49th Meeting of the Commission on Safety Standards

VIRTUAL MEETING on 07 and 08 April 2021

Report of the Meeting

Overview of main results of the meeting

A. The following draft safety standards were endorsed:

- DS497A: Safety Guide on Operational Limits and Conditions for Nuclear Power Plants (revision of NS-G-2.2).
- DS497B: Safety Guide on Modifications to Nuclear Power Plants (revision of NS-G-2.3).
- DS497C: Safety Guide on The Operating Organization for Nuclear Power Plants (revision of NS-G-2.4).
- DS497D: Safety Guide on Core Management and Fuel Handling for Nuclear Power Plants (revision of NS-G-2.5).
- DS497E: Safety Guide on Maintenance, Testing, Surveillance and Inspection in Nuclear Power Plants (revision of NS-G-2.6).
- DS497F: Safety Guide on Recruitment, Qualification and Training of Personnel for Nuclear Power Plants (revision of NS-G-2.8).
- DS497G: Safety Guide on Conduct of Operations at Nuclear Power Plants (revision of NS-G-2.14).
- DS516 Draft Safety Guide on Criticality Safety in the Handling of Fissile Material (revision of SSG-27).

B. **The following draft DPPs were approved:**

- DPP DS529: Safety Guide on Investigation of Site Characteristics and Evaluation of Radiation Risks to the Public and the Environment in Site Evaluation for Nuclear Installations (revision of NS-G-3.2).

C. **Policy discussions:**

- The CSS supports the creation of the Strategic Planning Working Group, and considers that development of a strategic plan for the implementation of the CSS recommendations is a priority. This will be provided for discussion at the next CSS meeting, together with a revised draft of the medium term plan.
- The Review Committees will be invited to review the preliminary gap analysis prepared by the Secretariat in response to the Covid-19 pandemic. The input from the Committees will be used by the Secretariat to prepare a more holistic analysis, which will then be integrated with the medium term plan. No new revisions to individual standards will be undertaken in response to the Covid-19 pandemic before the medium term plan had been discussed and agreed by the CSS.
- The CSS supports the activities being undertaken by the Secretariat with regard to SMRs and encourages the involvement of all the Review Committees in activities and discussions on this subject. This will include a special Meeting of the Chairs dedicated to this topic. An update on the activities undertaken will be provided at the next CSS meeting.

1. Opening session

1.1 Guidance on the conduct of the virtual meeting

Due to the ongoing Covid-19 pandemic, instead of the regular Headquarters meeting of the Commission on Safety Standards, procedures for online review of draft safety standards and draft DPPs were adopted (see agenda item 3), and the 49th Meeting of the CSS took place as a virtual meeting over two sessions held on the 7th and 8th of April 2021.

Mr D. Delattre welcomed the CSS participants logging on to the virtual meeting, and explained how the meeting would be conducted on-line.

1.2 Opening of the meeting: DDG L. Evrard

Ms Lydie Evrard said that she was extremely pleased to join the CSS meeting in her first week as Deputy Director General and Head of the Department of Nuclear Safety and Security. She noted the important role of the CSS in supporting the Agency in its mandate, and thanked her predecessor Mr Juan-Carlos Lentijo. Ms Evrard noted that the long-term structure of the safety standards established by the CSS in 2008 was close to completion, and new initiatives for the future development were now needed.

Ms Evrard thanked the outgoing and continuing chairpersons of the Review Committees, and welcomed the new chairpersons (see agenda item 1.4). She also thanked the CSS members for their dedicated and diligent input on the safety standards, which are a cornerstone of the global nuclear safety regime. She noted that the Covid-19 pandemic continued to present challenges, and thanked CSS members for sharing their experience. The Secretariat had prepared a preliminary gap analysis on possible implications for the safety standards and the nuclear security guidance, for consideration by the CSS.

In terms of the meeting agenda, Ms Evrard, noted the following:

- The meeting would discuss the new CSS Strategic Planning Working Group to support the CSS in the preparation of a medium and long term programme for the development of the safety standards (see agenda item 1.6).
- There were 8 draft Safety Guides for endorsement, as well as one draft DPP (see agenda items 3.1–3.9). Seven of the Safety Guides address the safe operation of nuclear power plants and were developed as a 'batch' to help ensure consistency.
- A progress report would be presented on the preparation of a Safety Report on the implications of the 2012 UNSCEAR report for the safety standards (see agenda item 7).

Ms Evrard concluded by wishing the CSS members a very productive meeting and expressed her deep appreciation for their continued support in enhancing the safety standards.

1.3 Introductory remarks from the CSS Chair

Ms R. Velshi thanked Ms Evrard for her introductory remarks and congratulated her on her new appointment. Ms Velshi also welcomed the new chairpersons of the Review Committees (see agenda item 1.4), as well as the returning chairpersons that were continuing for a second term.

Ms Velshi reminded the commission that the meting would consist of two virtual sessions and would need to be conducted efficiently in order to cover everything on the agenda, which involved a number of important decisions for the CSS. A lot of material for consideration by CSS members had already been posted on the CSS webpage, and time had been allocated on the agenda for questions and discussions.

Ms Velshi noted that now the priorities of the CSS 7th term had been agreed, the focus would be on implementation. In this regard, Mr Delattre would provide an overview of the CSS Strategic Planning

Working Group (see agenda item 1.6). Ms Velshi noted that work had also begun on strengthening the working relationship between the CSS, the ICRP and UNSCEAR through a series of meetings later in 2021.

With regard to the agenda, Ms Velshi noted that there was an update on activities related to SMRs as well as an update of the Safety Report on the implications of the 2012 UNSCEAR report. With respect to the Covid-19 pandemic, Mr Delattre would present a progress report on the gap analysis being prepared by the Agency on possible implications for the Safety Standards (see agenda item 5.2).

Ms Velshi thanked the CSS members for their participation and looked forward to a successful meeting.

1.4. Introduction of new Committee chairpersons

Ms Velshi welcomed the following new Committee chairpersons to the CSS meeting:

- EPReSC: Mr Marcus Grzechnik (from Australia);
- NSGC: Mr Alejandro Cortés Carmona (from Mexico);
- TRANSSC: Mr David Pstrak (from USA).

A complete list of participants to this CSS meeting is provided in Annex I.

1.5 Adoption of the agenda

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

1.6 Establishment of a CSS Strategic Planning Working Group

Ms Velshi informed the commission that the very first meeting of the new Working Group had taken place in conjunction with the Meeting of Chairs of the Review Committees, and reminded the commission members that the Terms of Reference (ToR) for theWorking Group had been posted on the CSS website, and that the objective was to support the CSS in taking a longer term strategic view on the development of the safety standards. The Working Group would also consider how the CSS might work more closely with the Review Committees and the Secretariat.

Ms Velshi noted that the creation of the Working Group was supported by the Secretariat and chairpersons of the Review Committees, and would support the development of the following:

1. A future strategic long term plan;
2. A medium term plan;

Mr G. Caruso thanked Ms Velshi for the initiative, and stated that the Working Group would be an important asset. He noted that very good initial discussions had already taken place at the Meeting of the Chairs on 6 April.

Mr Delattre noted that this was the perfect time for the Working Group to begin considering these forward-looking issues. He noted that the preliminary medium term plan was simply a summary of all the inputs received, and would need further input and prioritisation from from the Review Committees. This plan had been posted on the CSS website together with a holistic view of the structure of the current safety standards.

Ms N. Cromnier expressed support for the initiative, and asked how the ToR had been approved. She also suggested that participation in the Working Group should be limited so as to ensure a focus on strategic-level issues. Mr Delattre replied that the ToR had been discussed and agreed by the CSS Chair, the chairpersons of the Review Committees and the Secretariat; however, any suggestions from CSS members on improvement to the ToR were welcome. He agreed that the participation in the Working

Group should be limited, and noted that the Scientific Secretaries listed in the ToR would have a supporting role and not be directly involved in the discussions on strategy.

Ms K. Alm-Lytz welcomed the opportunity for discussions on strategic issues, and agreed with the comments from Ms Cromnier. Ms Alm-Lytz suggested that the starting point should be the strategic plan: the other outputs would then be based on this. She also recommended an environmental scan to ensure that trends in nuclear and radiation safety are also taken into account. Ms Alm-Lytz also noted that the Working Group contained only one member of the CSS, and therefore its purpose should be solely to support the CSS. Mr Delattre confirmed that the approach and timing for the development of a long term strategic plan would also be considered, and also confirmed that the Working Group would report to the CSS and not be involved in decision making.

Ms G Hirth supported the comments from Ms Alm-Lytz, and asked how meetings of the Working Group would be arranged. Mr Delattre stated that the intention was for the Working Group to meet twice a year when all the participants were already gathered together for the Meeting of the Chairs. It was also possible that additional meetings could be arranged, if necessary.

Mr K. Mrabit suggested that the strategy for promoting the implementation of the safety standards was also important, and noted that many States were still lacking the necessary national framework for safety. Mr Caruso noted that the implementation of the safety standards is central to the IAEA Peer Review and Advisory Services Committee, and that perhaps this Committee might provide a briefing to the CSS.

Mr A. González supported the creation of the Working Group, although he expressed some reservations about the selection of the participants and the possible confusion of the role of the Working Group with the Meeting of the Chairs. He welcomed the inclusion of the Chair of NSGC, even though the Nuclear Security Series was not within the remit of the CSS. Mr González also noted that there was provision for observers to the Working Group meetings and indicated that Argentina would be interested in such a role.

Mr T Elsner agreed with the comments made by Ms Aln-Lytz and Ms Cronmier. He also expressed support for the creation of the Working Group and asked how observers would be selected. Mr Delattre replied that the details of this had yet to be finalized.

Ms Velshi confirmed that next meeting of the Working Group would involve discussion of a strategic plan for the implementation of the CSS recommendations. This will be provided for discussion at the next CSS meeting, together with a revised draft of the medium term plan. **[Annex IV, Action 49.01]**.

Ms Velshi thanked all the CSS members who contributed to the discussion, and stressed that the Working Group would report to the CSS and that the CSS would make the decisions on policy and strategy. The intention was that CSS members would be fully engaged in setting the future strategic direction of the safety standards.

1.7 Status of the IAEA safety standards and actions from previous meetings (posted in advance of the meeting)

Mr Delattre presented the status of the roadmap for the long term structure of the safety standards, including those recently endorsed by the CSS. He informed the Commission that one General Safety Guide and nine Specific Safety Guides had been published in 2020. He also noted that two other safety standards endorsed by the Commission were in the final stages of the publication process, and that nine other endorsed Safety Guides were awaiting editing. The total number of published safety standards was 132, consistent with the long term structure.

Mr Delattre presented information on timescales for publication, which had deteriorated, as anticipated in the status report to the previous CSS meeting.

Up-to-date information on the status of all safety standards and the Nuclear Security Series (published and in draft) is available at: http://www-ns.iaea.org/committees/files/CSS/205/status.pdf.

Mr Delattre then described the progress with outstanding actions from previous CSS meetings: see Annex III.

Mr González suggested that the full picture regarding publication timescales could only be gained by including the timescales for translations. He also stated that delays in translating the Safety Glossary might have legal implications in some States. Mr Mrabit agreed with these comments and suggested that the Strategic Planning Working Group could also consider these issues.

Ms A.-C. Rigail asked whether the publication of the Safety Guides, DS496 and DS506, which support the revised Transport Regulations (SSR-6 (Rev. 1)) could be made a priority. Mr Delattre confirmed that this was the case and that DS496 was next in line for editing.

Ms R. Sardella asked how individual drafts were prioritized within the publication process. Mr Delattre replied that most were processed in the order in which they were endorsed by the CSS. In just a few cases (e.g. DS496), had a special priority been assigned.

Ms Velshi echoed the concerns regarding delays in publication and asked what extra resources were needed to achieve targets in terms of the time between CSS endorsement and publication. Mr Delattre suggested that just a few additional editors might be sufficient, but also noted that two large batches of revised Safety Guides (DS497 and DS509) would soon need to be edited and this would place a further demand on the IAEA editing resources. Ms Evrard concluded the discussions by acknowledging that this was an important issue, and that she would investigate what could be done. The CSS will remain regularly informed on the evolution of the publishing issue. **[Annex IV, Action 49.02]**.

2. Questions on the pre-uploaded end of term reports from the Review Committees

As part of the format of the virtual meeting, the end of term reports from the Review Committees were not presented, but were instead uploaded to the CSS website for review by CSS members prior to the meeting. This session was provided to allow CSS members to ask questions or raise comments on these reports.

2.1 Emergency Preparedness and Response Standards Committee (EPReSC)

Ms A. Heinrich summarised the end of term report from EPReSC (available on the CSS website), including the progress made by the Committee and the priorities for the next term.

Mr R. Jammal asked about the scope of the future EPReSC focus on waste management for emergencies. Ms Heinrich replied that this was intended to cover the management of waste generated by activities such as the decontamination of personnel.

2.2 Nuclear Safety Standards Committee (NUSSC)

Mr P. Webster summarised the end of term report from NUSSC (available on the CSS website), including the progress made by the Committee and the priorities for the next term.

Ms Sardella stated that a combined safety and security glossary was needed, and asked whether NUSSC could work with NSGC to identify and resolve any discrepancies in the use of terminology. Mr Webster replied that within the Safety Glossary there were already many terms with multiple definitions, and that one of the purposes of the Glossary was to clarify the differences in usage. A combined safety and security glossary would serve a similar purpose and, in the longer term, could lead to harmonization of the use of terminology between safety and security. Mr Delattre stressed that both the Safety Glossary and the Security Glossary were simply collections of definitions that had already been published, but agreed that a combined glossary was a starting point for identifying where future harmonization might be possible.

Mr D. Roberts noted that significant numbers of TECDOCs and Safety Reports were published, and it would be useful to have a better understanding of the relationship between the various safety related publications. Mr Webster replied that this issue had been discussed by NUSSC, and that work had been done to group publications by topic to help navigation. Mr Delattre noted that all informational publications issued by the Department of Nuclear Safety and Security were intended to support the safety standards and/or the Nuclear Security Series.

2.3 Radiation Safety Standards Committee (RASSC)

Ms R. Bly summarised the end of term report from RASSC (available on the CSS website), including the progress made by the Committee and the priorities for the next term.

Mr Mrabit noted that RASSC had focused on the implementation of GSR Part 3 and enquired whether any good practices from this had been identified, which could be applied to the implementation of the safety standards in general. Mr Delattre suggested that this was a question for all the Committees, noting that Committee meetings included feedback from Member States on implementation of the standards. Ms Bly also noted that information on the implementation could also be collected from regional workshops and international conferences.

Mr Jammal noted that one of the topics considered by RASSC was the exposure of non-target tissue in radiotherapy, and asked what the objective of these discussions was. He also advised that caution was needed to not overly stress any risks associated with medical procedures that are beneficial overall. Mr R. Gutterres supported the need for caution, and noted that medical procedures were already conducted within a robust legal and regulatory framework. Ms Bly responded that RASSC were considering the possible impact of this issue on the safety standards, noting that an UNSCEAR study is being undertaken.

Mr González commented that many of the RASSC priorities were related to the scope of regulatory concern, and he suggested that a common overarching approach to this was needed. He also suggested that the phrase “extant exposure situations” would be more accurate than “existing exposure situations”.

2.4 Transport Safety Standards Committee (TRANSSC)

Mr P. Hinrichsen summarised the end of term report from TRANSSC (available on the CSS website), including the progress made by the Committee and the priorities for the next term.

2.5 Waste Safety Standards Committee (WASSC)

Ms M. Golshan summarised the end of term report from WASSC (available on the CSS website), including the progress made by the Committee and the priorities for the next term.

2.6 Nuclear Security Guidance Committee (NSGC)

Mr S. Bayer summarised the end of term report for NSGC (available on the CSS website), including the progress made by the Committee and the priorities for the next term.

Mr González noted the discussions in NSGC on the Security Glossary, and stated that there should be a single glossary for both safety and security. Mr Bayer replied that there were a range of views on this within NSGC, with speed of publication being a common concern. Mr Delattre confirmed that the Secretariat was working on a combined safety and security glossary. There were indeed differences in the use of terminology, and a combined glossary would help to identify and also explain these.

2.7 Summary of the Meeting of the Chairs and of the CSS Strategic Planning Working Group held on 6 April 2021

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

- Summary of the end of term reports to the CSS and response to the Q&A session;
- Digestion by the Review Committees of the Covid-19 gap analysis;
- First meeting of the CSS Strategic Planning Working Group (see agenda item 1.6):
- Implications for the Review Committees of the CSS recommendations for its 7th term;
- Implications for the CSS of the recommendations from the end of term reports.

In discussing these topics, the meeting:

- Identified areas for coordination between the CSS and the Committees;
- Considered initiatives in relation to the safety–security interface;
- Discussed the review of the NSS recommendations, and the need for joint sessions between the Review Committees;
- Encouraged the use of NSS-OUI for the collection of feedback prior to the revision of standards;
- Agreed to include presentations on SPESS and NSS-OUI in the next round of Review Committee meetings.
- Discussions were also held on SMRs, on the strengthening of DPPs and feedback reports. The minutes of the meeting will be posted for the CSS when available.

3. Approval of draft publications and DPPs

NOTE: The drafts submitted to the Commission at this meeting will be subsequently posted as a final edited version on the CSS web site. CSS members will be notified and given a period of two weeks to provide comments. At the end of this period, if there are no objections, the drafts will be considered to be endorsed (i.e. by 'silent approval'). **[Annex IV, Action 49.03]**

3.1. Draft Safety Guide DS497A Operational Limits and Conditions for Nuclear Power Plants;

3.2. Draft Safety Guide DS497B Modifications to Nuclear Power Plants

3.3. Draft Safety Guide DS497C The Operating Organization for Nuclear Power Plants

3.4. Draft Safety Guide DS497D Core Management and Fuel Handling for Nuclear Power Plants

3.5. Draft Safety Guide DS497E Maintenance, Testing, Surveillance and Inspection in Nuclear Power Plants

3.6. Draft Safety Guide DS497F Recruitment Qualification and Training of Personnel for Nuclear Power Plants

3.7. Draft Safety Guide DS497G Conduct of Operations at Nuclear Power Plants

Mr R. Cavellec described the background and scope of these seven draft Safety Guides on the operation of nuclear power plants, which were all revisions of previous publications and had been prepared in a single batch. He stated CSS comments had been received, from Germany, India, Japan, Korea and Pakistan; 96% of these comments had been accepted.

Mr Webster confirmed that NUSSC strongly supported the publication, and noted the following:

- The revision of seven Safety Guides in a single batch was a significant amount of work, and he offered congratulations to Mr Cavellec and also to the SSDS Standards Specialists.
- The Safety Guides for research reactors (DS509) and fuel cycle facilities (DS517) were also being prepared in batches. NUSSC intends to review the implementation of the process for batch revisions, and Mr Webster suggested that the CSS Strategic Planning Working Group could also consider this. Mr Mrabit supported this comment.

- In accordance with the DPP for DS497, there was a second step, which was to consider the overall structure of the Safety Guides on the operation of NPPs. Mr Webster suggested that this might also be considered by the CSS Strategic Planning Working Group.

Ms Cromnier also acknowledged the large amount of work in revising a batch of seven Safety Guides, and indicated that it would also be useful to see a version of the drafts in which the changes were marked.

Mr G. Nageswara Rao stated that these were very important Safety Guides, and the regulatory body in India had encouraged operating organizations to also review the drafts. He also noted that the role of the regulatory body in relation to the operation of NPPs and the arrangements for the supervision of multiple unit NPPs were important issues.

Mr J. Dies Llovera expressed support for DS497F, in particular the recommendations for a systematic approach to training. He also noted that the education requirements for key personnel and the enhancement of management competences were important issues that should be considered in future revisions.

Mr Roberts also acknowledged the effort that had gone into the revisions, and enquired whether the added text on pandemics was general in nature, or specific to Covid-19. Mr Webster replied that the text was very general in nature. Mr Jammal also advised against inserting text that would only be relevant to the Covid-19 pandemic.

Mr Delattre said that feedback on the process for revising safety standards in batches was welcomed. One issue that had already been identified was the need to increase the times allocated for the review of drafts by Member States, the Committees and the Commission. The SPESS B procedure had already been updated to reflect this.

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

3.8. Draft Safety Guide DS516 Criticality Safety in the Handling of Fissile Material

Mr J. Rovny presented the background, scope and structure of the draft Safety Guide. He presented a summary of the comments from Member States, which were mostly related to the completeness of factors influencing criticality, clarification of language, and editorial comments. No comments had been received from the CSS.

Mr Webster confirmed that NUSSC strongly supported the publication.

Ms Rigail expressed support for the Safety Guide, which would be extremely useful. In France, the approach to criticality safety and defence in depth described in the draft was already considered to be much clearer. Ms Hirth and Mr Mrabit also expressed support for the final version of the draft.

Mr Dies Llovera noted the increasing use of accident tolerant nuclear fuel containing higher levels of enrichment, and suggested that this needed to be taken into account in future revisions of the Safety Guides prepared under DS497 and DS516.

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

3.9. Draft DPP DS529 for a Safety Guide on Investigation of Site Characteristics and Evaluation of Radiation Risks to the Public and the Environment in Site Evaluation for Nuclear Installations (revision of NS-G-3.2)

Mr A. Altinyollar introduced the draft DPP, describing the background and justification for the publication, as well as the objectives, scope and proposed structure. He reported that a detailed gap analysis had been performed and that a Technical Meeting was planned to collect experience feedback before starting drafting. CSS comments had been received from Israel and Pakistan. All of these comments had been accepted and the DPP revised accordingly.

Mr Webster confirmed that NUSSC supported the publication and had noted that drafting would be

complex due to the interface with a large number of other safety standards.

Ms Cromnier enquired whether SMRs would be within the scope. Mr Nageswara Rao stated that this would be a good opportunity to consider SMRs, and noted that addressing a wide range of nuclear installations within the draft would be challenge. Mr Altinyollar replied that SMRs would be considered.

Mr González noted that a large number of safety standards were related to the siting of nuclear installations, and asked whether the proposed publication would replace an existing publication. He also noted that the focus of the proposed Safety Guide was on the effects on the public and the environment, and asked whether NUSSC was the most appropriate lead Committee. Mr Altinyollar replied that the DPP was for a revision of NS-G-3.2, which would be superseded by DS529. NUSSC had been selected as the lead committee because the Safety Guide referred specifically to nuclear installations; however, the wider interest in this topic had already been recognized, and Mr Telleria from NSRW Waste and Environmental Safety Section had been nominated as a joint Technical Officer in the DPP.

The Commission approved the DPP.

4. DPPs and draft Nuclear Security Series publications for information

No DPPs or draft publications for the Nuclear Security Series had been submitted to the CSS.

5. Covid-19 outbreak dedicated session

5.1. Information on updates posted on the CSS web page

Mr Delattre reported that additional information on dealing with the Covid-19 pandemic had been received from CSS members from Germany, Slovakia, Canada, France, Morocco and the United States of America – see agenda item 5.3.

5.2. Progress report on the gap analysis prepared by the Secretariat on possible implications on the Safety Standards and information on concomitant work for the security guidance

Mr Caruso reported that the preliminary gap analysis that was posted on the CSS website on 18 March contained input from the whole of the Department of Nuclear Safety and Security. The Secretariat was also preparing a Technical Report on the experiences of Member States in dealing with the Covid-19 pandemic; the draft of this report had also been used as an input to the gap analysis.

Ms Alm-Lytz stated that the gap analysis was a useful systematic starting point, but noted that it was premature to consider the revision of individual safety standards. Instead, a holistic approach was needed to ensure that the issues associated with managing safety and security during a pandemic were not overstated. Ms Alm-Lytz suggested an approach based on adding requirements for appropriate contingency planning, and supplementing this with a Safety Guide. Mr Delattre confirmed that there was no intention to start revising any of the safety standards before the medium term plan had been finalized, and agreed that it was important to not just focus on the covid-19 pandemic. He also noted that the Department of Nuclear Energy had already issued a publication on contingency planning, which could be used as input to any future revisions.

Mr J. Lee said that it was important to distinguish between mandatory and optional measures taken in response to the pandemic. He also suggested that flexibility was needed, and it was important to not make the safety requirements too specific.

Ms Cromnier expressed support for the process, and agreed with the comments made by Ms Alm-Lytz. She also requested that documents be posted on the CSS website as early as possible to allow more time for review. Ms Cromnier also noted that the Covid-19 pandemic was continuing and that there would be further lessons. Mr Delattre responded that the preliminary gap analysis had been posted on the CSS website for information; the next input will be from the Review Committees, after which the CSS will

be invited to comment on a revised version.

Mr Gutteres noted that there were a number of issues related to the impact on safety and security, including the effects on regulatory activities, arrangements for the release of nuclear medicine patients, and the impacts on refuelling of reactors and safety analyses.

Mr González stated that the gap analysis was a good starting point, and suggested that a policy decision was needed on whether it was appropriate to revise existing safety standards or to produce a new safety standard specifically on this issue.

5.3. Exchange of experience from CSS members

Mr Elsner reported that the staff of the regulatory body in Germany were working remotely, and that rapid testing was used prior to any office work. Regulatory oversight had continued, with the emphasis on exploring new methods for remote inspections. Outages for reactor refuelling were continuing as scheduled, and lessons from the previous outages conducted during the pandemic had been incorporated.

Ms M. Žiaková reported that there had been a high incidence of infection in Slovakia in 2021; however, regulatory oversight had continued using similar remote working and staff testing arrangements as described by Mr Elsner. In terms of NPPs, early implementation of staff testing had ensured that the rate of infection of operating personnel was very low.

Mr Jammal reported that the regulatory body in Canada had continued remote working arrangements and conducted remote inspections where practicable. It had been determined that community transmission (not workplace transmission) was the main source of infection among operating personnel. Testing was being undertaken on a voluntary basis and regulatory oversight had continued.

Ms Rigail reported that despite a new lockdown in France, the operation of nuclear installations, including planned outages, had continued. The regulatory body had begun strategic discussions, in which some lessons from the pandemic general management had already been identified, with the view to apply them to emergency preparedness and response, as well as developing a risk-awareness culture in the general population.

Mr Roberts noted that there was a mixed picture in terms of Covid-19 pandemic across the USA. Nevertheless, the rate of infection among operating personnel at nuclear installations was low. Regulatory inspections had continued, but with precautions such as distancing being employed where practicable. Mr Roberts noted that the extended nature of the pandemic raised longer term regulatory oversight issues such as the requalification of staff. However, the regulatory body remained confident that an effective system of regulatory oversight will be maintained. Mr Roberts also stressed the importance of the work of the international community.

Mr González commented that Argentina had also provided an update. He also noted that the Secretariat had conducted a survey of Member States on the impact of the Covid-19 pandemic, and he hoped that the results would be available soon. In addition, this issue had been discussed at a meeting of South American countries, in which issues such as the legal status of remote inspections were discussed. A report of the meeting was being prepared.

Ms Hirth reported that Australia will soon be able to share lessons from dealing with the Covid-19 pandemic, noting that there had been very different measures required in different parts of the country. Although normal working arrangement are now possible again, Ms Hirth noted that office attendance remained relatively low and there were long term issues associated with organizational culture and change management that needed to be addressed.

5.4. Future steps

Mr Delattre reminded the CSS that the next step was for the Review Committees to review the preliminary gap analysis and provide further input. This would be addressed at the next round of meetings of the Committees. From this, a more robust analysis would be prepared and integrated with the medium term plan. The intention was that the updated gap analysis and medium term plan would be presented at the next CSS meeting for discussion. Ms Velshi confirmed that no new revisions to

individual standards would be undertaken before the medium term plan had been discussed and agreed by the CSS **[Annex IV, Action 49.04]**.

Mr Webster noted that NUSSC had been asked to consider the addition of a paragraph in DS498 on pandemics, and enquired whether this was still appropriate. Ms Velshi replied that it would be better to await the finalization of the medium term plan.

Ms Alm-Lytz enquired about the publication of the report on the experiences from Member States on the operation, safety and security of facilities during the Covid-19 pandemic. Mr Delattre replied that a draft of the report would be made available for the General Conference, and that publication was planned before the end of 2021.

6. Update on SMR related activities

Ms P. Calle Vives gave a presentation (available on the CSS website) on the review of applicability of the safety standards to novel advanced reactors. She indicated that this was a high level review involving three consultancy meetings (March, May and July 2021) which would provide a basis for a Safety Report to be completed in 2021. It was also intended to provide the basis for the development of a future prioritized programme of work to address gaps and areas of non-applicability. Ms Calle Vives then provided more details on the approach to the review and the focus of each of the consultancy meeting.

Mr Delattre reported that the Meeting of the Chairs had agreed that all the Review Committees will be involved in discussing the issues associated with this topic, and that a special Meeting of the Chairs dedicated to this topic would be arranged. Ms Velshi noted the wide interest in this important topic and requested that an update of the activities undertaken be provided at the next CSS meeting **[Annex IV, Action 49.05]**.

7. Progress report on the preparation of a Safety Report on Implications of the 2012 UNSCEAR report for the IAEA safety standards: considerations on attribution of radiation health effects and inference of radiation risk

Ms K. Asfaw presented the background, structure and current status of the draft Safety Report. She then described the next steps, as follows:

- The current draft would be circulated to all Consultants and contributors for comment.
- The current draft would also be sent to the Safety Standards Committees for information at the June 2021 meetings.
- The 'final' draft would be sent to the CSS in November 2021.

Due to time limitations, Ms Velshi asked the CSS Members to contact Ms Asfaw by email if they had any questions or comments.

8. Any other business. Report of the meeting. Dates of the next meetings

Mr Delattre indicated that a draft list of actions resulting from the 49th CSS meeting would be provided for comment to the CSS members **[Annex IV, Action 49.06]** and that the draft report of the 49th CSS meeting would be posted on the CSS web site for comment **[Annex IV, Action 49.07]**. Mr Delattre informed the Commission that the material made available and the presentations made at the 49th CSS meeting would be posted on the CSS web site **[Annex IV, Action 49.08]**.

Mr Delattre informed the Commission that the week scheduled for the 50th CSS meeting is **15–19 November 2021**; the 51st meeting would be held in **April 2022** (in the week starting on 19 April 2022).

ANNEX I

PARTICIPATION AT THE 49th CSS MEETING

The Commission

R. Velshi (Chair of CSS)

A. J. González, Argentina

G. Hirth, Australia

O. Lugovskaya, Belarus

R. F. Gutterres, Brazil

R. Jammal, Canada

J. Yu, China

M. R. M. Ezz El-Din, Egypt (sent apologies – unable to attend)

K. Alm-Lytz, Finland

A.-C. Rigail, France

T. Elsner, Germany

G. Nageswara Rao, India

F. Gov, Israel

T. Yamada, Japan

J. Lee, Republic of Korea

K. Mrabit, Morocco

M. Z. A. Baig, Pakistan (sent apologies – represented F. Mansoor)

A. Ferapontov, Russian Federation

M. Žiaková, Slovakia

O. Phillips, South Africa

J. Dies Llovera, Spain

N. Cromnier, Sweden

M. Kenzelmann, Switzerland (sent apologies – represented by H. Nilsson)

S. Alten, Turkey

A. Hart, United Kingdom

D. Roberts, United States of America

Observers

L. Vinhas, AdSec (sent apologies – unable to attend)

M. Hübel, EC (sent apologies – represented by Hans Rhein)

C. Cousins, ICRP (sent apologies – represented by C. Clement)

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

N. Muroya, OECD-NEA

B. Batandjieva-Metcalf, UNSCEAR

Representatives and experts supporting CSS members and observers

M. Afshar-Tous, M. Aparicio, Y-K. Chung, C. Cole, J. F. Facetti K. Goto, T. Granier, T. Kato, M. Mihaila, K. Morgan-Butler, F. Pelayo, V. Rouyer, N. Sandberg, R. Sardella, M. Turner, S. Vinton, K. Weidenbrueck, A. White, S. Wittick.

Chairpersons of the Review Committees

EPReSC: M. Grzechnik (former chairperson: A. Heinrich)

NSGC: A. Cortés Carmona (former chairperson: S. Bayer)

NUSSC: P. Webster

RASSC: R. Bly

TRANSSC: D. Pstrak (former chairperson: P. Hinrichsen)

WASSC: M. Golshan

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 (not present - represented by M. Pinak)

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

N. Aghajanyan, Waste and Environmental Safety Section (NSRW), WASSC

S. Case-Lackner, Programme Development & Int Cooperation Section, NSGC (not present - represented by A. Hallock)

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

IAEA Secretariat

L. Evrard, Deputy Director General, Department of Nuclear Safety and Security

E. Buglova, Director, Division of Nuclear Security (NSNS)

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

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

F. Baciu, Acting Head, Incident and Emergency Centre (IEC)

P. Contri, L. Guo, S. Mallick, H. Mansoux, M. Pinak, V. Ranguelova, J. Rowat, A. Shokr.

A. Altinyollar, K. Asfaw, M. Bassett, G. Bruno, P. Calle-Vives, R. Cavellec, C. Fischer, F. Jiang, T. Karseka-Yanev, M. Kobein-Apolloner, M. Labyntseva, M. Nikolaki, J. Rovny, P. Sales Barbosa, Z. H. Shah, P. Shaw, J. Silve, M. Yuzawa, D. Zahradka.

ANNEX II

Agenda of the 49th Meeting of the COMMISSION ON SAFETY STANDARDS

WebEx meetings on 7 and 8 April 2021

CSS web page: The CSS members will find on the IAEA web site a "CSS members' area" at the address https://www-ns.iaea.org/committees/css/. This include a sub-folder named "CSS documents for comments.

Wednesday 7 April 2021, 13:00 to 15:30

1. Opening Session

1.1. Members joining the WebEx meeting. (13:00) Guidance from the Secretariat on the conduct of the meeting

1.2. Opening of the Meeting (13:10); *DDG NS*

1.3. Introductory remarks from the CSS Chair (13:20); *R. Velshi*

1.4 Introduction of new Committees Chairpersons for EPReSC (Mr Marcus Grzechnik from Australia), NSGC (Mr Alejandro Cortés Carmona from Mexico) and TRANSSC (Mr David Pstrak from USA)

1.5. Adoption of the agenda (13:30); *CSS members*

1.6 Establishment of a CSS Strategic Planning Working Group

1.7 Status of the IAEA Safety Standards and actions from previous meetings (will be posted in advanced to the meeting); *D. Delattre*

2. Questions on the pre-uploaded end of term reports from the Safety Standards Committees and the Nuclear Security Guidance Committee (14:00-15:30)

2.1. Emergency Preparedness and Response Standards Committee; *A. Heinrich, former Chairperson/R. de La Vega, Scientific Secretary/ M. Grzechnik, new EPReSC Chairperson*

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, former Chairperson /S. Whittingham, Scientific Secretary/ Mr D. Pstrak, new TRANSSC Chairperson*

2.5. Waste Safety Standards Committee; *M. Golshan, Chairperson/N. Aghajanyan, Scientific Secretary*

2.6. Nuclear Security Guidance Committee; *S. Bayer*, former *Chairperson / S. Case Lackner, Scientific Secretary/ Mr A. Cortés Carmona, new NSGC Chairperson*

2.7. Summary of the meeting of the Chairs and of the CSS Strategic Planning Working Group held on 6 April 2021 before the CSS meeting

Thursday 8 April 2021, 13:00 to 15:30

3. Approval of draft publications and DPPs (13:00 to 14:30)

NOTE: It is assumed, for agenda items 3.01 to 3.08, that the CSS will be provided with the results of the editorial review in the Publishing Section after CSS meeting or soon after, for tacit approval through the web page.

3.01. Draft Safety Guide DS497A Operational Limits and Conditions for Nuclear Power Plants; *R. Cavellec – NUSSC Chair*

3.02. Draft Safety Guide DS497B Modifications to Nuclear Power Plants; *R. Cavellec – NUSSC Chair*

3.03. Draft Safety Guide DS497C The Operating Organization for Nuclear Power Plants; *R. Cavellec – NUSSC Chair*

3.04. Draft Safety Guide DS497D Core Management and Fuel Handling for Nuclear Power Plants; *R. Cavellec – NUSSC Chair*

3.05. Draft Safety Guide DS497E Maintenance, Testing, Surveillance and Inspection in Nuclear Power Plants; *R. Cavellec – NUSSC Chair*

3.06. Draft Safety Guide DS497F Recruitment Qualification and Training of Personnel for Nuclear Power Plants; *R. Cavellec – NUSSC Chair*

3.07. Draft Safety Guide DS497G Conduct of Operations at Nuclear Power Plants; *R. Cavellec – NUSSC Chair*

3.08. Draft Safety Guide DS516 Criticality Safety in the Handling of Fissile Material; *J. Rovny – NUSSC Chair*

3.09. Draft DPP DS529 for a Safety Guide on Investigation of Site Characteristics and Evaluation of Radiation Risks to the Public and the Environment in Site Evaluation for Nuclear Installations, revision of NS-G-3.2; *A. Altinyollar – NUSSC Chair*

4. DPPs and draft Nuclear Security Series publications for information (14:30-14:35)

None submitted.

5. Covid-19 outbreak dedicated session (14:35-15:00)

5.1. Information on updates posted on the CSS web page

5.2. Progress report on the gap analysis prepared by the Secretariat on possible implications on the Safety Standards and information on concomitant work for the security guidance

5.3. Exchange on experience from CSS members

5.4. 14:50-15:00 Future steps

6. Update on SMR related activities (15:00-15:10)

7. Progress report on the preparation of a Safety Report on Implications of the 2012 UNSCEAR report for the IAEA safety standards - Considerations on attribution of radiation health effects and inference of radiation risk (15:10-15:20)

8. 15:20 AoB, Report of the meeting. Date of the next meetings:

- CSS 50: week from 15 to 19 November 2021
- CSS 51: April 2022 (week to be confirmed)

ANNEX III

STATUS OF OUTSTANDING ACTIONS FROM PREVIOUS MEETINGS OF THE COMMISSION ON SAFETY STANDARDS

45th MEETING

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]. DS419, DS420, DS434, DS440, DS459, DS475, DS487 and DS489 are completed. DS449 is still to be completed.**

46th MEETING

46.02 The MTCD edited versions of the draft safety guides DS469, DS494, DS496 and DS506 to be posted for silent approval procedure by the CSS **[Action: Secretariat, CSS]. None completed so far.**

46.06 The Secretariat is still seeking additional funding for the translation of the 2018 Edition of the Safety Glossary in Arabic, Chinese and Russian. **[Action: Secretariat, CSS]. No funding so far.**

46.08. The CSS supports the actions being undertaken by the Secretariat to increase the resources available in MTCD for the publication of the safety standards, and will continue to review the implementation of these measures with the aim of reducing the timescale between CSS approval and final publication. **[Action: Secretariat, CSS]. On-going.**

47th MEETING

47.04. The fully edited versions of the four endorsed draft Safety Guides — DS468, DS507, DS490 and DS498 — will be posted on the CSS webpage as soon as they are available. CSS members will 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]. No progress so far.**

48th MEETING

48.01. The CSS notes that there are likely to be further lessons from the Covid-19 pandemic and it would be premature to publish any conclusions. CSS members are encouraged to continue providing reports or updates on their national experience from maintaining nuclear safety and nuclear security during the Covid-19 pandemic **[Action: CSS members]. Updates received from Canada, France, Germany, Morocco, Slovakia and USA.**

48.02. The Secretariat to continue, with a phased approach, to analyse information collected from Member States experience, prepare the Technical Report on Experiences in MS in ensuring safety, security and reliable operation of nuclear and radiation facilities and activities during the COVID-19 pandemic, and the Covid-19 gap analysis to be presented to the CSS and the Committees for discussion in 2021, followed by the preparation of an action plan on possible implications for the safety standards **[Action: Secretariat, CSS members, Committee members]**. **Preliminary gap analysis presented under agenda item 5.**

48.03. The Secretariat to prepare a set of recommendations for the 7th term of the CSS, based on the recommendations from the 6th term and the discussion at the 47th and the 48th meetings. This will be posted for final comments and finalized before the end of the year **[Action: Secretariat, CSS members]. Done. Final recommendations posted on 4 January 2021.**

48.04. The fully edited versions of the five endorsed draft Safety Guides — DS477, DS493, DS510A, DS510B and DS514 — will be posted on the CSS webpage as soon as they are available. CSS members

will 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 members]. None completed so far.**

48.05. A draft list of actions from the 48th CSS meeting will be provided to CSS members for comment (this list) **[Action: Secretariat, CSS Scientific Secretary]. Done, this list.**

48.06. The draft report of the 48th CSS meeting will be posted on the CSS webpage for comment **[Action: Secretariat, CSS Scientific Secretary]. Done, revised report posted on 4 January 2021.**

48.07. The presentations made under agenda items 1.6, 2, 3 and 6 and the UNSCEAR paper provided under agenda item 9 at the 48th CSS meeting will be posted on the CSS webpage **[Action: Secretariat, CSS Scientific Secretary]. Done.**

ANNEX IV

ACTIONS ARISING FROM THE 49th MEETING OF THE COMMISSION ON SAFETY STANDARDS

49.01. The CSS supports the creation of the Strategic Planning Working Group, and considers that development of a strategic plan for the implementation of the CSS recommendations is a priority. This will be provided for discussion at the next CSS meeting, together with a revised draft of the medium term plan. **[Action: Secretariat, CSS Strategic Planning Working Group, CSS members]**.

49.02. The CSS will remain regularly informed on the evolution of the publishing issue. **[Action: Secretariat, CSS Scientific Secretary]**.

49.03. The fully edited versions of the eight endorsed draft Safety Guides — DS497A to DS497G, and DS516 — will be posted on the CSS webpage as soon as they are available. CSS members will 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 members]**.

49.04 In their June 2021 meetings, the Review Committees will be invited to review the preliminary gap analysis prepared by the Secretariat in response to the Covid-19 pandemic and discuss on possible ways forward. The input from the Committees will be used by the Secretariat to prepare a more holistic view, which will then be integrated with the medium term plan. The updated gap analysis and medium term plan with a holistic approach will be presented at the next CSS meeting for discussion. No new revisions to individual standards would be undertaken in response to the Covid-19 pandemic before the medium term plan had been discussed and agreed by the CSS. **[Action: Review Committees Secretariat, CSS members]**.

49.05. The CSS supports the activities being undertaken by the Secretariat with regard to SMRs and encourages the involvement of all the Review Committees in activities and discussions on this subject. This will include a special Meeting of the Chairs dedicated to this topic. An update on the activities undertaken will be provided at the next CSS meeting. **[Action: Review Committees Secretariat]**.

49.06. A draft list of actions from the 49th CSS meeting (this list) will be provided to CSS members for comment. **[Action: Secretariat, CSS Scientific Secretary]**.

49.07. The draft report of the 49th CSS meeting will be posted on the CSS webpage for comment. **[Action: Secretariat, CSS Scientific Secretary]**.

49.08. The presentations made at the 49th CSS meeting will be posted on the CSS webpage. **[Action: CSS Scientific Secretary]**.