14 June 2016

Commission on Safety Standards

Thirty-ninth Meeting

6-7 April 2016

IAEA Headquarters, Vienna

Report of the Meeting

Overview of main results of the meeting

A. The following draft Safety Standards were endorsed for publication:

- DS456: Draft Safety Requirements on Leadership and Management for Safety (revision of GS-R-3)
- DS476: Draft Safety Requirements on Safety of Research Reactors (revision of NS-R-4)
- DS399: Draft Safety Guide on Radiation Protection and Safety in Medical Uses of Ionizing Radiation (revision of RS-G-1.5)
- DS454: Draft Safety Guide on Predisposal Management of Waste from the Use of Radioactive Material in Medicine, Industry, Research, Agriculture and Education (revision of WS-G-2.7)
- DS455: Draft Safety Guide on Establishing a National Radiation Safety Infrastructure

B. The following DPPs were approved:

- DS495: Draft Safety Requirements on Regulations for the Safe Transport of Radioactive Material, 20xx Edition (revision of SSR-6)
- DS494: Draft Safety Guide on Protection against Internal Hazards in the Design of Nuclear Power Plants (revision and combination of NS-G-1.7 and NS-G-1.11)

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 39th meeting of the Commission on Safety Standards and welcomed all members. He noted that this was the start of a new four year term and there were 10 new participants, which was a significant number. There were also 14 participants who had already been in the fifth term, so continuity could be ensured while at the same time new ideas would be gained.

He noted that the agenda included general presentations on the activities of the Department of Nuclear Safety and Security so that participants may see their role in the broader context. There was also a detailed presentation on the strategies and processes for the establishment of safety standards and on the step by step detailed rigorous review and approval process.

One key item on the agenda was to review the end of term report of the fifth term of the Commission and then discuss their recommendations for this term, so as to provide recommendations on priorities for this term. He confirmed that the Secretariat fully committed to follow these recommendations

Among other items, he highlighted several elements:

- Two draft Safety Requirements publications were submitted to this CSS meeting for endorsement: GSR Part 2 on Leadership and Management for Safety, which was the last in the Suite of General Safety Requirements, and SSR-3 on the Safety of Research Reactors.
- He was also pleased to announce that the new IT platform was now operational on NUCLEUS and there would be a short demonstration on how best to benefit from it. This application provides new opportunities for streamlining the revision of the safety standards, using a knowledge and content management tool. As a miscellaneous item there would be a brief presentation on how this approach could be used for the set of Safety Guides on operational safety.

Finally, he informed the Commission about upcoming important events in 2016:

- The International Conference on Effective Nuclear Regulatory Systems: Sustaining Improvements Globally to be held from 11 to 15 April 2016 in Vienna
- The International Conference on Advancing the Global Implementation of Decommissioning and Environmental Remediation Programme to be held from 23 to 27 May in Madrid, Spain
- The Third International Conference on Nuclear Knowledge Management – Challenges and Approaches to be held from 7 to 11 November 2016 in Vienna
- The International Conference on the Safety of Radioactive Waste Management to be held from 21 to 25 November 2016 in Vienna
- The International Conference on Nuclear Security: Commitments and Actions to be held from 5 to 9 December 2016 in Vienna

Mr Lentijo concluded by wishing all participants a very productive session.

1.2 Introductions, Adoption of the Agenda, Approval of the 38th CSS meeting report

Ms D. Drábová, Chair of the Commission, welcomed all participants. She introduced as new members of the Commission Mr P. F. Lavalle Heilbron Filho from Brazil, Mr Yongkang Zhao from China, Mr M.R.M. Ezz El-Din from Egypt, Mr Guk Hee Yoo from the Republic of Korea, Ms M. Žiaková from Slovakia, Mr J. Dies Llovera from Spain, Mr H. Wanner from Switzerland, Mr D. Senior from the United Kingdom, Mr G. Tracy from the United States of America and Mr H. Nieh as the new observer from OECD/NEA.

A complete list of participants is included as Annex I.

Mr A. Gonzalez took the opportunity to welcome the new members of the Commission and looked forward to the resolution of some still unresolved challenges in the area of safety standards: the

question of whether nuclear security publications are standards of the Agency or not; the nature of the safety standards – whether quantitative or qualitative; that publications that are not standards, but are closely related to standards (such as publications in the Emergency Preparedness and Response Series), should be brought into the system of the standards; the issue of prioritization of work on standards, in particular the need to prioritize development of standards on protection of the environment; the role of the Safety Standards Committees; and the capacity of Member States to review Agency documents. Mr P. Webster also raised the question of the role of the Agency's Publishing Section, and Mr Lentijo concurred that timeliness in the issuing of publications was a part of their quality.

The provisional agenda was approved and is provided in Annex II.

Ms D. Drábová informed the Commission that the draft report of the 38th CSS meeting had been made available. Comments had been received from Australia, German and Japan, and these had been addressed. The report of the 38th CSS meeting had then been approved electronically by the membership of the fifth term of the Commission and posted on the CSS website for information on 22 February 2016.

1.3 Administrative arrangements for the meeting, status of the main topics for the 5th CSS term, status of endorsed standards, response to actions from the 38th Meeting and to remaining actions from previous meetings

Mr D. Delattre informed the Commission of administrative arrangements for the meeting. He noted that all material had been made available more than two months in advance of the meeting for effective review by the Commission. He also indicated that, as requested by the Commission, his detailed presentation on the status report had been uploaded to the CSS web site in advance of the meeting.

Mr Delattre presented the status of the few outstanding main topics for the 4th CSS term and the main topics for the 5th CSS term (see Annexes IV and V) and the status of the roadmap for the long term structure of the General Safety Requirements and the Specific Safety Requirements.

Mr Delattre also presented the status of the endorsed safety standards. He informed the Commission that seven safety standards had been published since the last CSS meeting (GSR Part 1 (Rev. 1), GSR Part 4 (Rev.1), NS-R-3 (Rev.1), SSR-2/1 (Rev.1). SSR-2/2 (Rev.1), SSG-34 and SSG-36) and noted that seven further safety standards, endorsed by the Commission, were being published. Lists of currently valid, published standards, projects and draft standards under preparation/revision and drafts of the Nuclear Security Series that are interface documents are included as Annexes VI, VII and VIII, respectively[1].

Mr Delattre also provided information on the response to the few outstanding actions from 35th and 36th CSS meetings and the actions from the 38th CSS meeting (see Annex IX).

Mr Gonzalez noted that it was expected that the ICRP would significantly change its recommendations with respect to radon, increasing the relevant dose coefficient by a factor of three, and that this would have implications for activities such as mining. He suggested that the Secretariat approach UNSCEAR to obtain a clear position on which the Agency could base safety requirements and recommendations in the light of the expected change in ICRP recommendations.

2. Information on the activities of the Department of Nuclear Safety and Security

Mr G. Caruso presented information on the newly created Office of Safety and Security Coordination (NSOC). He outlined its role, in particular with respect to the Global Nuclear Safety and Security Framework, the safety standards and the IAEA Action Plan on Nuclear Safety, indicating that at present a sustainable strategic approach is under development that will build upon the Agency's work in relation to the Fukushima Daiichi accident.

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[1] Comprehensive, up-to-date information on the status of all standards, published and in draft, as well as on the status of all 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 G. Rzentkowski presented information on the activities of the Division of Nuclear Installation Safety (NSNI). He focused on issues relevant to the mandate of CSS, namely the development of safety standards and the various provisions for their implantation such as peer review services offered by the Division and knowledge sharing and training.

In the discussion that followed, Mr Rzentkowski noted that sometimes, in order to achieve consensus, it was necessary to be more objective-focused and qualitative rather than prescriptive and quantitative; such an approach also had the advantage that Member States could decide themselves how best to meet the objectives given the specifics of national regulatory framework.

With regard to the safety strategy currently under development, Mr Caruso reported that it was intended to undertake the work within the Agency's Regular Budget. Mr Gonzalez emphasized the importance of the Vienna Declaration as the main issue to be included in the safety strategy. Although the technical aspects of the Vienna Declaration were already contained within the Safety Requirements, some further guidance, which should be provided in the Safety Guides, were necessary to facilitate their implementation. This had been recognized by Mr Rzentkowski who also noted that the main challenge lays in the application of the standards to fulfill the provisions of the Vienna Declaration and promised the Agency's assistance in developing a practical approach.

Mr Gonzalez also noted that the term 'peer review' was not translatable and that, further, it was not clear for some reviews, such as the International Regulatory Review Service (IRRS), whether the recommendations made were made in the Agency's name or in the name of the expert who had led the mission. He considered that IRRS missions were not offered under the auspices of the Agency's statute. Mr C.-M. Larsson noted the exceptional success of the IRRS, perhaps because it was considered to be 'owned' by peers. He did not advocate changing how this particular service was offered, and suggested that the Secretariat analyse why the IRRS had become so welcomed. Mr Lentijo noted that some services provided by the Agency were more strategic, while others were more specific, and Mr Rzentkowski remarked that there was an apparent gap in some areas such as, for example, the provision of a review of the design of operating nuclear installations. He committed to look more closely at the successes and challenges of the peer review services as a whole.

The issue of safety standards for research reactors was also raised. It was noted that, although there are relatively few standards applicable for research reactors only, there were an additional 40 safety standards applicable for facilities and activities or applicable for nuclear installations, including research reactors. Mr Larsson suggested that information might usefully be provided to Member States on how to apply these standards for research reactors, and advised against the development of a separate sub-grouping of standards for research reactors alone, as Member States would not have the capacity to assimilate so many standards.

Mr P. Johnston provided information on the activities of the Division of Radiation, Transport and Waste Safety (NSRW). He summarized the work being done on radiation safety and monitoring, on regulatory infrastructure and transport safety and on waste and environmental safety.

Mr P. F. Heilbron questioned whether it was intended to revise RS-G-1.7 on Application of the Concepts of Exclusion, Exemption and Clearance. He suggested that account be taken of TECDOC 855, which had originally elaborated on those concepts. Mr Gonzalez also recommended taking account of the content of ICRP Publication 104. Mr Johnston noted that it was expected that RASSC and WASSC would take a decision on the matter in June 2016, and that it was likely that the guidance would be split into guidance on clearance, for which there was strong consensus on the revised provisions, and guidance on exemption, where the way forward may be less straightforward.

Mr K. Mrabit provided information on the activities of the Division of Nuclear Security (NSNS). He explained the various elements of nuclear security: the relevant legal instruments, the IAEA Nuclear Security Series, Integrated Nuclear Security Support Plans, developed at the request of Member States, education and training, and the work of the Division for major public events and in risk reduction. At the conclusion of Mr Mrabit's presentation, many members of the Commission congratulated him on his new appointment as head of the regulatory body of Morocco and thanked him for his many years of service to the Agency in various roles.

Ms E. Buglova described the work of the Incident and Emergency Centre (IEC). She reported on the safety standards and Emergency Preparedness and Response Series publications currently under development, the activities of the IEC regarding assessment and prognosis, the management and information systems supported by the IEC and the IEC's work in capacity building.

Mr P. Tiippana noted that to be successful in communicating in an emergency, it was necessary to establish a firm basis in communicating with the public in normal circumstances. Ms Drabova indicated the importance of enhancing the understanding the public has of risks. Ms Buglova highlighted the role of EPReSC to ensure that the Safety Requirements and Safety Guides in such overlapping areas were consistent, and that no gaps existed. Mr Gonzalez emphasized that the basic radiation protection policy had to be the same for all situations.

All presentations are available on the CSS web site.

3. Information for new CSS members on the Strategies and Processes for the Establishment of IAEA Safety Standards (SPESS)

Mr Delattre provided two presentations, on SPESS A and SPESS B, both of which are available on the CSS web site. Mr Delattre first provided information on the history of the standards, their status, and the categories of standards, and then elaborated on the content of SPESS A: the vision for the standards and the 12 basic strategies to achieve the vision, focusing in particular on the role of the Commission on Safety Standards and the Safety Standards Committees. He then described the content of SPESS B, which details the step-by-step review and approval process. He also made reference to SPESS C, which provides guidance for drafters, and noted that SPESS E is in preparation and would provide detailed information about the NSS-OUI IT Platform (see agenda item 8). Finally, he encouraged all members of the CSS to familiarize themselves with the content of SPESS A and SPESS B.

4. Reports from the Safety Standards Committees meetings and information on the meetings of the Nuclear Security Guidance Committee

4.1 Emergency Preparedness and Response Standards Committee (EPReSC)

Ms A. Heinrich, EPReSC Chair, reported on the first meeting of EPReSC, which had been attended by representatives of 61 Member States and 10 international organizations as observers. The first meeting had included background information and an overview of SPESS, as well as informational presentations on the publications in the area of emergency preparedness and response and on the safety standards. Operating guidelines had been drafted and discussed and a workplan had been established, including the establishment of two electronic working groups. EPReSC had also discussed the two draft Safety Guides for which it is lead Committee, namely DS474 on Arrangements for the Termination of a Nuclear or Radiological Emergency and DS475 on Arrangements for Public Communications in Preparedness and Response for a Nuclear or Radiological Emergency, as well as the DPP for DS469, the revision of Safety Guide TS-G-1.2, on Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material. Ms Heinrich's presentation is available on the CSS web site.

4.2 Nuclear Safety Standards Committee (NUSSC)

Mr F. Feron, NUSSC Chair, reported on the 40th NUSSC meeting. NUSSC had approved six standards for submission to the CSS (DS427, DS432, DS442, DS452, DS456 and DS476). In the case of DS476, the draft Safety Requirements on Safety of Research Reactors, NUSSC had requested the Secretariat to develop an annex addressing how the requirements would apply for subcritical assemblies; ultimately, however, it was agreed by means of an electronic approval process subsequent to the meeting that the table showing how the requirements apply to subcritical assemblies be withdrawn from the annex. NUSSC had also approved two standards for submission to Member States for comment (DS479, DS486) and two DPPs (DS494 and DS495). NUSSC had cleared drafts of the Nuclear Security Series (NST020 and NST048). NUSSC had also expressed its support for a common nuclear safety and nuclear security glossary, and had discussed a draft TECDOC on

Considerations on the Application of the IAEA Safety Requirements for Design of Nuclear Power Plants. Mr Feron's presentation is available on the CSS web site.

The discussion that followed addressed the feasibility of establishing a common nuclear safety and nuclear security glossary. Mr I. Barraclough, Technical Officer for the Nuclear Security Series Glossary, noted that this was a 'working glossary' providing a compilation of terms used in Nuclear Security Series publications. It was intended that through use of this glossary in the future, further inconsistencies in the use of terms in the Nuclear Security Series would be avoided. As the series was not yet a complete set, it was clear that there are still gaps in the glossary. A later objective would be to harmonize the Nuclear Security Series Glossary with the Safety Glossary. Mr Gonzalez drew a distinction between a list of legally binding definitions and a clear, common 'glossar' of explanations of terms in both nuclear security and safety, which should be established as a priority.

4.3 Radiation Safety Standards Committee (RASSC)

Mr G. Massera, RASSC Chair, provided a presentation on the 39th RASSC meeting. RASSC had approved eight standards for submission to CSS (DS399, DS427, DS432, DS442, DS454, DS455, DS456, DS476), three standards for submission to Member States for comment (DS471, DS479, DS486) and one DPP (DS495). RASSC had also cleared drafts and DPPs of the Nuclear Security Series (NST020, NST048, NST044, NST057). Discussions had also been held on attribution of health effects and inference of risk, and on the proposed revision of RS-G-1.7. Mr Massera's presentation is available on the CSS web site.

Mr Gonzalez noted that there was a fundamental problem with the use of the term 'commodity', which is translated as 'consumer product' in many languages. He considered that the Agency meaning of 'consumer product' (as a device or manufactured item into which radionuclides have *deliberately* been incorporated…) ran counter to the normal meaning of the word.

Both Mr Gonzalez and Mr Larsson raised comments on the opinion paper provided by RASSC on the Implications of the UNSCEAR report "Attributing Health Effects to Ionizing Radiation Exposure and Inferring Risks" for the development of IAEA safety standards. In particular, they considered that it could not be ruled out that there were no implications of the UNSCEAR report on the safety standards. Although the standards were intended to be used in a prospective manner, providing requirements and guidance on radiation protection based on probabilities of occurrence of events, a great interest lay in retrospective attribution of effects, and it was in distinguishing these two approaches that problems arose in understanding and communication, even among experts.

The CSS agreed that the CSS Chair, with the assistance of volunteers from the CSS members, should prepare, on the basis of the RASSC contribution paper, a CSS policy on the implications of the UNSCEAR report "Attributing Health Effects to Ionizing Radiation Exposure and Inferring Risks" for the development of IAEA safety standards [Action 39.01, Annex III].

4.4 Transport Safety Standards Committee (TRANSSC)

Mr P. Hinrichsen, Chair of TRANSSC, reported on the 31st TRANSSC meeting, at which most significantly a decision had been taken, on the basis of a total of 150 proposals for change, to revise both the Transport Regulations, IAEA Safety Standards Series No. SSR-6 and the related Advisory Material, IAEA Safety Standards Series No. SSG-26. A consultants' meeting in February 2016 had then prepared draft text for the revisions of SSR-6 and SSG-26, and these would be considered at the next TRANSSC meeting in June 2016. Mr Hinrichsen's presentation is available on the CSS web site.

On the question of the proposal of TRANSSC to revise the A1 and A2 values, both Mr Heilbron and Mr I. Lund noted that these were well accepted values, and urged the Secretariat to ensure there was a valid need for change before accepting any changes to this model. Mr Heilbron also recalled that the Agency had in the past maintained a list of valid package certificates, but Mr S. Whittingham noted that such a register was very difficult to maintain up to date and indicated that there were no current plans to re-establish it.

4.5 Waste Safety Standards Committee (WASSC)

Mr G. Williams, WASSC Chair, provided a report on WASSC, noting that there had been no meetings held in the time period since the 38th CSS meeting. As well as recalling what had been approved at the 40th WASSC meeting (as reported in the 38th CSS meeting report), he noted that future work would cover the revision of WS-G-3.1 on the remediation process for areas with residual radioactive material (DS468), a planned Safety Report on disposal of intermediate level waste, the HIDRA project on human intrusion in the context of disposal of radioactive waste, and the DAROD project on decommissioning and remediation of damaged facilities. Mr Williams's presentation is available on the CSS web site.

In the discussion that followed, it was noted that in the past the Safety Standards Committees had, as an exception, from time to time approved draft standards that had not yet been subject to a comprehensive technical editorial review. The Secretariat was requested to ensure that all draft standards are subjected to a comprehensive technical editorial review before their review at the SPESS step 11 by the Committees [Action 39.02, Annex III].

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

Mr B. Dal, Chair of NSGC, noted that no NSGC meeting had taken place since the 38th CSS meeting, but provided an introduction to the Nuclear Security Series and NSGC procedures. He explained the process for development of a publication in the Nuclear Security Series, and the additional steps for a draft identified as an 'interface document', indicating that an interface with safety could be of a generic nature, or more specific, such as where safety measures and security measures could potentially affect one another. Mr Dal's presentation is available on the CSS web site.

The discussion that followed addressed the challenges of developing guidance publications in a proactive way in the face of rapidly evolving threats. Mr Dal also reported that NSGC had not fully accepted the review of the Safety Standards and Nuclear Security Guidance review and approval processes that had been conducted by the Agency's Office for Internal Oversight. NSGC had not been involved in setting the goals for the review, and it had requested further discussion on how the nature of and approach to such a review could be improved.

4.7 Summary of the meeting of the Chairs held on 5 April 2016 before the CSS meeting

The meeting of the seven Chairs of the Committees and the Commission addressed the following main topics:

- Coordination of the presentations from the Committee Chairs to the CSS
- The results of the technical editorial review of DS454 and its presentation to the CSS
- Possible implications for the Committees from the CSS priorities for its sixth term
- The status and use of the NSS-OUI IT platform

5. Presentation of the Chair's report on the fifth CSS term and discussion on the recommendations for the sixth term

Ms Drabova summarized the main achievements of the CSS fifth term and described the content of the end of term report. The report was arranged under several topics, including the long term structure of the safety standards, the review of standards in the light of lessons from the Fukushima Daiichi accident, the integration of safety and security and the future review, revision and publication process, and other policy matters and the use of standards in Member States.

Mr Dal drew attention to the use of the word 'integration' in relation to safety and security. He considered this was not an appropriate word, as separate organizations have responsibilities for safety and security; rather the term 'harmonization' might be better. However, Ms Drabova noted that the approach of the IAEA was in terms of 'integration', and Mr Gonzalez noted that security, although

not mentioned explicitly in the Agency's statute, had not been forgotten; rather it had been taken for granted that security was an essential part of safety. Mr Lentijo agreed, but noted that a broad consensus on this matter was still absent. He would continue to apply his efforts to achieve consensus. He noted two elements of discrepancy among Member States: that some Member States consider that, in the Statute, safety was not intended to encompass security; and that some Member States do not want nuclear security guidance to be mandatory.

Mr Caruso then provided a presentation on the priorities for the sixth term of the CSS, as recommended by the fifth term of the CSS, and also the response of the Secretariat to these recommendations. Mr Caruso's presentation is available on the CSS web site. In particular, Recommendation 1 addressed the integration of safety and security and proposed certain actionable steps. Mr Larson queried the apparent deviation from the long term vision of the CSS and AdSec, as agreed in 2011, which was to have a single safety and security publications series, overseen by a single safety and security series commission. He lamented that the achieving of this vision seemed more distant than ever. Mr Lund also recalled the clear statement from the General Conference on the need for integration of safety and security. Ms Buglova noted that safety and security had been integrated in the Safety Requirements and Safety Guides on emergency preparedness and response, even as far back as GS-R-2, published in 2002.

The CSS requested the Secretariat to identify and study the conditions to be met in order to start the preparation of a Joint Safety-Security Fundamentals and to make further steps toward better integration of safety and nuclear security [Action 39.03, Annex III].

The CSS then discussed each of the priorities for the sixth term in turn, and made suggestions, including for consistency of expression with other policies and publications of the IAEA. In some cases, Mr Caruso noted that the action identified as a priority was already underway, and the CSS agreed that setting a matter as a priority meant that the normal process should still be followed, but that the CSS wished to be kept informed about progress.

Recommendation 8 included the expression 'guidance on health effects', which Mr Gonzalez suggested be corrected to 'guidance on radiation protection'.

Recommendation 9 concerned the use of 'unacceptable radiological consequences' and 'high radiological consequences' as criteria for implementing specific recommendations in the area of nuclear security. Mr Delattre noted that further input from NSGC would be sought on precisely what guidance or advice was necessary.

For Recommendation 11, it was agreed that the reference to reporting back to the Board of Governors on any changes to standards in the publication process would be removed, as the Board was outside the purview of the CSS.

For Recommendation 12, it was noted that, while the CSS's assistance in guiding the transition after the IAEA Action Plan on Nuclear Safety was most welcome, the new safety strategy would have a scope beyond safety standards only.

It was agreed that the CSS Chair, with DIR-NSOC and the CSS Secretariat, would prepare a set of priorities for the 6th CSS term, on the basis of the recommendations from the end of term report of the fifth term and of the discussion at the 39th CSS meeting, for approval at the 40th CSS meeting. [Action 39.04, Annex III].

6. Approval of draft publications and DPPs

6.1 DS456: Draft Safety Requirements on Leadership and Management for Safety (revision of GS-R-3)

Ms H. Rycraft presented the draft Safety Requirements. She outlined the background to the development of the draft, noting that, in comparison to the publication it would supersede, namely

GS-R-3, it would include specific requirements on leadership for safety and on the interface between safety and nuclear security. Comments had been received from Japan and Israel, and Ms Rycraft summarized these, indicating that they had been resolved. Ms Rycraft's presentation is available on the CSS web site.

Mr Gonzalez requested that particular care be taken with the translation of the term 'safety culture' into the other official languages; the term should be understood as meaning 'culture for safety', rather than 'culture of safety', which was its common translation in Agency texts at present.

Many members of the Commission indicated their support for the draft and requested the Secretariat to apply the necessary resources to have it published as soon as possible.

The Commission endorsed the draft for submission to the Board of Governors for approval and for publication.

6.2 DS476: Draft Safety Requirements on Safety of Research Reactors (revision of NS-R-4)

Mr D. Sears presented the draft Safety Requirements and provided an overview of the content and status of the draft. He indicated that comments had been received from Japan and the Republic of Korea and these had all been addressed in discussion with those who had submitted the comments. Mr Sears's presentation is available on the CSS web site.

Mr Larsson noticed that the use of terms addressing dose constraints and reference levels was not in accordance with the provisions in GSR Part 3 and proposed some modified text, which was accepted by the Commission.

With this modification, the Commission endorsed the draft for submission to the Board of Governors for approval and for publication.

6.3 DS399: Draft Safety Guide on Radiation Protection and Safety in Medical Uses of Ionizing Radiation (revision of RS-G-1.5)

Ms J. Vassileva presented the draft Safety Guide. She set out the background, objective, structure and scope of the draft, and also noted that the Safety Guide was expected to be co-sponsored by WHO, PAHO and ILO, all of whom had participated substantively in the development of the text, along with various international and regional professional organizations. A number of comments had been received from the Republic of Korea, and the issues raised had been resolved with the originator of the comments. Mr Colgan noted that the formal endorsement of the text by the potential cosponsors would be sought after CSS approval. Ms Vassileva's presentation is available on the CSS web site.

The Commission endorsed the draft for publication.

6.4 DS454: Draft Safety Guide on Predisposal Management of Waste from the Use of Radioactive Material in Medicine, Industry, Research, Agriculture and Education (revision of WS-G-2.7)

Mr K. Moeller presented the draft Safety Guide, which had been approved by WASSC. As an exception to the normal process, the draft had been reviewed and revised by the Standards Specialist in parallel with its review by the CSS, and so a revised version of the draft had been uploaded to the CSS website shortly before the meeting. Mr Moeller reported on the main changes introduced in each section by the Standards Specialist. Mr Moeller's presentation is available on the CSS web site.

Mr Williams, the Chair of WASSC, noted that the text of DS454 was now vastly improved and confirmed that no relevant content had been changed. Mr Larsson confirmed that he had also carefully checked the text and could endorse the changes made. Mr Williams apologized for the exceptional route that DS454 had taken and confirmed that in the future the comprehensive review by the Standards Specialist would take place before approval by the Safety Standards Committees.

The Commission endorsed the draft for publication.

6.5 DS455: Draft Safety Guide on Establishing a National Radiation Safety Infrastructure

Mr T. Hailu presented the draft Safety Guide. It provides guidance on the application of IAEA Safety Standards for establishing or strengthening the national radiation safety infrastructure, and provides advice to States in the early phases of establishing a national radiation safety infrastructure. He summarized the development process of DS455 and noted that it had been approved by the Safety Standards Committees. No comments had been received by CSS members. Mr Hailu's presentation is available on the CSS web site.

Mr Gonzalez requested the Secretariat to ensure that there was full compatibility between DS455 and GSR Part 3 with respect to language and terminology.

The Commission endorsed the draft for publication.

6.6 Progress report on the finalization of DS427, DS432, DS442 and DS452 approved for submission to the CSS

Mr D. Telleria provided a progress report on the finalization of DS427, DS432 and DS442. The Standards Specialist had completed the review of the first two of these and the review of DS442 was currently underway. It had been ensured that the three texts were consistent with one another. It was anticipated that the three drafts would be submitted to the CSS for endorsement at the 40th meeting in November 2016. Furthermore, the three drafts would be submitted to the relevant Safety Standards Committees for information at their meetings in June 2016. Mr Telleria's presentation is available on the CSS web site. Some members of the CSS questioned about the impact of the delay of publications of the IAEA Safety Guides covering protection of the environment, and the need to be more expeditious with this topic.

6.7 Draft DPP DS495 on Regulations for the Safe Transport of Radioactive Material, 20xx Edition (revision of SSR-6)

Ms N. Capadona presented the draft DPP. The revision of the Transport Regulations would include a new category of surface contaminated objects (SCO-III) and would also address transport after long periods of storage and would clarify and harmonize the regulations. Mr Capadona also set out the schedule of production, with a target publication date for the revised Transport Regulations of 2018. Mr Delattre noted that the draft of DS495 had already been prepared, and that it was expected that a DPP for the revision of the Advisory Material to this edition of the Transport Regulations would be presented at the 40th CSS meeting for approval. Ms Capadona's presentation is available on the CSS web site.

The Commission approved the DPP.

6.8 Draft DPP DS494 on Protection against Internal Hazards in the Design of Nuclear Power Plants (revision and combination of NS-G-1.7 and NS-G-1.11)

Mr A. Amri presented the draft DPP. He noted that the proposed revision was in line with a NUSSC decision to combine all recommendations on internal hazards into a single Safety Guide. He outlined the main proposed content of DS494 and indicated its current status and a tentative production schedule. No comments had been received from CSS members. Mr Amri's presentation is available on the CSS web site.

Mr Feron requested that the DPP be slightly modified to indicate that, although internal hazards due to electromagnetic fields or electromagnetic interference were within the scope of DS494, the topics would essentially be covered by cross-references to SSG-34 and SSG-39.

With this modification, the Commission approved the DPP.

7. Draft Nuclear Security Series publications for information

7.1 Draft NST020 on Sustaining a Nuclear Security Regime

Ms R. Evans presented the draft Implementing Guide for information. She explained the concept of 'sustainability' as used in the draft as a set of objectives and implementing actions incorporated into the nuclear security regime to support its continuing effectiveness. Mr Larson noted that this concept, although not used in the safety standards, was quite a powerful concept and might also be useful for safety. A number of comments had been received by the Republic of Korea on NST020 and these would be taken into account in the finalizing of the text for publication. Ms Evans's presentation is available on the CSS web site.

8. Status of the NSS-OUI IT platform

Mr Delattre provided an extensive presentation on the current status of the IT platform. He reminded the CSS of the main objectives of the system, and its three main components: a component content management system, a knowledge management system, an online user interface (called NSS-OUI, with the pronunciation of "OUI" as "Wi" like Yes in French), and an electronically supported review, revision and approval process management system. Multi-format output possibilities were available over multiple devices and browsers. He noted that the FONTO XML Editor and the DITA Open Toolkit were ready to start testing, while projects for 2016 included supporting the review and approval process and collecting and extracting feedback. He explained how the content and relationships are managed through metadata and through explicit relationship information and provided a demonstration of the use of the platform. Mr Delattre encouraged members of the CSS to use the platform so as to become more familiar with its features. He concluded by summarizing the next steps and pilot tests planned for 2016 and indicated that guidelines for use of the IT platform would be prepared and made available [Action 39.05, Annex III]. The presentation by Mr Delattre is available on the CSS web site.

9. Miscellaneous. Report of the meeting, Date of the next meeting

Mr Delattre provided a presentation on the planned revision of a number of Safety Guides on operation of nuclear power plants. A gap analysis had been carried out using the IT platform, which had enabled consideration of whether the suite of Safety Guides was properly structured. In all, nine existing Safety Guides were planned for revision and it was intended to use the new IT platform also to manage the revision. A two-step approach was planned, and the revision would be carried out in consultation with the Safety Standards Committees and the CSS.

Mr Webster drew the attention of the CSS to the copyright notice inserted in all safety standards. He was concerned that this might impede their use and requested the Secretariat to seek clarification on the implications for the users of the safety standards of the copyright notice inserted in all published standards [Action 39.06, Annex III].

Ms Drabova, Mr Lachaume and Mr Wanner volunteered to provide presentations at the 40th CSS meeting on the use of standards in the Czech Republic, France and Switzerland, respectively.

Mr Delattre informed the Commission of the dates proposed for holding the next meeting, namely in the week from 7 to 11 November 2016.

Mr Delattre also indicated that a draft list of actions resulting from the 39th CSS meeting would be provided for comment to the CSS members [Annex III, Action 39.07] and that the draft report of the 39th CSS meeting would be posted for comment to the CSS web site [Annex III, Action 39.08]. Mr Delattre informed the Commission that all presentations made at the 39th CSS meeting would be posted on the CSS web site [Annex III, Action 39.09].

ANNEX I

PARTICIPATION AT THE 39th CSS MEETING

The Commission

A.J. González, Argentina

C.-M. Larsson, Australia

P.F. Lavalle Heilbron Filho, Brazil

R. Jammal, Canada (sent apologies – unable to attend; represented by Mr Webster)

Yongkang Zhao, China (sent apologies – unable to attend; represented by Mr Liu)

D. Drábová (Chair), Czech Republic

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

P. Tiippana, Finland

J.-L. Lachaume, France

A. Vorwerk, Germany (sent apologies – unable to attend; represented by Mr Weidenbrück)

S. A. Bhardwaj, India

M. Markovits, Israel (sent apologies – unable to attend; represented by Mr Singer)

T. Fuketa, Japan

G.H. Yoo, Republic of Korea

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

M. A. Habib, Pakistan

A. Ferapontov, Russian Federation

M. Žiaková, Slovkia

C.O. Phillips, South Africa

J. Dies Llovera, Spain

I. Lund, Sweden

H. Wanner, Switzerland

TBC, United Arab Emirates

D. Senior, United Kingdom

G. Tracy, United States of America (sent apologies – unable to attend; represented by Mr Weber)

Observers

R. Awad, AdSec (sent apologies – unable to attend)

M. Garribba, EC

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

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

H. Nieh, OECD NEA

Chairpersons of the Review Committees

Ms Heinrich, EPReSC

B. Dal, NSGC

F. Feron, NUSSC

G. Massera, RASSC

P. J. Hinrichsen, TRANSSC

G. Williams, WASSC

Representatives and associated experts

Ms Collet i Campo, Ms Forest, Ms Kawamura, Mr Kim, Mr Lee, Mr Liu, Mr Singer, Ms Spevakova, Mr Turner, Mr Ugayama, Ms Wallin Caldwell,Mr Weber, Mr Webster, Mr Weidenbrück

IAEA Staff Members

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

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

K. Mrabit, Director, Division of Nuclear Security (NSNS)

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

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

A. Al Khatibeh, T. Andrews, O. Coman, M. Khaliq, Daming Liu, A. Nicic, A. Orrell, M. Pinak, S. Purvis, A. Shokr, C. Spitzer, P. Tarren

A. Amri, N. Capadona, R. Evans, T. Hailu, H. Rycraft, D. Sears, D. Telleria, J. Vassileva

Coordinators of review Committees and of the Commission on Safety Standards

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

G. Bruno, Waste and Environmental Safety Section (NSRW), WASSC

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

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

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

M. Breitinger, Incident and Emergency Centre (IEC), EPReSC

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

ANNEX II

AGENDA

Thirty-ninth Meeting of the
COMMISSION ON SAFETY STANDARDS
6-8 April 2016

1. Opening Session

1.1 Opening of the Meeting (10:00)

1.2 Introductions, Adoption of the Agenda, Information on the status of the 38th CSS meeting report; *D. Drabova*

1.3 Administrative arrangements for the meeting, Status on the main topics for the 5th CSS term, Status of the endorsed Standards and Response actions from the 38th Meeting and remaining actions from previous meetings; *D. Delattre*

2. Information on the activities of the Department on Nuclear Safety and Security

3. Induction for new CSS members on the Strategies and Processes for the Establishment of IAEA Safety Standards (SPESS)

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

4.1 Emergency Preparedness and Response Standards Committee; *A. Heinrich, Chairperson/M. Breitinger, Scientific Secretary*

4.2 Nuclear Safety Standards Committee; *F. Feron, Chairman/M. Svab, Scientific Secretary*

4.3 Radiation Safety Standards Committee; *G. Massera, Chairman/T.Colgan, Scientific Secretary*

4.4 Transport Safety Standards Committee; *P. Hinrichsen, Chairman/S. Whittingham, Scientific Secretary*

4.5 Waste Safety Standards Committee; *G. Williams, Chairman/tbd, Scientific Secretary*

4.6 Information on the meeting of the Nuclear Security Guidance Committee; *B. Dal, Chairman/I. Barraclough, Scientific Secretary*

4.7 Summary of the meeting of the Chairs held on 5 April 2016 before the CSS meeting

5. Presentation of the Chairman report on the fifth CSS term and discussion on the recommendations for the sixth term

6. Approval of draft publications and DPPs

6.1 Draft Safety Requirements on Leadership and Management for Safety (DS456)

6.2 Draft Safety Requirements on Safety of Research Reactors (DS476)

6.3 Draft Safety Guide on Radiation Protection and Safety in Medical Uses of ionizing Radiation (DS399)

6.4 Draft Safety Guide on Predisposal Management of Waste from the Use of Radioactive Materials in Medicine, Industry, Research, Agriculture and Education (DS454)

6.5 Draft Safety Guide on Establishing a National Radiation Safety Infrastructure (DS455)

6.6 Progress report on the finalization of DS427, DS432, DS442 and DS452 approved for submission to the CSS

6.7 Draft DPP DS495 for a Safety Requirements on Regulations for the Safe Transport of Radioactive Material, 20xx Edition, revision of SSR-6

6.8 Draft DPP DS494 for a Safety Guide on Protection against Internal Hazards in the Design of Nuclear Power Plants, revision and combination of NS-G-1.7 and NS-G-1.11

7. DPPs and draft Nuclear Security Series publications for information

7.1 Draft Implementing Guide NST020 on Sustaining a Nuclear Security Regime

8. Status of the NSS-OUI IT platform

9. Miscellaneous. Report of the meeting, Date of the next meeting (Week from 7-11 November 2016)

ANNEX III

ACTIONS ARISING FROM THE 39th MEETING OF THE COMMISSION

39.01 The CSS Chair, with the assistance of volunteers from the CSS members, to prepare, on the basis of the RASSC contribution paper, a CSS policy on the implications of the UNSCEAR report "Attributing Health Effects to Ionizing Radiation Exposure and Inferring Risks" for the development of IAEA safety standards. **[Action: CSS Chairs, Volunteers from CSS, CSS Scientific Secretary].**

39.02 The Secretariat to ensure that all draft standards are subject to a comprehensive technical editorial review before their review at the SPESS step 11 by the Committee. **[Action: Secretariat, Review Committees Scientific Secretary].**

39.03 The Secretariat to identify and study the conditions to be met in order to start the preparation of a Joint Safety-Security Fundamentals and make further steps toward better integration of safety and nuclear security. **[Action: Secretariat].**

39.04 The CSS Chair, with DIR-NSOC and the CSS Secretariat to prepare a set of priorities for the 6th CSS term, on the basis of the recommendations from the 5th term end of term report and of the discussion at the 39th CSS meeting, for approval at the 40th CSS meeting. **[Action: CSS Chairs, DIR-NSOC, CSS Scientific Secretary].**

39.05 The Secretariat to prepare guidelines on the use of the IT Platform by Member States. **[Action: Secretariat]**

39.06 The Secretariat to seek clarification on the implications for the users of the safety standards of the copyright notice inserted in all published standards. **[Action: Secretariat].**

39.07 A list of actions resulting from the 39th CSS meeting to be provided to the CSS members for comment. **[Action: Secretariat, CSS Scientific Secretary].** ***This list***

39.08 The draft report of the 39th CSS meeting to be posted for comment. **[Action: Secretariat, CSS Scientific Secretary].**

39.09 The presentations made at the 39th CSS meeting to be uploaded on the CSS web page. **[Action: Secretariat, CSS Scientific Secretary]. Done**

ANNEX IV

STATUS OF MAIN TOPICS OF THE 4TH CSS TERM

#	Main topics	Reference set of SG	Status/action
3	Guidance and assistance related to the new applications of radiation sources	Items 68 to 76	DS409 published (SSG-8) DS408 published (SSG-11) DS419 Step 11 after MS consultation DS420 Step 11 after MS consultation DS434 for a safety guide on radioisotope production facilities being drafted. DPP approved by the CSS DS470 on Radiation Sources in Research and Education at Step 7 DS471 on X-ray Generators and Sources Used for Inspection Purposes at Step 8 DS458 Radiation Safety and Regulatory Control for Consumer Products published SSG-36
7	Assistance and additional safety guidance to countries dealing with expanded uranium exploration and mining	Item 83	DS 421: published (SSG-32) DS459 at step 6
8	Guidance on public exposures to natural sources of ionizing radiations (radon, NORM residues, aircrew…) and for the safety of uranium mining activities	Item 5	
9	Crucial need to further improve promotion of the application of the safety standards on medical applications including recommendations that will reduce the frequency of over or under exposures related to nuclear medicine, and to enhance these standards as appropriate	NA. Relates to the application of SS, in particular of item 68	DS399 at Step 12

ANNEX V

STATUS OF MAIN PRIORITIES FOR THE 5TH CSS TERM

1. Finalization of the General Safety Requirements (including review following the Fukushima Daiichi accident): **Close to finalization. DS456 (GSR Part 2) submitted at this CSS meeting for final endorsement.**

2. Initiation of the revision of the remaining Specific Safety Requirements (including review of other Specific Safety Requirements following the Fukushima Daiichi accident): **revision of NS-R-3 Rev. 1 (DS484 at Step 5), NS-R-4 (DS476 submitted at this CSS meeting for final endorsement) and NS-R-5 (DS478 at Step 9).**

3. Enhancing the feedback process: **Used for the above activities. Test phase started with the guides that support SSR-2/2 (Rev. 1). Presentation on the update at this meeting (item 8) and miscellaneous (item 9).**

4. Exposure to radon: **SSG-32 published**

5. Medical exposure: **DS399 STEP 11 submitted at this CSS meeting for final endorsement.**

6. Application of the justification principle: **GSG-5 published**

7. Harmonization of exemption, clearance criteria and other radionuclide specific criteria: **DS458 (SSG-36) published and other topics initiated at the Coordination Committee.**

8. NORM related issues: **DS459 at Step 6.**

9. Occupational radiation protection, including its application to rescuers: **DS453 (being published) and DS457 published as GSR Part 7.**

10. Knowledge management: **DS456 on the revision of GS-R-3 (STEP 12), and amendment of GSR-Part 4 published + knowledge management for regulatory bodies in DS473 at step 11.**

11. Regulatory oversight of human and organizational factors: **GSR Part 1 (Rev. 1) published**

12. The safety/security interface: **Process and Committees in place. Harmonization of the TORs of the RCs. Guidance for drafters prepared and included in a revision of SPESS C.**

13. Usefulness of standards for countries embarking on nuclear power programmes: **Difficulty to identify a precise indicator. Presentation from UAE at the 33rd CSS meeting**

14. The need for more detail in standards on PSA and severe accident management: **DPP for the revision of NS-G-2.15 (DS483) at Step 9.**

ANNEX VI

CURRENT SAFETY STANDARDS

[status on 31 May 2016]

A. Safety Fundamentals

SF-1	Fundamental Safety Principles (2006) **Co-sponsorship:** Euratom, FAO, ILO, IMO, OECD/NEA, PAHO, UNEP, WHO [ACEFRS][2]

B. General Safety Standards (applicable to all facilities and activities)

GSR Part 1 (Rev.1)	Governmental, Legal and Regulatory Framework for Safety (2016) [E]
GS-R-3	The Management System for Facilities and Activities (2006) [ACEFRS]
GSR Part 3	Radiation Protection and Safety of Radiation Sources –International Basic Safety Standards (2014) [ACER]
GSR Part 4 (Rev.1)	Safety Assessment for Facilities and Activities (2016) [E]
GSR Part 5	Predisposal Management of Radioactive Waste (2009) [ACEFRS]
GSR Part 6	Decommissioning of Facilities (2014) [ACER]
GSR Part 7	Preparedness and Response for a Nuclear or Radiological Emergency (2015) **Co-sponsorship:** FAO, ICAO, ILO, IMO, INTERPOL, OECD/NEA, PAHO, CTBTO, UNEP, OCHA, WHO, WMO [E]

GSG-1	Classification of Radioactive Waste (2009) [ERS]
GSG-2	Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency (2011) [AEFRS]
GSG-3	The Safety Case and Safety Assessment for the Predisposal Management of Radioactive Waste (2013) [E]
GSG-4	Use of External Experts by the Regulatory Body (2013) [E]
GSG-5	Justification of Practices, Including Non-medical Human Imaging (2014) [E]
GS-G-2.1	Arrangements for Preparedness for a Nuclear or Radiological Emergency (2007) **Co-sponsorship:** FAO, OCHA, ILO, PAHO, WHO [ES]
GS-G-3.1	Application of the Management System for Facilities and Activities (2006) [ER]
GS-G-3.2	The Management System for Technical Services in Radiation Safety (2008) [EFR]
GS-G-3.3	The Management System for the Processing, Handling and Storage of Radioactive Waste (2008) [ER]
RS-G-1.1	Occupational Radiation Protection (1999) **Co-sponsorship:** ILO [ACEFRS]
RS-G-1.2	Assessment of Occupational Exposure Due to Intakes of Radionuclides (1999) **Co-sponsorship:** ILO [ACEFRS]
RS-G-1.3	Assessment of Occupational Exposure Due to External Sources of Radiation (1999) **Co-sponsorship:** ILO [ACEFRS]
RS-G-1.4	Building Competence in Radiation Protection and the Safe Use of Radiation Sources (2001) **Co-sponsorship:** ILO, PAHO, WHO [ACEFRS]
RS-G-1.7	Application of the Concepts of Exclusion, Exemption and Clearance (2004) [CERS]
RS-G-1.8	Environmental and Source Monitoring for Purposes of Radiation Protection (2005) [ES]
RS-G-1.9	Categorization of Radioactive Sources (2005) [ACEFRS]

[2] A=available in Arabic; C=available in Chinese; E=available in English; F=available in French; R=available in Russian; S=available in Spanish

WS-G-2.3	Regulatory Control of Radioactive Discharges to the Environment (2000) (under revision) [ACEFRS]
WS-G-2.5	Predisposal Management of Low and Intermediate Level Radioactive Waste (2003) (under revision) [ERS]
WS-G-2.6	Predisposal Management of High Level Radioactive Waste (2003) (under revision) [ERS]
WS-G-3.1	Remediation Process for Areas Affected by Past Activities and Accidents (2007) [ES]
WS-G-5.1	Release of Sites from Regulatory Control on Termination of Practices (2006) [ERS]
WS-G-5.2	Safety Assessment for the decommissioning of Facilities Using Radioactive Material (2008) [ERS]
WS-G-6.1	Storage of Radioactive Waste (2006) [ERS]

C. Specific Safety Standards (applicable to specified facilities and activities)

C.1. Nuclear Power Plants

SSR-2/1 (Rev.1)	Safety of Nuclear Power Plants: Design (2016) [E]
SSR-2/2 (Rev.1)	Safety of Nuclear Power Plants: Commissioning and Operation (2016) [E]
NS-R-3 (Rev.1)	Site Evaluation for Nuclear Installations (2016) [E]

GS-G-1.1	Organization and Staffing of the Regulatory Body for Nuclear Facilities (2002) [CEFRS]
GS-G-1.2	Review and Assessment of Nuclear Facilities by the Regulatory Body (2002) [CEFR]
GS-G-1.3	Regulatory Inspection of Nuclear Facilities and Enforcement by the Regulatory Body (2002) [CEFRS]
GS-G-1.4	Documentation for Use in Regulating Nuclear Facilities (2002) [CEFRS]
GS-G-3.5	The Management System for Nuclear Installations (2009) [ER]
GS-G-4.1	Format and Content of the Safety Analysis report for Nuclear Power Plants (2004) [EC]
NS-G-1.4	Design of Fuel Handling and Storage Systems for Nuclear Power Plants (2003) [ERS]
NS-G-1.5	External Events Excluding Earthquakes in the Design of Nuclear Power Plants (2003) [ER]
NS-G-1.6	Seismic Design and Qualification for Nuclear Power Plants (2003) [ER]
NS-G-1.7	Protection against Internal Fires and Explosions in the Design of Nuclear Power Plants (2004) [ER]
NS-G-1.9	Design of the Reactor Coolant System and Associated Systems in Nuclear Power Plants (2004) [ERS]
NS-G-1.10	Design of Reactor Containment Systems for Nuclear Power Plants (2004) [ER]
NS-G-1.11	Protection against Internal Hazards other than Fires and Explosions in the Design of Nuclear Power Plants (2004) [E]
NS-G-1.12	Design of the Reactor Core for Nuclear Power Plants (2005) [ECR]
NS-G-1.13	Radiation Protection Aspects of Design for Nuclear Power Plants (2005) [ER]
NS-G-2.1	Fire Safety in the Operation of Nuclear Power Plants (2000) [ECFR]
NS-G-2.2	Operational limits and Conditions and Operating Procedures for Nuclear Power Plants (2000) [CEFRS]
NS-G-2.3	Modifications to Nuclear Power Plants (2001) [CEFRS]
NS-G-2.4	The Operating Organization for Nuclear Power Plants (2001) [CEFR]
NS-G-2.5	Core Management and Fuel Handling for Nuclear Power Plants (2002) [ER]

NS-G-2.6	Maintenance, Surveillance and In-Service Inspection in Nuclear Power Plants (2002) [ER]
NS-G-2.7	Radiation Protection and Radioactive Waste Management in the Operation of Nuclear Power Plants (2002) [ERS]
NS-G-2.8	Recruitment, Qualification and Training of Personnel for Nuclear Power Plants (2002) [ER]
NS-G-2.11	A System for the Feedback of Experience from Events in Nuclear Installations (2006) [ERS]
NS-G-2.12	Ageing Management for Nuclear Power Plants (2009) [ER]
NS-G-2.13	Evaluation of Seismic Safety for Existing Nuclear Installations (2009) [ERS]
NS-G-2.14	Conduct of Operations at Nuclear Power Plants (2008) [ERS]
NS-G-2.15	Severe Accident Management Programmes for Nuclear Power Plants (2009) [ER]
NS-G-3.1	External Human Induced Events in Site Evaluation for Nuclear Power Plants (2002) [ECFR]
NS-G-3.2	Dispersion of Radioactive Material in Air and Water and Consideration of Population Distribution in Site Evaluation for Nuclear Power Plants (2002) (under revision) [ER]
NS-G-3.6	Geotechnical Aspects of Site Evaluation and Foundations for Nuclear Power Plants (2005) [ECR]
SSG-2	Deterministic Safety Analysis for Nuclear Power Plants (2009) [ERS]
SSG-3	Development and Application of Level 1 Probabilistic Safety Assessment for Nuclear Power Plants (2010) [ER]
SSG-4	Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants (2010) [ER]
SSG-9	Seismic Hazards in Site Evaluation for Nuclear Installations (2010) [E]
SSG-12	Licensing Process for Nuclear Installations (2010) [ES]
SSG-13	Chemistry Programme for Water Cooled Nuclear Power Plants (2011) [ER]
SSG-16	Establishing the Safety Infrastructure for a Nuclear Power Programme (2012) [ER]
SSG-18	Meteorological and Hydrological Hazards in Site Evaluation for Nuclear Installations (2011) **Co-sponsorship:** WMO [E]
SSG-21	Volcanic Hazards in Site Evaluation for Nuclear Installations (2012) [ES]
SSG-25	Periodic Safety Review for Nuclear Power Plants (2013) [E]
SSG-27	Criticality Safety in the Handling of Fissile Material (2014) [E]
SSG-28	Commissioning for Nuclear Power Plants (2014) [E]
SSG-30	Safety Classification of Structures, Systems and Components in Nuclear Power Plants (2014) [E]
SSG-34	Design of Electrical Power Systems for Nuclear Power Plants (2016) [E]
SSG-35	Site Survey and Site Selection for Nuclear Installations (2015) [E]
SSG-38	Construction for Nuclear Installations (2015) [E]
SSG-39	Design of Instrumentation and Control Systems for Nuclear Power Plants (2016)[E]
WS-G-2.1	Decommissioning of Nuclear Power Plants and Research Reactors (1999) (under revision) [AECFR]

C.2. Research Reactors

NS-R-3 (Rev.1)	Site Evaluation for Nuclear Installations (2016) [E]
NS-R-4	Safety of Research Reactors (2005) [ACEFRS]
GS-G-1.1	Organization and Staffing of the Regulatory Body for Nuclear Facilities (2002) [CEFRS]
GS-G-1.2	Review and Assessment of Nuclear Facilities by the Regulatory Body (2002) [CEFR]
GS-G-1.3	Regulatory Inspection of Nuclear Facilities and Enforcement by the Regulatory Body (2002) [CEFRS]

GS-G-1.4	Documentation for Use in Regulating Nuclear Facilities (2002) [CEFRS]
GS-G-3.5	The Management System for Nuclear Installations (2009) [ER]
NS-G-2.11	A System for the Feedback of Experience from Events in Nuclear Installations (2006) [ERS]
NS-G-2.13	Evaluation of Seismic Safety for Existing Nuclear Installations (2009) [ERS]
NS-G-4.1	Commissioning of Research Reactors (2006) [E]
NS-G-4.2	Maintenance, Periodic Testing and Inspection of Research Reactors (2006) [E]
NS-G-4.3	Core Management and Fuel Handling for Research Reactors (2008) [E]
NS-G-4.4	Operational Limits and Conditions and Operating Procedures for Research Reactors (2008) [E]
NS-G-4.5	The Operating Organization and the Recruitment, Training and Qualification of Personnel for Research Reactors (2008) [E]
NS-G-4.6	Radiation Protection and Radioactive Waste Management in the Design and Operation of Research Reactors (2008) [E]
SSG-9	Seismic Hazards in Site Evaluation for Nuclear Installations (2010) [E]
SSG-10	Ageing Management for Research Reactors (2010) [E]
SSG-12	Licensing Process for Nuclear Installations (2010) [ES]
SSG-18	Meteorological and Hydrological Hazards in Site Evaluation for Nuclear Installations (2011) **Co-sponsorship:** WMO [E]
SSG-20	Safety Assessment for Research Reactors and Preparation of the Safety Analysis Report (2012) [E]
SSG-21	Volcanic Hazards in Site Evaluation for Nuclear Installations (2012) [E]
SSG-22	Use of a Graded Approach in the Application of the Safety Requirements for Research Reactors (2012) [E]
SSG-24	Safety in the Utilization and Modification of Research Reactors (2012) [E]
SSG-27	Criticality Safety in the Handling of Fissile Material (2014) [E]
SSG-35	Site Survey and Site Selection for Nuclear Installations (2015) [E]
SSG-37	Instrumentation and Control Systems and Software Important to Safety for Research Reactors (2015) [E]
SSG-38	Construction for Nuclear Installations (2015) [E]
WS-G-2.1	Decommissioning of Nuclear Power Plants and Research Reactors (1999) (under revision) [AECFR]

C.3. Fuel Cycle Facilities

NS-R-3 (Rev.1)	Site Evaluation for Nuclear Installations (2016) [E]
NS-R-5 (Rev.1)	Safety of Nuclear Fuel Cycle Facilities (2014) [ACER]
GS-G-1.1	Organization and Staffing of the Regulatory Body for Nuclear Facilities (2002) [CEFRS]
GS-G-1.2	Review and Assessment of Nuclear Facilities by the Regulatory Body (2002) [CEFR]
GS-G-1.3	Regulatory Inspection of Nuclear Facilities and Enforcement by the Regulatory Body (2002) [CEFRS]
GS-G-1.4	Documentation for Use in Regulating Nuclear Facilities (2002) [CEFRS]
GS-G-3.5	The Management System for Nuclear Installations (2009) [ER]
NS-G-2.11	A System for the Feedback of Experience from Events in Nuclear Installations (2006) [ERS]
NS-G-2.13	Evaluation of Seismic Safety for Existing Nuclear Installations (2009) [ER]
SSG-5	Safety of Conversion Facilities and Uranium Enrichment Facilities (2010) [E]
SSG-6	Safety of Uranium Fuel Fabrication Facilities (2010) [E]
SSG-7	Safety of Uranium and Plutonium Mixed Oxide Fuel Fabrication Facilities (2010) [E]
SSG-9	Seismic Hazards in Site Evaluation for Nuclear Installations (2010) [E}

SSG-12	Licensing Process for Nuclear Installations (2010) [ES]
SSG-15	Storage of Spent Nuclear Fuel (2012) [E]
SSG-18	Meteorological and Hydrological Hazards in Site Evaluation for Nuclear Installations (2011) **Co-sponsorship:** WMO [E]
SSG-21	Volcanic Hazards in Site Evaluation for Nuclear Installations (2012) [E]
SSG-27	Criticality Safety in the Handling of Fissile Material (2014) [E]
SSG-35	Site Survey and Site Selection for Nuclear Installations (2015) [E]
SSG-38	Construction for Nuclear Installations (2015) [E]
WS-G-2.4	Decommissioning of Nuclear Fuel Cycle Facilities (2001) (under revision) [ECFRS]

C.4. Radioactive Waste Disposal Facilities

SSR-5	Disposal of Radioactive Waste (2011) [ACEFRS]
GS-G-1.1	Organization and Staffing of the Regulatory Body for Nuclear Facilities (2002) [CEFRS]
GS-G-1.2	Review and Assessment of Nuclear Facilities by the Regulatory Body (2002) [CEFR]
GS-G-1.3	Regulatory Inspection of Nuclear Facilities and Enforcement by the Regulatory Body (2002) [CEFRS]
GS-G-1.4	Documentation for Use in Regulating Nuclear Facilities (2002) [CEFRS]
GS-G-3.4	The Management System for the Disposal of Radioactive Waste (2008) [ER]
SSG-1	Borehole Disposal Facilities for Radioactive Waste (2009) [E]
SSG-14	Geological Disposal Facilities for Radioactive Waste (2011) [E]
SSG-23	The Safety Case and Safety Assessment for the Disposal of Radioactive Waste (2012) [E]
SSG-29	Near Surface Disposal Facilities for Radioactive Waste (2014) [E]
SSG-31	Monitoring and Surveillance of Radioactive Waste Disposal Facilities (2014) [E]

C.5. Mining and Milling

RS-G-1.6	Occupational Radiation Protection in the Mining and Processing of Raw Materials (2004) [ES]
WS-G-1.2	Management of Radioactive Waste from the Mining and Milling of Ores (2002) (under revision) [ERS]

C.6. Applications of Radiation Sources

GSR Part 3	Radiation Protection and Safety of Radiation Sources – International Basic Safety Standards (2014) [ACE]
GS-G-1.5	Regulatory Control of Radiation Sources (2004) **Co-sponsorship:** FAO, ILO, PAHO, WHO [AEFS]
RS-G-1.4	Building Competence in Radiation Protection and the Safe Use of Radiation Sources (2001) **Co-sponsorship:** ILO, PAHO, WHO [ACEFRS]
RS-G-1.5	Radiological Protection for Medical Exposure to Ionizing Radiation (2002) **Co-sponsorship:** PAHO, WHO (under revision) [CEFRS]
RS-G-1.9	Categorization of Radioactive Sources (2005) [ACEFRS]
RS-G-1.10	Safety of Radiation Generators and Sealed Radioactive Sources (2006) **Co-sponsorship**: ILO, PAHO, WHO [EFS]
SSG-8	Radiation Safety of Gamma, Electron and X Ray Irradiation Facilities (2010) [ES]
SSG-11	Radiation Safety in Industrial Radiography (2011) [AEFS]

SSG-17	Control of Orphan Sources and Other Radioactive Material in the Metal Recycling and Production Industries (2012) [AEFR]
SSG-19	National Strategy for Regaining Control over Orphan Sources and Improving Control over Vulnerable Sources (2011) [AEFS]
SSG-32	Protection of the Public against Exposure Indoors due to Radon and Other Natural Sources of Radiation (2015) [E]
SSG-36	Radiation Safety for Consumer Products (2016) [E]
WS-G-2.2	Decommissioning of Medical, Industrial and Research Facilities (1999) (under revision) [ACEFRS]
WS-G-2.7	Management of Waste from the Use of Radioactive Materials in Medicine, Industry, Agriculture, Research and Education (2005) [CERS]

C.7. Transport of Radioactive Material

SSR-6	Regulations for the Safe Transport of Radioactive Material 2012 Edition (2012) [ACEFRS]
SSG-26	Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2012 edition) (2014) [E]
SSG-27	Criticality Safety in the Handling of Fissile Material (2014) [E]
SSG-33	Schedules of Provisions of the IAEA Regulations for the Safe Transport of Radioactive Material (2012 Edition) (2015) [ERS]
TS-G-1.2	Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material (2002) [ERS]
TS-G-1.3	Radiation Protection Programmes for the Transport of Radioactive Material (2007) [ES]
TS-G-1.4	The Management System for the Safe Transport of Radioactive Material (2008) [ER]
TS-G-1.5	Compliance Assurance for the Safe Transport of Radioactive Material (2009) [E]

ANNEX VII

PROJECTS AND DRAFT STANDARDS UNDER DEVELOPMENT

[status on 31 May 2016]

PROJECTS:

DS469: Preparedness and Response for an Emergency during the Transport of Nuclear Material or Radioactive Material, Revision of TS-G-1.2 [Step 3]

DS496: Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material – Edition for the revision of SSR-6 [Step 3]

DS497: Revision of eight closely interrelated safety guides on operational safety for NPPs: NS-G-2.2 to 2.8 and NS-G-2.14 [Step 3]

DRAFT STANDARDS UNDER DEVELOPMENT:

DS494: Protection against Internal Hazards in the Design of Nuclear Power Plants, revision and combination of NS-G-1.7 and NS-G-1.11 [Step 5]

DS495: Regulations for the Safe Transport of Radioactive Material, 20xx Edition – SSR-6, revision of SSR-6 [Step 7]

DS493: Package Design Safety Reports for the Transport of Radioactive Material, amendment and addendum to TS-G-1.5 [Step 7]

DS492: Human Factors Engineering in Nuclear Power Plants [Step 5]

DS491: Deterministic Safety Analysis for Nuclear Power Plants (revision of SSG-2) [Step 7]

DS490: Seismic Design and Qualification for Nuclear Power Plants (revision of NS-G-1.6) [Step 5]

DS489: Storage of Spent Nuclear Fuel, revision of SSG-15 [Step 5]

DS488: Design of the Reactor Core for Nuclear Power Plants, revision of NS-G-1.12 [Step 7]

DS487: Design of Fuel Handling and Storage Systems for Nuclear Power Plants, revision of NS-G-1.4 [Step 5]

DS486: Establishing the Safety Infrastructure for a Nuclear Power Programme (Rev. 1), revision of SSG-16 [Step 8]

DS485: Ageing Management and Programme for Long Term Operation for Nuclear Power Plants, revision of NS-G-2.12 [Step 10]

DS484: Site Evaluation for Nuclear Installations, revision of NS-R-3 [Step 5]

DS483: Severe Accident Management Programme for Nuclear Power Plants, revision of NS-G-2.15 [Step 10]

DS482: Design of Reactor Containment Systems for Nuclear Power Plants, revision of NS-G-1.10 [Step 7]

DS481: Design of the Reactor Coolant System and Associated Systems in Nuclear Power Plants, revision of NS-G-1.9 [Step 5]

DS479: Operating Experience Feedback for Nuclear Installations, revision of NS-G-2.11 [Step 8]

DS478: Safety of Nuclear Fuel Cycle Facilities, revision of NS-R-5 [Step 10]

DS477: The Management System for the Predisposal and Disposal of Radioactive Waste, revision and combination of GS-G-3.3 and GS-G-3.4 [Step 5]

DS476: Safety of Research Reactors, revision of NS-R-4 [Step 12]

DS475: Arrangements for Public Communications in Preparedness and Response for a Nuclear or Radiological Emergency [Step 5]

DS474: Arrangements for the termination of a nuclear or radiological emergency [Step 7]

DS473: Regulatory Body Functions and Processes, revision and combination of GS-G-1.2, GS-G-1.3, GS-G-1.4, part of GS-G-1.5, part of SSG-12 and part of WS-G-5.1 [Step 10]

DS472: Organization, Management and Staffing of a Regulatory Body, revision and combination of GS-G-1.1, part of GS-G-1.5, GSG-4 and DS113 and DS460 [Step 10]

DS471: Radiation Safety of X-ray Generators and Radiation Sources Used for Inspection Purposes and for Non-Medical Imaging [Step 8]

DS470: Radiation Safety of Radiation Sources Used in Research and Education [Step 5]

DS468: Remediation Process for Areas with Residual Radioactive Material (revision of WS-G-3.1) [Step 5]

DS460: Communication and Consultation with Interested Parties by the Regulatory Body [Step 14]

DS459: Management of Radioactive Residues from Mining, Mineral Processing, and other NORM related Activities (revision and expansion of WS-G-1.2) [Step 7]

DS456: GSR Part 2: Leadership and Management for Safety (revision of GS-R-3) [Step 12]

DS455: Establishing the Infrastructure for Radiation Safety [Step 12]

DS454: Predisposal Management of Waste from the Use of Radioactive Materials in Medicine, Industry, Research, Agriculture and Education (revision of WS-G-2.7) [Step 12]

DS453: Occupational Radiation Protection (revision of RS-G-1.1, RS-G-1.2, RS-G-1.3, RS-G-1.6, GS-G-3.2) [Step 12]

DS452: Decommissioning of Nuclear Power Plants, Research Reactors and Other Nuclear Fuel Cycle Facilities (revision of WS-G-2.1 and WS-G-2.4) [Step 11]

DS449: Format and Content of the Safety Analysis Report for Nuclear Power Plants (revision of GS-G-4.1) [Step 5]

DS448: Predisposal Management of Radioactive Waste from Nuclear Power Plants and Research Reactors (revision of WS-G-2.5) [Step 14]

DS447: Predisposal Management of Radioactive Waste from Nuclear Fuel Cycle Facilities (revision of WS-G-2.6) [Step 14]

DS442: Regulatory control of radioactive discharges to the environment (revision of WS-G-2.3) [Step 11]

DS440: Design of Auxiliary and Supporting Systems in Nuclear Power Plants [Step 5]

DS434: Radiation Safety of Radioisotope Production Facilities [Step 6]

DS432: Radiation Protection of the Public and Protection of the Environment [Step 11]

DS427: Prospective Radiological Environmental Impact Analysis for Facilities and Activities, revision of NS-G-3.2 [Step 11]

DS420: Radiation Protection and Safety in Nuclear Gauges [Step 11]

DS419: Radiation Protection and Safety in Well Logging [Step 11]

DS403: Decommissioning of Medical, Industrial and Research Facilities (revision of WS-G-2.2) [Step 9]

DS399: Radiation Protection and Safety in Medical Uses of Ionizing Radiation (revision of RS-G-1.5) [Step 12]

DS381: Safety of Nuclear Fuel Cycle R&D Facilities [Step 14]

DS360: Safety of Nuclear Fuel Reprocessing Facilities [Step 14]

ANNEX VIII

DRAFTS OF THE NUCLEAR SECURITY SERIES UNDER DEVELOPMENT (INTERFACE DOCUMENTS ONLY; TENTATIVE TITLES ONLY) [status end of May 2016]

NST051: Security During the Lifetime of a Nuclear Facility [Step 5]

NST049: Detection of and Initial Response to Radioactive Material at Undesignated Points of Entry and Exit [Step 5]

NST048: Security of Radioactive Material in Use and Storage and of Associated Facilities [Step 9]

NST045: Computer Security for Nuclear Security [Step 5]

NST044: Security of Radioactive Material in Transport [Step 9]

NST041: Preventive and Protective Measures against Insider Threats [Step 11]

NST023: Physical Protection of Nuclear Facilities and of Nuclear Material [Step 12]

NST020: Sustaining a Nuclear Security Regime [Step 12]

NST016: Detection of Radioactive Material at Designated Points of Entry and Exit [Step 5]

NST011: Preventive Measures for Nuclear and Other Radioactive Material out of Regulatory Control [Step 7]

NST009: Building Capacity for Nuclear Security [Step 11]

NST006: Framework for International Cooperation and Assistance on Nuclear Security [Step 5]

NST005: Regaining Control over Nuclear and Other Radioactive Material out of Regulatory Control [Step 5]

NST004: Developing a National Framework for Managing Response to Nuclear Security Events [Step 11]

NST002: Regulations and Associated Administrative Measures for Nuclear Security [Step 12]

ANNEX IX

STATUS OF REMAINING ACTIONS FROM THE 35TH AND 36TH MEETINGS OF THE COMMISSION AND STATUS OF ACTIONS FROM THE 38TH MEETING

35.09 RASSC to prepare a policy/position paper on the UN General Assembly deliberation on the attribution of radiation effects and inference of risk and possible implications for the safety standards. **[Action: Secretariat, NSRW, and RASSC].** Contribution from RASSC at this meeting

36.02 The translation of SSG-26 (Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material, 2012 Edition) into all official languages to be initiated as soon as possible, subject to availability of funding **[Action: Secretariat, NSRW, MTCD]. On-going**

36.03 The CSS members to prepare the 37th meeting by providing feedback on a holistic review of the collection of Safety Guides, aimed at developing an approach to ensuring their consistency, completeness and proper interdependence, to be considered as an item on the agenda of the 37th CSS meeting. The long term structure is available through the status of safety standards. The current set of standards is available in the "complete collection of safety standards". The feedback to be summarized by the Secretariat for discussion at the 37th meeting. **[Action: CSS members, CSS Scientific Secretary]. Limited input. Postponed to new CSS term. Input from the IT platform**

36.05 A pilot test of the IT platform for the feedback management, review/revision and publication process to be performed, including the management of definitions. **[Action: Secretariat, CSS Scientific Secretary]. Testing and start of operation. Presentation under Item 8 and miscellaneous**

38.01 The final report of the 37th CSS meeting to be uploaded on the CSS web page. **[Action: Secretariat, CSS Scientific Secretary]. Done**

38.02 The presentation used for the DPP DS493 to be used as a template for future presentations of drafts and DPPs to the Commission **[Action: Secretariat, CSS Scientific Secretary]. Done**

38.03 The revised versions of SPESS A, B and C and the new SPESS E document to be finalized and posted on the Safety Standards web page. **[Action: Secretariat, CSS Scientific Secretary]. Done**

38.04 The draft end of term report with the section 3 on recommendations for the next term to be submitted for final comments and then sent to the CSS Chair for finalization. **[Action: Secretariat, CSS Scientific Secretary, CSS members and CSS Chair]. Done**

38.05 A list of actions resulting from the 38th CSS meeting to be provided to the CSS members for comment. **[Action: Secretariat, CSS Scientific Secretary].** ***This list***

38.06 The draft report of the 38th CSS meeting to be posted for comment and finalization by the CSS members of the fifth CSS term. **[Action: Secretariat, CSS Scientific Secretary]. Done**

38.07 The presentations made at the 38th CSS meeting to be uploaded on the CSS web page. **[Action: Secretariat, CSS Scientific Secretary]. Done**