6.1 China

Mr Y. Jun gave a presentation (available on the CSS web site) on the use of IAEA safety standards in China. He summarized the nuclear power programme, as well as the regulatory system and legislative procedures in China. His presentation also included an analysis of which IAEA safety standards have been adopted, and how the safety objective and safety principles in SF-1 have been integrated into Chinese legislation.

In the discussion that followed, Mr Jun gave more information on the future development of the nuclear energy programme in China, the approach to SMRs, the licensing process for facilities, and the responsibilities for nuclear security in China.

6.2 Finland

Ms Alm-Lytz gave a presentation (available on the CSS web site) on the use of IAEA safety standards in the development of Finnish radiation and nuclear safety regulations. She summarized the nuclear facilities and regulatory oversight activities in Finland. Ms Alm-Lytz then described the regulatory system and legislative instruments in Finland in relation to safety and nuclear security, and how the interfaces between safety and security are addressed. She also described the knowledge management tool used for the regulatory oversight of nuclear facilities.

In the discussion that followed, Ms Alm-Lytz gave more information on how the administrative burden associated with regulation was assessed, the approach to regulations for new nuclear power plants, and the regulatory review and assessment process in Finland.

7. Information on the activities of the OECD Nuclear Energy Agency

Mr A. White presented a summary (available on the CSS web site) of recent NEA activities in relation to the following areas:

- Nuclear regulation;
- Nuclear safety research;
- Multinational design evaluation programme (MDEP);
- Human aspects of nuclear safety;
- Radioactive waste management;
- Nuclear decommissioning and legacy management;
- Radiological protection and public health.

In the discussion that followed, Mr White gave more information on addressing legal issues and the NEA programme on deep geological disposal.

8. Miscellaneous. Report of the meeting, Date of the next meetings

Mr Y. D. Song and Mr Markovits volunteered to provide presentations at the 46th CSS meeting on the use of the IAEA safety standards in the Republic of Korea and Israel, respectively.

Mr Delattre indicated that a draft list of actions resulting from the 45th CSS meeting would be provided for comment to the CSS members **[Annex III, Action 45.08]** and that the draft report of the 45th CSS meeting would be posted on the CSS web site for comment **[Annex III, Action 45.09]**. Mr Delattre informed the Commission that all presentations made at the 45th CSS meeting would be posted on the CSS web site **[Annex III, Action 45.10]**.

Mr Delattre informed the Commission that the dates for the next meeting are **16–20 December 2019** and the first meeting in 2020 would be held in the week from **14-17 April 2020.**

ANNEX I

PARTICIPATION AT THE 45th CSS MEETING

The Commission

A. J. González, Argentina

C.-M. Larsson, Australia (sent apologies – unable to attend; represented by J. Powell)

A. Gromann De Araujo Goes, Brazil

R. Jammal, Canada

Y. Jun, China

D. Drábová (Chair), Czech Republic

M. R. M. Ezz El-Din, Egypt

P. Tiippana, Finland (sent apologies – unable to attend; represented by K. Alm-Lytz)

A.-C. Rigail, France

T. Elsner, Germany (sent apologies – unable to attend)

G. Nageswara Rao, India

M. Markovits, Israel

M. Sakurada, Japan

J. S. Uhm, Republic of Korea (sent apologies – unable to attend; represented by Y. D. Song)

H. Mohd Ali, Malaysia (sent apologies – unable to attend)

M. Z. A. Baig, Pakistan (sent apologies – unable to attend; represented by N. Maqbul)

A. Ferapontov, Russian Federation

M. Žiaková, Slovakia

C. O. Phillips, South Africa

J. Dies Llovera, Spain

I. Lund, Sweden

H. Wanner, Switzerland

A. Hart, United Kingdom

F. Brown, United States of America (sent apologies – unable to attend; represented by R. Lewis)

Observers

L. Vinhas, AdSec

M. Garribba, EC (sent apologies – unable to attend; represented by M. Heubel)

C. Cousins, ICRP (sent apologies – unable to attend)

R. Meserve, INSAG (sent apologies – unable to attend)

N. Muroya, OECD-NEA (sent apologies – unable to attend; represented by A. White)

Chairpersons of the Review Committees

EPReSC: A. Heinrich

NSGC: S. Bayer (sent apologies – unable to attend; represented by J. Facetti)

NUSSC: P. Webster

RASSC: R. Bly

TRANSSC: P. J. Hinrichsen

WASSC: M. Golshan

Representatives and associated experts

M. Aparicio, I. Forest, K. Goto, G. Hirth (via Skype), Y. Li, H. W. Park, R. Sharafutdinov, N. Turner, Y. Vinogradova, M. Yasuda, Y. S. Yoon, J. Zegri Reiriz.

IAEA Staff Members

J.-C. Lentijo, Deputy Director General, Department of Nuclear Safety and Security

E. Buglova, Head, Incident and Emergency Centre (IEC)

G. Caruso, Director, Office of Safety and Security Coordination (NSOC)

P. Johnston, Director, Division of Radiation, Transport and Waste Safety (NSRW)

R.A.A. Raja Adnan, Director, Division of Nuclear Security (NSNS)

G. Rzentkowski, Director, Division of Nuclear Installation Safety (NSNI)

H. Mansoux, S. Morita, A. Orrell, M. Pinak, D. Senior, A. Shokr, C. Spitzer, P. Tarren.

A. Amri, K. Asfaw, Z. Fan, A. Guskov, P. Kaiser, T. Karseka-Yanev, H. Pappinisseri Puthanveedu, J. Rovny, P. Sales Barbosa, P. Shaw, C. Toth, P. Villalibre.

Coordinators of Review Committees and of the Commission on Safety Standards

R. de la Vega, Incident and Emergency Centre (IEC), EPReSC

M. Svab, Regulatory Activities Section (NSNI), NUSSC

T. Colgan, Radiation Safety and Monitoring Section (NSRW), RASSC

S. Whittingham, Regulatory Infrastructure and Transport Safety Section (NSRW), TRANSSC

S. Geupel, Waste and Environmental Safety Section (NSRW), WASSC

I. Barraclough, Safety Standards and Security Guidance Development Section (NSOC), NSGC

D. Delattre, Scientific Secretary of the CSS (NSOC), Safety Standards and Security Guidance Development Section

ANNEX II

AGENDA OF THE 45th MEETING OF THE COMMISSION ON SAFETY STANDARDS: 8–9 April 2019

1. Opening Session

1.1. Opening of the Meeting by DDG J.-C. Lentijo

1.2. Introductions of new members, Adoption of the Agenda, Adoption of the 44th CSS meeting report

1.3. Administrative arrangements for the meeting, Status of the overall structure, Status of the endorsed Standards, progress on the main topics that the CSS identified as interests for the 6th term and response to actions from the 44th Meeting.

***2.* Reports from the Safety Standards Committees and the Nuclear Security Guidance Committee**

2.1. Emergency Preparedness and Response Standards Committee; A. Heinrich, Chairperson/R. de La Vega, Scientific Secretary

2.2. Nuclear Safety Standards Committee; P. Webster, Chairperson/M. Svab, Scientific Secretary

2.3. Radiation Safety Standards Committee; R. Bly, Chairperson/T. Colgan, Scientific Secretary

2.4. Transport Safety Standards Committee; P. Hinrichsen, Chairperson/S. Whittingham, Scientific Secretary

2.5. Waste Safety Standards Committee; M. Golshan, Chairperson/S. Geupel, Scientific Secretary

2.6. Information on the meeting of the Nuclear Security Guidance Committee; J. Facetti, Vice-chairperson/ I. Barraclough, Scientific Secretary

2.7. Information on the meeting of the Chairs held on 8 April 2019 before the CSS meeting.

3. Approval of draft publications and DPPs

3.01. Draft Safety Guide DS419 on Radiation Safety in Well Logging, H. Pappinisseri Puthanveedu

3.02. Draft Safety Guide DS420 on Radiation Safety in the use of Nuclear Gauges, H. Pappinisseri Puthanveedu

3.03. Draft Safety Guide DS434 on Radiation Safety of Accelerator Based Radioisotope Production Facilities, H. Pappinisseri Puthanveedu

3.04. Draft Safety Guide DS440 on Design of Auxiliary Systems and Supporting Systems for Nuclear Power Plants, A. Amri

3.05. Draft Safety Guide DS449 on Format and Content of the Safety Analysis Report for Nuclear Power Plants, P. Villalibre

3.06. Draft Safety Guide DS459 on Management of Residues Containing Naturally Occurring Radioactive Material from Uranium Production and other Activities, Z. Fan

3.07 Draft Safety Guide DS475 on Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency, P. Kaiser

3.08. Draft Safety Guide DS487 on Design of Fuel Handling and Storage Systems for Nuclear Power Plants, C. Toth

3.09. Draft Safety Guide DS489 on Storage of Spent Nuclear Fuel, A. Guskov

3.10. Draft DPP DS516 for a Safety Guide on Criticality Safety in the Handling of Fissile Material

(revision of SSG-27), J. Rovny

3.11. Draft DPP DS517 for the revision of the Safety Guides SSG-5 on Safety of Conversion Facilities and Uranium Enrichment Facilities, SSG-6 on Safety of Uranium Fuel Fabrication Facilities and SSG-7 on Safety of Uranium and Plutonium Mixed Oxide Fuel Fabrication Facilities, J. Rovny

3.12 Draft DPP DS518 for the revision of the Safety Guides SSG-42 on Safety of Nuclear Fuel Reprocessing Facilities and SSG-43 on Safety of Nuclear Fuel Cycle Research and Development Facilities, J. Rovny

4. DPPs and draft Nuclear Security Series publications for information

None submitted.

5. Policy discussion

5.1. Progress report (by WebEx) by G. Hirth (Chair of the CS held on 5–8 March 2019) on the preparation of a Safety Report to address the action 43.03 from the 43rd CSS meeting and specifically to provide practical guidance, including case studies, on:

- How to apply the concept of retrospective attribution of radiation health effects;
- The prospective inference of health risks from radiation exposures;
- The prediction of notional health effects for comparative purposes (e.g. the use of collective dose).

5.2 Final reports from the Committees on the action 43.04 from the 43rd CSS meeting related to the review of the Safety Fundamentals SF-1.

5.3 Preparation of the end of term report

5.4 Updates on NSS-OUI

6. Use of IAEA safety standards in Member States

6.1 China

6.2 Finland

This will also include a call for candidates for making a presentation at the next meeting on the use of safety standards in Member States.

7. Information on activities of the OECD Nuclear Energy Agency

8. Miscellaneous. Report of the meeting. Dates of the next meetings (16–20 December 2019 and 14–17 April 2020)

ANNEX III

ACTIONS ARISING FROM THE 45th MEETING OF THE COMMISSION

45.01 The final report of the 44th CSS meeting to be uploaded on the CSS web page. **[Action: Secretariat, CSS Scientific Secretary]. Done**

45.02 The Secretariat is to produce a summary "road map" that includes the currently planned initiatives to issue publications on managing the safety–security interface, for presentation at the 46th CSS meeting. **[Action: Secretariat, CSS Scientific Secretary]**

45.03 The MTCD edited versions of the draft safety guides DS419, DS420, DS434, DS440, DS449, DS459, DS475, DS487 and DS489 to be posted on the CSS web page, as soon as they are available. CSS members to be alerted by email for a two week silent approval procedure with the objective of confirming the CSS endorsement of these drafts. **[Action: Secretariat, CSS]**.

45.04 The results of the CM held in March 2019 and the draft DPP for the Safety Report to be presented for information to the Review Committees at their meeting during the Summer 2019 and progress reports to be made at future meetings of the Review Committees and the CSS. **[Action: Secretariat]**

45.05 The conclusions of the Review Committees from their reviews of SF-1 are to be collated in a systematic way, and should be captured using the NSS-OUI feedback mechanism. Although the review process is now considered to have been completed, the Review Committees members and observers are invited to continue to document any additional comments on SF-1 via NSS-OUI, i.e. as can be done for any other publication in the Safety Standards and Nuclear Security Guidance series. **[Action: Review Committees].**

45.06 A set of policy discussions to be held during the 46th CSS meeting, selected among the several proposals made at the 45th meeting **[Action: CSS Scientific Secretary, Secretariat, CSS].**

45.07 A draft end of term report to be prepared with three main parts: 1) factual main results of the sixth CSS term; 2) progress report on the CSS main interests for its sixth term and 3) CSS recommendations for its seventh term. **[Action: CSS Scientific Secretary, Secretariat, CSS].**

45.08 A draft list of actions resulting from the 45th CSS meeting to be provided to the CSS members for comments. **[Action: Secretariat, CSS Scientific Secretary]. Done (this list).**

45.09 The draft report of the 45th CSS meeting to be posted for comments. **[Action: Secretariat, CSS Scientific Secretary].**

45.10 The presentations made at the 45th CSS meeting to be uploaded on the CSS web page. **[Action: Secretariat, CSS Scientific Secretary]. Done.**

ANNEX IV

STATUS OF ACTIONS FROM THE 44th MEETING OF THE COMMISSION

44.01 The final report of the 43rd CSS meeting to be uploaded on the CSS web page. **[Action: Secretariat, CSS Scientific Secretary]. Done**

44.02 Discussion documents should be prepared in advance of the Consultants' Meeting in March 2019 to prepare a DPP for the Safety Report addressing issues airing from the 2012 UNSCEAR report (see Action 43.03). This should include proposals on the purpose, scope, target audience and possible contents of the Safety Report and be circulated to the CSS. **[Action: Secretariat, CSS Scientific Secretary, CSS]. Done**. **Secretariat paper posted on 30 January. Comments from USA and NUSSC Chair. Contribution papers from Argentina and Australia. CS held 5-8 March 2019. See Agenda Item 5.1**

44.03 The MTCD edited versions of the draft safety guides DS403, DS471, DS481, DS482, DS486, DS488, DS491 and DS492 to be posted on the CSS web page when available. The CSS members to be alerted by email for a two week silent approval procedure, with the objective of confirming the CSS endorsement of these drafts. **[Action: Secretariat, CSS]. Done for DS403 and DS492**

43.04 NSGC to be consulted on possible participation at the Consultants' Meeting referred to in action 44.02 above **[Action: Secretariat, NSGC Scientific Secretary]. Done: the Scientific Secretary represented NSGC**

44.05 The current reviews of SF-1 being undertaken by the SSCs should continue and further progress reports should be presented at the 45th CSS meeting. **[Action: SSCs, Secretariat, CSS Scientific Secretary]. Done. See Agenda Item 5.2**

44.06 Arrangements should be made for draft standards that have reached the MTCD editing stage to be checked for potential issues that could arise from subsequent translation of the text into official languages. **[Action: Secretariat]. Done in a systematic manner**

44.07 The Safety Glossary is an essential supporting publication for the Safety Requirements publications and other safety standards. Funds should be sought for the translation of the 2018 Edition of the Safety Glossary into all official languages. **[Action: Secretariat]. Glossary in publication and cost-estimate for translation (track-changes) will be requested.**

44.08 A draft list of actions resulting from the 44th CSS meeting to be provided to the CSS members for comments. **[Action: Secretariat, CSS Scientific Secretary]. Done (this list)**

44.09 The draft report of the 44th CSS meeting to be posted for comments. **[Action: Secretariat, CSS Scientific Secretary]. Done. Draft posted on 3 January 2019. Comments from NUSSC Chair and NSGC Vice-Chair. Revised report posted on 30 January. See Agenda Item 1.2.**

44.10 The presentations made at the 44th CSS meeting to be uploaded on the CSS web page. **[Action: Secretariat, CSS Scientific Secretary]. Done**