INTERNATIONAL ATOMIC ENERGY AGENCY

DIVISION OF RADIATION, TRANSPORT AND WASTE SAFETY

Radiation Safety Standards Committee (RASSC) – Forty-second Meeting

Waste Safety Standards Meeting (WASSC) – 43rd Meeting

13–14 June 2017

IAEA HEADQUARTERS, VIENNA, AUSTRIA
MINUTES OF THE JOINT SESSION

RW1. OPENING OF THE MEETING

RW1.1 Opening of the Joint Session

The Joint Session of RASSC and WASSC was opened by the Director of the Division of Radiation, Transport and Waste Safety (NSRW), Mr Peter Johnston. He welcomed all participants and briefed them on some items of possible interest.

Hereafter, Mr Johnston drew the attention of the attendees to a number of past and future events that are of interest to both Committees.

Regarding items to be discussed in the Joint Session, Mr Johnston emphasized the importance of agreeing how to proceed in relation to revising the Safety Guide Application of the Concepts of Exclusion, Exemption and Clearance (RS-G-1.7). While the Committees approved the DPPs – one dealing with clearance, and the other dealing with exemption – at their last meetings in November, there were a number of important issues raised that the Secretariat felt required further consideration. A Consultants’ Meeting held prior to the meetings of RASSC and WASSC has made a clear recommendation on how to proceed.

In November 2016, the three Safety Guides DS427, DS432 and DS442, providing state-of-the-art recommendations on regulatory approaches for protection of public and the environment, including the flora and fauna, have been endorsed by Commission on Safety Standards and are in the process for publication. The Secretariat is now working intensively in developing practical methodologies applicable to specific facilities and activities. An important issue in this regard is the need to develop guidance on the regulation and use of radiotracers for industrial applications and in environmental studies. Mr Johnston requested the advice of RASSC and WASSC on the best way to progress on this issue.

Mr Johnston highlighted the RASSC opinion on the implications of the 2012 UNSCEAR report “Attributing Health Effects to Ionizing Radiation Exposure and Inferring Risks” for the development of IAEA safety standards. RASSC concluded that the UNSCEAR report has no direct and immediate implications for the IAEA safety standards and, as such, it reinforces the appropriateness of, and sound scientific basis for, these standards. There is a division of opinion on this topic among members of the Commission on Safety Standards, and a Working Group to discuss this matter further is to be established.

Next, Mr Johnston drew the attention of the participants to the upcoming International Conference on Radiation Protection in Medicine (Vienna, 11–15 December 2017). This is a follow-up to the very successful predecessor held in Bonn in December 2012, and it will provide the radiation protection
community with the opportunity to evaluate progress in implementation of the “Bonn Call for Action” as well as identifying new challenges from the increasing and varied applications of ionizing radiation in medical diagnosis and treatment.

Significant progress has been made with regard to ARTEMIS, the Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation. The Agency is implementing the first missions to take place. These include a review of the decommissioning programme in Italy in July 2017 and the two reviews requested in line with the obligations of the European Waste Directive – Poland in October 2017 and France in January 2018.

Finally, Mr Johnston highlighted that, in May 2017, the Contracting Parties of the Joint Convention have held their Third Extraordinary Meeting as well as their Organizational Meeting for the Sixth Review Meeting in May 2018. Both meetings were attended by approximately 270 delegates, representing 57 out of a total of 74 Contracting Parties.

Mr Johnston ended wishing a productive Joint Session to the attendees.

**RW1.2 Chairmen’s Introduction**

Mr Gustavo Massera (RASSC Chairman) and Mr Geoff Williams (WASSC Chairman) thanked Mr Johnston for his opening remarks. They also welcomed all newly appointed and existing members and observers of RASSC and WASSC to the Joint Session. Mr Massera outlined that RASSC and WASSC have often met in the past and always had fruitful discussions.

**RW1.3 Adoption of the Agenda**

The Agenda of the Joint Session was approved and adopted without changes. The Agenda can be found in Annex 1. The list of participants is contained in Annex 2.

**RW1.4 Administrative Arrangements**

The Scientific Secretaries drew attention to the location of the emergency exits, introduced the administrative support staff for the meeting and summarized the administrative arrangements, including the joint hospitality event. It was agreed that Geoff Williams chairs the morning session and Gustavo Massera the afternoon session.

**RW2. GENERAL SAFETY STANDARDS ISSUES**

**RW2.1 Report of the Meetings of the Chairs and of the Commission on Safety Standards**

Mr Dominique Delattre, Head of the Safety Standards and Security Guidance Development Section (NSOC), presented the main results of the 41st CSS meeting held in April 2017.

The following draft safety standards were endorsed for publication:

- Draft Safety Requirements DS478 on *Safety of Nuclear Fuel Cycle Facilities* (revision of NS-R-5 (Rev. 1));

The following DPP was approved:
• DPP for the Draft Safety Guide DS498 on *External Events Excluding Earthquakes in the Design of Nuclear Installations* (revision of NS-G-1.5).

Since the 40th CSS meeting in November 2016, one safety standard was published:


A Working Group of CSS members from Argentina, Australia, Finland and USA, as well as the Chairs of EPRsC, RASSC and WASSC and staff of the Secretariat, was established to consider the implications of the 2012 UNSCEAR report “Attributing Health Effects to Ionizing Radiation Exposure and Inferring Risks” for the development of IAEA safety standards. Representatives of ICRP and UNSCEAR would also be invited to contribute to the Working Group. The Working Group was requested to prepare a report for consideration at the 42nd CSS meeting on the potential implications for both the content of the safety standards and the implementation of and communication on the standards.

CSS members were also informed on improvements in the publishing process. A permission granted to reproduce or translate a standard will automatically extend to future revisions of that standard, without the need for further requests. Draft safety standards will be approved in a two-step process by the Publications Committee, which will enable the CSS to learn about substantive comments at an earlier stage than before.

There were no questions to this presentation.

**RW2.2 Registration for Access to NSS-OUI**

Mr Dominique Delattre provided a presentation on the latest status of development of the new IT platform “NSS-OUI” (Nuclear Safety and Security Online User Interface) in NUCLEUS. The presentation updated information provided at the five previous meetings of the Committees in November/December 2014, June 2015, November 2015, June 2016, and November 2016.

NSS-OUI is a content management system and knowledge management system. The system allows the management of relationships between requirements and associated guidance, including safety reports and TECDOCs. In addition, the system has advanced search and navigation capabilities (search by publication or by requirement). The platform will be used in the future as part of the review and revision process for both Safety Standards and Nuclear Security Series publications.

Most of the current work in relation to safety standards focuses on the revision of existing safety standards. This means that systematic feedback on the application of safety standards, as well as the identification of gaps and/or inconsistencies, is becoming more important. In order to ensure greater consistency across the entire set of safety standards, it is also desirable to be able to update a number of different Safety Standards simultaneously.

The principal objectives of the new platform are:

1. To ensure that the review and revision of publications in the Safety Standards Series and in the Nuclear Security Series are based on a systematic process of collection and analysis of feedback;
2. To ensure that any revision of publications or parts of publications is justified by the above mentioned feedback process, therefore stability of the parts of the standards and guidelines that remain valid;
3. To maintain technical consistency between publications by managing them as a series;
4. To enhance semantic consistency through the systematic use of harmonized terminology;
5. To ensure comprehensive coverage by means of a systematic ‘top-down’ approach to review and revision complemented by topical gap analyses;
To support the harmonized use and application of Safety Standards and Nuclear Security Series publications by enhancing their user-friendliness and by providing tools for users to easily navigate within the series.

As of May 2017, all IAEA Safety Standards are available and tagged in NSS-OUI. Metadata search and full text search for a total of 122 Safety Standards and 23 Nuclear Security Series are fully operational.

Mr Delattre demonstrated the functionality of the new system, including the use of metadata, the various search functions and the mechanisms for providing feedback. It is intended that the final system will be compatible with use on a desktop, laptop, tablet and smart phone and will work with all popular browsers. He requested feedback of the users on how the platform works. Online guidance has been developed on how to use the new system and a training video is also available.

The next steps in the further development of the system include inter alia:

- A new relationship search tool with possibility to select/deselect topical areas;
- A full SharePoint process flow to manage the review and approval process steps for the revisions up to the final approval and publication;
- To import the Glossaries, followed by semi-automatic tagging to import as metadata the definitions and associated information notes for defined terms used in the text of the publications;
- To continue inserting relationships to relevant Safety Reports, TECDOCs and other relevant publications;
- To insert links to e-learning tools for the requirements and, where appropriate, for guides.

Mr Delattre demonstrated how to register on the homepage of the NSS-OUI platform. He pointed out that only CSS members and SSC members/observers are eligible to register, as agreed with the DDG-NS.

Finally, Mr Delattre thanked Japan and the United States for their financial support to develop the new platform.

RASSC and WASSC welcomed the development of the IT platform, noting that the system’s strong functionality can greatly improve the review and revision process.

RW2.3 Holistic Overview of the Safety Standards Structure

As integral part of his presentation, Mr Dominique Delattre presented a Word file showing the situation that would be reached after finalization of all drafts being prepared. The overview comprised all DPPs which have been approved by the Coordination Committee as of 24 May 2017. The Committees are asked to review the resulting set of future IAEA Safety Standards, with the objective to identify potential gaps, if any. Mr Delattre reminded the Committee members that even in the case that such a gap would be identified, this should not lead to a proliferation of the number of Safety Standards.

RW3. REVISION OF IAEA SAFETY STANDARDS

RW3.1 Revision of the Safety Guide “Application of the Concepts of Exclusion, Exemption and Clearance” (RS-G-1.7)

Mr Miroslav Pinak (Section Head RSM/NSRW) and Mr Vladan Ljubenov (WES/NSRW) informed on the latest developments with respect to the DPPs for DS499 and DS500.
Although RASSC and WASSC approved both DPPs at their meetings in November/December 2016, there were a number of comments that needed to be addressed. In advance of the 41st CSS meeting (April 2017), extensive written comments from Czech Republic were received. Considering the nature of the comments, the Secretariat decided not to submit the DPPs to the CSS, and organized a Consultants’ Meeting (30 May – 1 June 2017) prior to the meetings of RASSC and WASSC to discuss the best way forward. The invited consultants had already experience in drafting of RS-G-1.7.

The minutes of the Consultants’ Meeting have been made available on the RASSC-42 and WASSC-43 webpages. The consultants recommended the following:

- It is appropriate to develop two separate safety guides dealing with application of the concepts of exemption and clearance, respectively.
- International trade of commodities containing radionuclides should be addressed in a separate safety report or TECDOC.
- Both safety guides should be developed in a coordinated manner to ensure consistency of approach and content.
- Consideration needs to be given to developing generic values for exemption and clearance of items with surface contamination. While some Member States already have their own values, generic values could be of great benefit to others.
- Attention needs to be given to ensuring consistency of any numbers that will potentially be referenced or introduced throughout all three documents.
- The existing DPPs should be revised to reflect this new approach (two Safety Guides and one Safety Report/TECDOC).

The scope of DS500 (dealing with clearance) remains unchanged, while the scope of DS499 (dealing with exemption and international trade) will be narrowed, by removing the contents related to international trade. In both DPPs, some contents were restructured to better align them with each other. The clear intention is to place the DPPs on the agenda for approval at the 42nd CSS meeting in November 2017. TRANSSC has been asked to consider if it wishes to continue as a Review Committee for DS499 knowing that the issues of trade will not be addressed in the document.

The presentation was followed by a vigorous discussion.

The United Kingdom was asking for justification to remove the issue of international trade of commodities containing radionuclides from DS499: The dose criteria for international trade are different from those for exemption. Therefore, both issues should be dealt with separately.

Australia, Belgium, the Czech Republic and the European Commission supported the development of two separate Safety Guides for the revision of RS-G-1.7. In this context, Australia stressed the need to proceed with DS499 and DS500 in parallel and in a well-coordinated manner. Mr Monti (European Commission) warned that it will become difficult to get consensus on values for conditional clearance, as the practices adopted in the EU Member States are different. He suggested to present examples in an Annex to DS500 which should provide guidance on methodology rather than numerical values. Finland also supported the development of two Safety Guides, but recommended to maintain the option to merge them into a single Safety Guide at the end of the process, in order to reduce the total number of Safety Standards in the long-term structure.

In response to a related question from the United States, Mr Ljubenov clarified that the issue of surface contamination is addressed in DS500 for use of material, not for transport. In addition, the Unites States raised the question whether it is intended to bring new numbers into DS500 that could potentially be inconsistent with GSR Part 3. Mr Ljubenov clarified that it is not intended to change any existing numbers in RS-G-1.7. Instead, a few numbers will be added in DS500 only.
In response to a related question from India, Mr Ljubenov pointed out that clearance on the basis of gross activity is not considered to be a good practice and, thus, will not be recommended in DS500.

IRPA insisted on avoiding unnecessary conservatism in clearance values when developing DS500.

Finally, the WASSC Chair requested formal approval of both Committees to remove the issue of international trade of commodities containing radionuclides from the scope of DS499, and to address this topic in a safety report or TECDOC. No objections were raised.

**Action:** The Secretariat to amend the DPPs of DS499 and DS500 for the revision of RS-G-1.7 and to submit them to the Chairs of RASSC and WASSC for approval

**RW4. OTHER SAFETY STANDARDS ISSUES**

**RW4.1 Applications of Radioisotopes in Industry and Research**

Mr Jovan Thereska presented an overview on commonly used radioisotopes and state-of-the-art radiation technologies applications and commonly used in industry.

Radiotracers are chemical compounds in which one or more atoms have been replaced by a radioisotope. Radiotracer techniques are used extensively throughout the world for diagnostic purposes, troubleshooting and process optimization in industry. Examples of applications include: Residence time distribution analysis; Flow rate measurements; Leak detection in buried pipelines and heat exchangers; Mixing/blending studies; Corrosion/wear monitoring; Environmental pollution investigation; Sediment movement on river and sea bed; Inter-well tracer test in oil fields; Material inventory; and Positron emission tomography.

Criteria for selection of a tracer for a specific investigation include: (a) type and energy of the emitted radiation; (b) half-life of the radionuclide; (c) physical and chemical stability; (d) easy and unambiguous detection.

Radiation protection measures for workers are necessary throughout all aspects of operations (i.e. production, transport, injection and waste management including cleaning of the working area). Public exposures due to radiotracers are composed of near-field exposure (inside facilities) and far-field exposure (outside facilities). The latter is arising from direct exposure and internal exposure of traced products.

There were no comments or questions to the presentation.

**RW4.2 Proposal to Develop a Safety Guide on Regulatory Control and Radiation Safety for Radiotracers**

Mr Diego Telleria (WES/NSRW) presented a proposal by the Secretariat to develop a Safety Guide on Regulatory Control and Radiation Safety for Radiotracers. He explained the background for this proposal. NSRW had received a request from a number of Member States, channelled through NAPC, to provide advice on a regulatory approach applicable for the use of radioactive tracers in industry and environmental studies. The immediate need is to cover a chapter with safety and regulatory considerations in a TECDOC on “Using Radiotracers Safely: Regulation and Environmental Protection” (working title), which is currently being prepared by NAPC. Due to the lack of specific Safety Standards on this matter, NSRW based its advice on the following IAEA publications:

- General Safety Requirements — notably GSR Part 1 (Rev. 1), GSR Part 2, GSR Part 3 and GSR Part 4 (Rev. 1);
• General Safety Guides (in publication) – notably GSG-7 (ex DS453), GSG-8 (ex DS432), GSG-9 (ex DS442) and GSG-10 (ex DS427); and

• TECDOCs – notably Notification and Authorization for the Use of Radiation Sources (TECDOC-1525) and Inspection of Radiation Sources and Regulatory Enforcement (TECDOC-1526).

The safety and regulatory chapter to be included in the TECDOC in preparation by NAPC was drafted with the assistance of international consultants, in cooperation with staff from NAPC and NSRW. The Secretariat highlighted the following observations:

• The use of radioactive tracers in industry and environmental studies involves interested parties outside the nuclear sector;
• The radiation risk is relatively low in most of the scenarios, even for unplanned events;
• There is a lack of a uniform regulatory approach;
• Environmental practices involving radionuclides are becoming more and more controversial.

As a summary of the presentation, the Secretariat considered that a Safety Guide might be justified, and put this to the Committee members for discussion on how to move forward. The WASSC Chair requested to involve NSGC in drafting such a Safety Guide, to ensure that safety-security interfaces are adequately addressed.

In response to a related question from Indonesia, Mr Telleria pointed out that a user of radiotracers should have a license for the related application.

As a conclusion of the question and answer session, despite the interest in the topic, there was no clear view of the Committee members about the need for a specific Safety Guide on Regulatory Control and Radiation Safety for Radiotracers. RASSC and WASSC appreciated the work being carried out by the Secretariat in preparing the TECDOC, but left open any decision to develop a Safety Guide for further discussions. The Secretariat noted that, once the chapter on safety and regulatory aspects in the mentioned TECDOC is finalized, it could be submitted to RASSC, WASSC and NSGC for information and comments.

RW4.3 Applying a Graded Approach to Regulation

Mr Jovica Bosnjak (NSRW) reminded the Committees that the application of the graded approach was discussed in December 2015 when approving the draft safety requirements Leadership and Management for Safety (GSR Part 2). At the time, RASSC had some questions as to how the graded approach is applied by the regulatory body both in relation to its own operations and the requirements it places on licensees, particularly in relation to non-nuclear applications, and if these issues are adequately covered in the safety standards.

Mr Bosnjak noted that application of the graded approach to regulation is addressed in the following safety standards: Principle 31 and Principle 52 of the Safety Fundamentals; safety requirements GSR Part 1 (Rev. 1), GSR Part 2 and GSR Part 3. It is also covered in the safety guides Regulatory Control of Radiation Sources (GS-G-1.5), Application of the Concepts of Exclusion, Exemption and Clearance (RS-G-1.7) and Characterization of Radioactive Sources (RS-G-1.9).

More recently, the graded approach is addressed in the three draft safety guides Establishing the Infrastructure for Radiation Safety (DS455), Organization, Management and Staffing of a Regulatory

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1 “Safety has to be assessed for all facilities and activities, consistent with a graded approach…..”

2 “To determine whether radiation risks are as low as reasonably achievable, all such risks, whether arising from normal operations or from abnormal or accident conditions, must be assessed (using a graded approach) a priori and periodically reassessed throughout the lifetime of facilities and activities…..”
Body for Safety (DS472), and Functions and Processes of the Regulatory Body for Safety (DS473). In these documents the graded approach is mentioned or referred to on 22, 12 and 35 occasions respectively.

The concept is present, but not explicitly referred to in Notification and Authorization for the Use of Radiation Sources (TECDOC-1525) and Inspection of Radiation Sources and Regulatory Enforcement (TECDOC-1526). It is intended that both these documents will be revised in the near future, at which time more focus will be given to application of the graded approach. The graded approach is also central to the report on Use of Graded Approach in the Application of Management Systems Requirements for Facilities and Activities (TECDOC-1740), published in 2014.

Application of the graded approach has been raised in a number of recent IRRS missions and there have been a number of recommendations on its application in relation to various aspects of the licensing and inspection process for users of radiation sources. It is recognized that there is a need for improvement but the experience of these missions is that Member States are applying the concept in a more consistent and effective manner than was previously the case.

Mr Bosnjak considered that the graded approach is adequately reflected in the recently developed safety standards. Experience has shown that there is increasing awareness at the national level that the graded approach is a fundamentally important concept and that it is now being applied in a more consistent manner to all facilities and all activities. Nevertheless, the Agency will continue to underline the importance of the concept and will develop additional guidance material in the future.

The United States noted that the definition of the term “graded approach” in the Safety Glossary (2016 Revision) uses the expression “… likelihood of the exposures …”. This suggests the need to use a probabilistic approach, but it is not always clear how this should be done.

Australia, Belgium and France considered that, while the definition suggests that the concept is relatively straightforward, it is difficult to apply in practice. It is also important that it is applied correctly and effectively. They all supported the development of guidance on how the graded approach should be applied, including examples of its application in Member States. Indonesia referred to the relationship between optimization and the graded approach; both are widely quoted, but rarely applied in an appropriate manner.

ILO emphasized the responsibility of the regulatory body to ensure the use of the graded approach by its licensees and end users. It is essential that the application of the graded approach continues to be emphasised during IRRS missions, and the ILO welcomed the intention to develop additional guidance material.

From the point-of-view of WASSC, Mr Williams stressed that regulation of NORM activities lends itself particularly well to the use of a graded approach. He supported the view that application in specific situations is not always clear and proposed that the new TECDOCs being developed cover all possible situations in which the graded approach should be applied.

**RW4.4 Prudence and Conservatism in Radiation Protection**

Mr Roger Coates (IRPA) thanked both Committees for the opportunity to present the view of radiation protection professionals on this particular aspect of the application of the System of Radiological Protection. He noted that the System is based not only on science, but also needs to take account of ethical judgements and experience. From the ethical viewpoint, the four key considerations are beneficence/non-maleficence, prudence, justice, and dignity. At the level of principle, prudence is about caution, care and a sensible approach. However, practical interpretation of prudence involves a degree of judgement in that what is appropriate at a high level of risk may not be appropriate at a lower risk level.
In practice, prudence has been interpreted as the need for adopting a conservative approach, as is often reflected in international and regulatory guidance and expectations. But this inevitably introduces an intrinsic bias towards lower and lower doses, without there necessarily being any discernible benefit either to individuals or to society.

As an example, Mr Coates described the current regulatory system for releasing items from regulatory control (the concept of clearance). While the intention is to focus the regulatory system on matters of significance and not on trivia, the various steps in the decision-making process each add further conservatism to the estimates of individual dose. From a starting point of a few tens of μSv in a year being regarded as a prudent approach, Mr Coates estimated that the actual radiation doses would be at least one hundred times lower i.e. of the order of 0.1 μSv in a year. This compares with an annual dose from natural background radiation of around 2000 μSv (2 mSv) in a year.

Such a conservative approach has major financial implications for decommissioning. For example, the experience in the United Kingdom is that to reduce the clearance value for Cæsium-137 from 1 Bq/g to 0.1 Bq/g would cost several billion pounds over the lifetime of a facility. Mr Coates considered that this was not money well spent and that the clearance values could be increased by a factor of up to 100 and still meet a high standard for radiation protection of the public.

Mr Coates added that a good starting point would be to establish a minimum value for exemption and clearance of 1 Bq/g for artificial nuclides, which would have the added benefit of consistency with the values currently applied to natural radionuclides such as uranium and thorium. This would have an immediate impact in relation to important radionuclides such as Cobalt-60, Zinc-65, Ruthenium-106, Cæsium-134/137, Plutonium-238/239/240/241 and Americium-241, for which the clearance value is currently set at 0.1 Bq/g.

In summary, Mr Coates stated that while prudence is right in principle, its application is judgemental and it has drifted into conservatism. Society has limited resources and if these are used on inappropriate prudence/conservatism, this results in poor value for society. This in turn contradicts the ethical consideration of beneficence, which is about doing the best that can be done with society’s resources. Recognizing the problem of conservatism is the first but important step to remedying the situation.

The United States remarked that uncertainties in risk analysis are very large and there is a need to develop a more realistic approach, possibly through the use of probabilistic risk assessment. Belgium urged caution in this regard, noting that some degree of conservatism is necessary to account for the possibility that we may be seriously wrong in our understanding and assessment of radiation risks.

Several comments were made in relation to the public perception of risk by Belgium, Czech Republic and Ireland. It appears that the public does not understand the risks and even the financial argument is not readily accepted. In the eyes of the public, all radiation is not equal and their decisions are often made on the basis of subliminal feelings rather than scientific facts. Mr Coates noted that treating natural and man-made radiation differently suggests that they are indeed in some way different and, as radiation protection professionals, we have a duty to seek to address such public perception rather than accepting it without challenge.

Canada considered that it is difficult to communicate the conservatism that already exists within the System of Radiological Protection and this makes it difficult to increase the current values for clearance. The United Kingdom commented that the enormous and unnecessary additional costs for low level waste management need to be communicated to the public as such costs are often reflected in additional everyday charges.

Indonesia reminded the Committees that, apart from issues related to prudence and conservatism, there are very real technical issues to be addressed, for example the use of conditional clearance. It
could be considered that unconditional clearance represented the “optimistic” approach while conditional clearance was the option chosen by the pessimist. Conditional clearance could therefore possibly be an added degree of conservatism that is unwarranted.

There was a general acceptance that the current System, certainly as it is applied to clearance from regulatory control, is highly conservative but there are a number of reasons as to why changes to the currently-agreed numbers would be challenging. However, it was emphasized that we should not allow additional conservatism to be introduced, for example in the development of exemption and clearance values for surface contaminated material.

Mr Pinak noted that safety standards are developed on the basis of practical experience and what is implementable. Public perception does play a role in such an approach. While the current safety standards do allow for individual Member States to develop their own values, a harmonized approach where the same values are applied worldwide has clear advantages.

The RASSC and WASSC Chairs thanked Mr Coates for a stimulating presentation.

RW5. DPPs FOR APPROVAL

RW5.1 Draft Safety Guide: Arrangements for Preparedness and Response for a Nuclear or Radiological Emergency (DS504)

Ms Svetlana Nestoroska Madjuranova (IEC) introduced the DPP for a revision of the safety guide Arrangements for Preparedness and Response for a Nuclear or Radiological Emergency (GS-G-2.1) which was published in 2007. GS-G-2.1 supported the safety requirements Preparedness and Response for a Nuclear or Radiological Emergency (GS-R-2), which were superseded and replaced by GSR Part 7 (same title) published in 2015. It complements the safety guide Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency (GSG-2) published in 2011.

The main reasons for revising GS-G-2.1 are to better address how specific requirements in GSR Part 7 can be met while ensuring consistency in terminology and concepts; providing more detailed guidance on a number of requirements in GSR Part 7, such as those for infrastructure; removing outdated guidance or other guidance which has been addressed in more recent EPR related safety standards; ensuring appropriate cross-references are given to various EPR related safety standards; and addressing the five emergency preparedness categories with common guidance.

The revised safety guide addresses all radiological or nuclear emergencies, irrespective of cause. The target audience is emergency planners with responsibilities to prepare adequately to respond to any nuclear or radiological emergency at facility, local, regional and national levels. This includes governments, response organizations, operating organizations and regulatory bodies. The proposed structure of the revised safety guide follows GS-G-2.1 to a great extent.

Ms Nestoroska Madjuranova summarized the proposed structure of the document and noted the target publication date of Q3 2022. A total of 29 comments on the draft DPP were received from the Committees. These were mainly editorial in nature and 23 of them were accepted. In response to a question from Iran, Ms Nestoroska Madjuranova confirmed that DS504 will contain detailed guidance on emergency categorization, consistent with what is published in GSR Part 7.

There were no further comments from RASSC and WASSC, who approved the DPP for submission to the CSS for endorsement.

Action: The Secretariat to submit the DPP for the draft safety guide Arrangements for Preparedness and Response for a Nuclear or Radiological Emergency (DS504) to the CSS for endorsement
Ms Tamara Yankovich (WES/NSRW) introduced the DPP to revise the safety guide on *Environmental and Source Monitoring for Purposes of Radiation Protection* (RS-G-1.8) which was published in 2005. A Consultants’ Meeting in March 2016 identified the following key issues to be covered in the revised document:

1. Consistency with more recently published safety standards, including in relation to the use of terminology and the application to different exposure situations;
2. Use of monitoring data to assess doses to the public and to flora and fauna;
3. Development of harmonized monitoring programmes that demonstrate protection of people and the environment;
4. Application of the graded approach;
5. Reporting requirements;
6. Data management and quality management; and
7. Communication and consultation with interested parties.

The revised safety guide will address the planning and implementation of characterization and monitoring to verify compliance with regulatory requirements. It will address the use of source monitoring, environmental monitoring and individual monitoring for the purposes of assessment of radiological impacts to the public and the environment. The target audience is regulatory bodies, operating organizations, decision-makers and others responsible for developing monitoring strategies, for planning and implementing monitoring, and for interpreting monitoring data in relation to planned, existing or emergency exposure situations.

The key issues to be addressed in the new safety guide relate to the characterization and monitoring for planned, emergency and existing exposure situations, using the graded approach. This includes

1. Source monitoring and environmental monitoring of discharges for authorized facilities and activities;
2. Source monitoring, environmental monitoring and individual monitoring for unplanned and uncontrolled releases;
3. Individual monitoring of members of the public in emergency and existing exposure situations; and
4. Interpretation of results, including those for dose assessment.

Ms Yankovich outlined the proposed structure and content of the document, including possible annexes and appendices. The target publication date is the end of 2021.

Out of the scope of DS505 is the monitoring

- of non-radiological contaminants or physical stressors;
- of workers and the workplace;
- of emergency workers and helpers;
- for the purposes of protection of patients; and
- for security purposes.

A total of 71 comments were received from 14 Member States and one International Organization. All were accepted and were very helpful if clarifying the scope of the document. A number of comments were received on the title of the safety guide. Ms Yankovich noted that it is common practice for safety standards to have changes made to the title on a number of occasions during the
development process. As such, the current title should be regarded as a ‘working title’ that need not be finalized at this time.

Korea welcomed the proposal to update RS-G-1.8 and underlined the importance of addressing the protection of flora and fauna. Ms Yankovich confirmed that this would indeed be addressed in the document, consistent with the approach recommended by ICRP. Belgium noted that monitoring for clearance does not appear to be addressed and asked that this be considered for inclusion.

India noted that IAEA guidance on the use of delay tanks in medical facilities is causing difficulties for several Member States and asked if this could be addressed in the document. The Secretariat responded that the new safety guide will cover all facilities that discharge to the environment. Therefore, in situations where delay tanks are in operation, the safety guide will address monitoring of the associated discharges. However, this is different to the policy on whether or not delay tanks are justified; such issues are outside the scope of the document.

The United Kingdom considered that the subject matter of the safety guide was more within the remit of RASSC than WASSC and proposed that RASSC be nominated as lead Committee for the development of the safety guide. This position was supported by Sweden and the United States, and Japan had submitted a similar comment during the review of the DPP for DS505. No other opinions, either in support of or contrary to this proposal, were expressed.

The Russian Federation asked the Secretariat to consider shortening the title of DS505 to “Source, Environmental and Individual Monitoring for Protection of the Public and the Environment”. In response, the Safety Standards and Security Guidance Development Section indicated that it is necessary to maintain “Source Monitoring” and “Environment Monitoring” in the title, consistent with the terminology in the IAEA Safety Glossary.

There were no more comments from RASSC and WASSC, and the DPP was approved for submission to the CSS for endorsement.

**Action:** The Secretariat to submit the DPP for the draft safety guide *Source Monitoring, Environmental Monitoring and Individual Monitoring for Protection of the Public and the Environment* (DS505) to the CSS for endorsement.

**RW6. REVIEW OF IAEA SAFETY STANDARDS**


The documents were introduced by Mr Jovica Bosnjak (NSRW) who noted that, in line with the Long Term Structure of the IAEA Safety Standards published in 2013, four current documents have been amalgamated in the development of DS472. These are *Organization and Staffing of the Regulatory Body for Nuclear Facilities* (GS-G-1.1); *Regulatory Control of Radiation Sources* (GS-G-1.5); *Management Systems for Regulatory Bodies* (DS113); and *Use of External Experts by the Regulatory Body* (GS-G-4).

For the development of DS473, the documents which have been merged are *Review and Assessment of Nuclear Facilities by the Regulatory Body* (GS-G-1.2); Regulatory Inspection of Nuclear Facilities and Enforcement by the Regulatory Body (GS-G-1.3); *Documentation for Use in Regulating Nuclear Facilities* (GS-G-1.4); *Regulatory Control of Radiation Sources* (GS-G-1.5); *Licensing Process for Nuclear
Installations (SSG-12); and Release of Sites from Regulatory Control upon Termination of Practices (WS-G-5.1).

As part of the approval of the DPPs it was agreed that, due to the large volume of material to be addressed, two separate but complementary safety guides should be developed: one dealing with organizational issues (DS472) and the other with practical aspects (DS473). In developing both documents, account was also taken of experiences in Member States as well as feedback from IRRS and other missions. Both safety guides are expected to form the basis for all future IRRS missions.

Mr Bosnjak reviewed the structure and development process for both documents, which were submitted to Member States for comment in June 2015. A total of 136 comments were received on DS472. Of these, 105 were accepted and 31 were rejected. In the case of DS473, 369 comments were received, of which 222 were approved and 147 were rejected.

As part of the review process by the Committees, a further 54 comments were received from six Member States on DS472. Of these, 24 were accepted and 30 were rejected. In the case of DS473, 132 comments were received, of which 42 were accepted and 80 were rejected. The majority of the comments were editorial in nature and no technical issues were raised. The resolution of comments tables were posted on the Committees’ website in advance of the meeting.

Finland opened the discussions, stating that it had serious concerns about the manner in which the application of the graded approach was addressed in both documents, in particular in relation to non-nuclear facilities. Both documents appeared unbalanced and were addressed primarily at countries with nuclear facilities, an approach that fails to recognize that the majority of IAEA Member States are non-nuclear. Finland referred specifically to paras. 3.100, 4.30 and 6.3, where this imbalance is evident. These concerns were supported by Czech Republic and France. Both stressed the importance of both documents to support IRRS missions but recognized that the text as currently written could be accepted by them.

Finland also noted that the need to read both documents in parallel is not helpful. Much of the material in the main body of the text is not essential and this could be moved to annexes. This would make both documents more user-friendly and the key issues on which an IRRS mission is established and judged would be clear. On the same point, Czech Republic noted that it was difficult to identify the most important and relevant issues in the documents.

In response the Secretariat recognized that it had been difficult to draft the text in that it needs to be relevant for all facilities and all activities. It also pointed out that the text on the graded approach had been intentionally written in a manner that allowed for maximum flexibility in its application in different circumstances. Work was already starting to develop TECDOCs on the application of the graded approach, including to non-nuclear facilities and low risk activities. These should help greatly with application of the guidance in DS473, in particular.

Mr Williams noted that the comments being raised were of a substantive nature and it would have been helpful if they had been raised at an earlier stage in the development of both documents. Sweden recognized the validity of this comment, but nevertheless supported the views expressed by Finland that both documents should be improved before proceeding to the CSS. This position was also supported by Denmark.

The meeting came to the view that the comments from Finland, supported by others, in relation to the application of the graded approach should be reflected in amended versions of both documents. It was also considered that the necessary changes could be made relatively easily and need not delay final publication.

Even though NUSSC is the lead Committee, the issue of the application of the graded approach to non-nuclear facilities is of direct relevance to the responsibilities of RASSC. Consequently RASSC and
WASSC did not approve DS472 and DS473 for submission to the CSS in their current form. The Secretariat was asked to inform NUSSC of the issues raised and the view of both Committees that these need be satisfactorily resolved before the documents proceed further. It was agreed that, following the NUSSC meeting the following week, amended versions of both documents would be posted on the RASSC and WASSC websites for review and approval. In circumstances where no comments were received, this would be taken as approval of the documents.

RASSC also noted that it would like to be involved in the development of the TECDOCs on the application of the graded approach, as mentioned by the Secretariat.

**Action:** The Secretariat to inform NUSSC of the discussions at RASSC and WASSC and that the concerns raised in relation to the application of the graded approach need be satisfactorily resolved before the documents proceed further. Following the NUSSC meeting, revised texts of DS472 and DS473 should be posted on the Committees’ website for review and approval.

**RW6.3 Draft Safety Guide: Arrangements for the Termination of a Nuclear or Radiological Emergency (DS474)**

Ms Svetlana Nestoroska Madjunarova (IEC) introduced the draft safety guide *Arrangements for the Termination of a Nuclear or Radiological Emergency* (DS474), which supports requirement 18 of *Preparedness and Response for a Nuclear or Radiological Emergency* (GSR Part 7) and requirement 46 of *Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards* (GSR Part 3).

The objective of DS474 is to provide guidance and recommendations to Member States on developing arrangements at the preparedness stage to respond to a nuclear or radiological emergency in relation to the transition to either an existing exposure situation, or to a planned exposure situation, as appropriate, and the termination of the emergency.

Ms Nestoroska Madjunarova reviewed the history of the development of the document. The text was developed through six Consultants’ Meetings in 2014 and 2015 and a Technical Meeting was held in November 2015. The draft was subsequently submitted to Member States for comment in July 2016. In parallel, an ad-hoc working group was established in 2014 under the auspices of the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) and this mechanism was used for ongoing consultation with International Organizations.

A total of 275 comments were received from 13 Member States and three International Organizations. Most of the comments were of an editorial nature and 193 were accepted. Comments were rejected on the grounds of either being outside the scope of the document or because of inconsistency with other IAEA safety standards.

After these comments were addressed, the updated draft was posted for review by the Committees and an additional 33 comments were received from seven Member States. Of these, 22 were accepted. No new technical issues were identified and the revised text was posted on the Committees website in May 2017.

Mr Williams noted that the text of DS474 is consistent with that of *Remediation Process for Areas Affected by Past Activities and Accidents* (DS468), currently under development. He thanked the Secretariat for ensuring this to be the case and that there are no outstanding issues to be resolved.

There were no questions or comments from RASSC and WASSC, and DS474 was approved for submission to the CSS for endorsement.
Action: The Secretariat to submit the draft safety guide *Arrangements for the Termination of a Nuclear or Radiological Emergency* (DS474) to the CSS for endorsement.

RW6.4 Draft Safety Guide: Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency (DS475)

Ms Lisa Berthelot (IEC) introduced the draft safety guide *Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency* (DS475), which supports requirements 10 and 13 of *Preparedness and Response for a Nuclear or Radiological Emergency* (GSR Part 7) and requirement 43 of *Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards* (GSR Part 3).

CSS-34 endorsed the DPP for DS475 in November 2013. Six Consultancy Meetings and one Technical Meeting were held during 2014–2016 to develop the draft. The International Organizations contributed through the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE).

The document provides guidance and recommendations on developing arrangements, at the preparedness stage, for communicating with the public and media and for coordinating with all sources of official information in the preparedness and response to a nuclear or radiological emergency. The key issues addressed in the document are protection of the public; informing the public about the hazards, protective actions and other response actions; building and maintaining public trust; addressing public concerns regarding potential health effects; preventing panic and helping to ensure that actions taken do more good than harm; minimizing rumours and responding to misinformation; and enabling interested parties to make informed decisions.

The document is directed at those responsible for communicating with the public and media in a nuclear or radiological emergency within all organizations involved in EPR at facility, local, national and international levels, including those without a daily communication function. Its scope covers the full range of nuclear and radiological emergencies, regardless of cause, including those due to a perceived hazard, natural disasters and nuclear security events.

When posted for review by the Committees, a total of 161 comments were received from nine Member States. Of these, 147 were accepted. A number of comments related to the use of social media and the approach to managing rumours. In addition, some new text was added on the INES scale and the personality traits of Public Information Officers (PIOs). Some sections of the text were relocated to improve clarity.

Australia noted that the intensity of communication needs to change as one moves from the emergency phase into transition and recovery, but the key messages must remain consistent. France questioned the use of “communication” in the preparedness phase and suggested that “constructive dialogue” might be a more appropriate term.

There were no further questions or comments from RASSC and WASSC, and DS475 was approved for submission to Member States for comment.

Action: The Secretariat to submit the draft safety guide *Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency* (DS475) to Member States for comment.

RW6.5 Draft Safety Guide: Operating Experience Feedback for Nuclear Installations (DS479)

Mr Peter Tarren (NSNI) introduced the draft safety guide *Operating Experience Feedback for Nuclear Installations* (DS479), which is a revision of the safety guide *A System for the Feedback of Experience from Events in Nuclear Installations* (NS-G-2.11) published in 2006.
The revision of NS-G-2.11 is necessary to ensure coherency and consistency with the other relevant IAEA safety standards, in particular the recently published Safety of Nuclear Power Plants (SSR-2/2 Rev. 1). The new document will provide comprehensive guidance on recommended ways of fulfilling Requirement 24 of SSR-2/2 Rev. 1 on feedback of operating experience. It will also incorporate experience on application of the safety standards, the operating experience (OE) feedback from the IAEA incident reporting systems, and relevant experience from major accidents.

DS479 is applicable to all stages of a nuclear installation, including design, construction, commissioning, operation and decommissioning. While the scope of NS-G-2.11 remains essentially unchanged, it has been restructured to provide recommendations for the OE programme at operating organisations and regulatory bodies. New information in DS 479 relates to the management system and the role of managers; identification and reporting of issues; involvement of interested parties in the OE programme; and the regulatory OE programme.

Mr Tarren reviewed the content of the document and its development. It was submitted to Member States for comment on two occasions: in 2015 and again in 2016. Following resolution of all comments, the revised draft was posted for review by the Committees in April 2017. A total of 117 comments were received through NUSSC from six Member States, and 98 were accepted. No comments were received from either RASSC or WASSC. Comments were mainly of an editorial nature and were very helpful in clarifying and improving the text.

There were no questions or comments from RASSC and WASSC, and DS479 was approved for submission to the CSS for endorsement.

Action: The Secretariat to submit the draft safety guide Operating Experience Feedback for Nuclear Installations (DS479) to the CSS for endorsement.

RW6.6 Draft Safety Guide: Severe Accident Management Programmes for Nuclear Power Plants (DS483)

Mr Anthony Ulses (NSNI) introduced the draft safety guide Severe Accident Management Programmes for Nuclear Power Plants (DS483), which is a revision of the safety guide NS-G-2.15 (same title) published in 2009. The document provides guidance on the establishment of a Severe Accident Management Programme at nuclear power plants and addresses all possible fuel locations, primarily the reactor core and the spent fuel pool.

Mr Ulses described the structure and content of the document, which was developed through a series of Consultants’ Meetings between 2013 and 2015. The draft text was approved in June 2015 for submission to Member States for comment. A total of 364 comments were received from 12 Member States and one International Organization. A number of these comments related to the balance between preventative and mitigatory accident management; these and other comments were resolved through a Consultants’ Meeting in January 2016.

Following review by the Committees, a further 146 comments were received, of which 135 were accepted. These were primarily of an editorial nature and no new technical issues emerged. The revised text and the resolution of comments table were posted on the Committees’ website in advance of the meeting.

There were no questions or comments from RASSC and WASSC, and DS483 was approved for submission to the CSS for endorsement.

Action: The Secretariat to submit the draft safety guide Severe Accident Management Programmes for Nuclear Power Plants (DS483) to the CSS for endorsement.
RW6.7 Draft Safety Requirements: Site Evaluation for Nuclear Installations (DS484)

Mr Ovidiu Coman (NSNI) introduced the draft safety requirements *Site Evaluation for Nuclear Installations* (DS484), which are intended to replace the safety requirements NS-R-3 (Rev. 1), published in 2016 to address the lessons learned from the Fukushima Daiichi accident. Following approval, the new Safety Requirements will be referred to as SSR-1 in the long-term structure of Safety Standards. The current revision was initiated

- to incorporate the new developments related to site evaluations for nuclear installations since the publication of NS-R-3 in 2003;
- to ensure coherency and consistency with the other relevant IAEA Safety Standards (e.g. SF-1 and GSRs), and the recently revised Safety Standards (GSR Part 2 and GSR Part 7);
- to incorporate the operating experience feedback and the feedback from the accident at the Fukushima-Daiichi NPP.

The DPP was approved by the Committees in July 2014 and by the CSS in November 2014. Three Consultancy Meetings were held during 2013–2015 to develop the draft.

The scope of the document remains essentially unchanged from NS-R-3 (Rev. 1); it covers site evaluation for both new and existing nuclear installations. The new information incorporated in DS484 includes inter alia: safety principles and concepts; site safety objectives and link with the Safety Fundamentals SF-1; requirements for site suitability and data collection; identification and screening of the site specific external hazards.

Mr Coman provided an overview of the comments received by the Committees. A total of 248 comments were received from 12 Member States and one International Organization. Among them, 184 were accepted without or with modifications, 51 rejected, and 13 requested clarifications. There are no unresolved comments or issues remaining.

No questions were raised to the presentation. DS484 was approved by RASSC and WASSC for submission to Member States for comments.

**Action:** The Secretariat to submit the draft safety requirements *Site Evaluation for Nuclear Installations* (DS484) to Member States for comment.


Mr Christopher Bajwa (RIT/NSRW) introduced the draft Safety Requirements *Regulations for the Safe Transport of Radioactive Materials, 20xx Edition*, on behalf of the Technical Officer, Ms Nancy Capadona (RIT/NSRW). DS495 is a revision of the 2012 Edition of the Regulations for the Safe Transport of Radioactive Material (SSR-6), with a scope applying to the transport of radioactive material by all modes on land, water or air. Transport comprises all operations and conditions associated with and involved in, the movement of radioactive material; these include the design, manufacture, maintenance and repair of packaging, and the preparation, consigning, and loading, carriage including in-transit storage, unloading and receipt at the final destination of loads of radioactive material and packages. A detailed review by TRANSSC identified the need to update the current requirements to address ageing management for packages to be transported after long periods of storage as well as the need to improve harmonization with UN transport regulations. In addition, a new category of Surface Contaminated Objects (SCO-III) is to be introduced to cover the transport of large reactor components and other items with surface contamination.

CSS-39 endorsed the DPP for DS495 in April 2016. DS495 was approved in June 2016 by the Committees for submission to Member States for comment.
A total of 167 comments were received from 15 Member States and one International Organization, with the majority identifying technical issues (76) or seeking further clarification (50). Among them, 65 were accepted, 50 accepted with modifications, and 52 rejected.

Prior to the meetings of the Safety Standards Committees, no further comments were received.

Canada raised some concern about the high number of technical comments received by the Member States, and that the resolution table for Member States comments were not posted on the IAEA webpage. Mr Bajwa responded that the resolution table would be made available on the TRANSSC-34 web page and that a detailed discussion and final agreement on the resolution of comments would take place only during the 34th TRANSSC meeting (10–13 July 2017).

USA asked whether the outcomes from the recent meeting of the TRANSSC Working Group for NORM will have any implications for the development of DS495. Mr Bajwa replied in the negative.

Pending a final decision by TRANSSC as the lead Committee, RASSC and WASSC approved DS495 for submission to the CSS for endorsement.

Action: The Secretariat to submit the draft safety requirements *Regulations for the Safe Transport of Radioactive Material, 20xx Edition* (DS495) to the CSS for endorsement.

**RW7. CLOSING OF THE MEETING**

**RW7.1 Conclusions of the Joint Session**

Mr Massera and Mr Williams thanked the members and observers of both Committees for their active involvement in the meeting.

Mr Williams welcomed the clear way forward on the revision of RS-G-1.7. Mr Massera pointed out that the concerns raised by RASSC in relation to the application of the graded approach in DS472 and DS473 need be satisfactorily resolved before the documents proceed further, and encouraged the RASSC members to convince themselves that this has been done after the revised texts of DS472 and DS473 have been posted on the Committees’ website for review and approval.

**RW7.2 Closing**

The joint RASSC/WASSC session was closed by the Chairs, Mr Massera and Mr Williams.
Annex 1

List of Actions

**Action:** The Secretariat to amend the DPPs of DS499 and DS500 for the revision of RS-G-1.7 and to submit them to the Chairs of RASSC and WASSC for approval

**Action:** The Secretariat to submit the DPP for the draft safety guide *Arrangements for Preparedness and Response for a Nuclear or Radiological Emergency* (DS504) to the CSS for endorsement

**Action:** The Secretariat to submit the DPP for the draft safety guide *Source Monitoring, Environmental Monitoring and Individual Monitoring for Protection of the Public and the Environment* (DS505) to the CSS for endorsement.

**Action:** The Secretariat to inform NUSSC of the discussions at RASSC and WASSC and that the concerns raised in relation to the application of the graded approach need be satisfactorily resolved before the documents proceed further. Following the NUSSC meeting, revised texts of DS472 and DS473 should be posted on the Committees' website for review and approval.

**Action:** The Secretariat to submit the draft safety guide *Arrangements for the Termination of a Nuclear or Radiological Emergency* (DS474) to the CSS for endorsement.

**Action:** The Secretariat to submit the draft safety guide *Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency* (DS475) to Member States for comment.

**Action:** The Secretariat to submit the draft safety guide *Operating Experience Feedback for Nuclear Installations* (DS479) to the CSS for endorsement.

**Action:** The Secretariat to submit the draft safety guide *Severe Accident Management Programmes for Nuclear Power Plants* (DS483) to the CSS for endorsement.

**Action:** The Secretariat to submit the draft safety requirements *Site Evaluation for Nuclear Installations* (DS484) to Member States for comment.

**Action:** The Secretariat to submit the draft safety requirements *Regulations for the Safe Transport of Radioactive Material, 20xx Edition* (DS495) to the CSS for endorsement.
### Annex 2

**AGENDA**

**42**<sup>nd</sup> **Meeting of the Radiation Safety Standards Committee (RASSC)**  
**43**<sup>rd</sup> **Meeting of the Waste Safety Standards Committee (WASSC)**

**Tuesday, 13 June 2017, 9:00 – 17:30**  
**Wednesday, 14 June 2017, 14:00 – 17:30**  
**VIC, Meeting Room M3, M Building, First Floor**

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<td>RW 4.4</td>
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### RW 5  DPPs for Approval

| RW 5.1 | **DS504** Draft Safety Guide: Arrangements for Preparedness and Response for a Nuclear or Radiological Emergency (Revision of GS-G-2.1) | For approval for submission to CSS | Ms. S. Nestoroska Madjuranaova |
|         | (for all SSCs and NSGC) | |
| RW 5.2 | **DS505** Draft Safety Guide: Source Monitoring, Environmental Monitoring and Individual Monitoring for Protection of the Public and the Environment (Revision of RS-G-1.8) | For approval for submission to CSS | Ms. T. Yankovich |
|         | (also for EPReSC and NUSSC) | |

### RW 6  Review of IAEA Safety Standards

| RW 6.1 | **DS472** Draft Safety Guide: Organization, Management and Staffing of a Regulatory Body for Safety | For approval for submission to CSS | Mr. J. Bosnjak |
|         | (for all SSCs and NSGC) | |
| RW 6.2 | **DS473** Draft Safety Guide: Functions and Processes of the Regulatory Body for Safety | For approval for submission to CSS | Mr. J. Bosnjak |
|         | (for all SSCs and NSGC) | |
| RW 6.3 | **DS474** Draft Safety Guide: Arrangements for the Termination of a Nuclear or Radiological Emergency | For approval for submission to CSS | Ms. S. Nestoroska Madjuranaova |
|         | (for all SSCs) | |
| RW 6.4 | **DS475** Draft Safety Guide: Arrangements for Public Communications in Preparedness and Response for a Nuclear or Radiological Emergency | For approval for submission to CSS | Ms. L. Berthelot |
|         | (for all SSCs and NSGC) | |
| RW 6.5 | **DS479** Draft Safety Guide: Operating Experience Feedback for Nuclear Installations (Revision of NS-G-2.11) | For approval for submission to CSS | Mr. P. Tarren |
|         | (also for NUSSC, TRANSSC and NSGC) | |
| RW 6.6 | **DS483** Draft Safety Guide: Severe Accident Management Programmes for Nuclear Power Plants (Revision of NS-G-2.15) | For approval for submission to CSS | Mr. M. Kim |
(also for EPreSC, NUSSC and NSGC)

**RW 6.7**  **DS484** Draft Safety Requirements: Site Evaluation for Nuclear Installations (Revision of NS-R-3 Rev. 1)  
(for all SSCs and NSGC)

**For approval for submission to the Member States**  
Mr S. Morita / Mr O. Coman

**RW 6.8**  **DS495** Draft Safety Requirements: Regulations for the Safe Transport of Radioactive Material 20xx edition (Revision of SSR-6)  
(for all SSCs and NSGC)

**For approval for submission to CSS**  
Mr S. Whittingham

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**RW 7**  **Closing of the Meeting**

**RW 7.1** Conclusions of the Joint Session

Mr G. Massera / Mr G. Williams

**RW 7.2** Closing

Mr G. Massera / Mr G. Williams
## Annex 3
### LIST OF PARTICIPANTS

**Radiation Safety Standards Committee (RASSC)**

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<tr>
<th>Country</th>
<th>Participant Name</th>
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<tr>
<td>Argentina</td>
<td>Mr Gustavo Massera</td>
<td>CHAIRMAN</td>
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<td>Australia</td>
<td>Mr Alex Kalaiiovski</td>
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<td>Belgium</td>
<td>Mr Lodewijk Van Bladel</td>
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<td>Brazil</td>
<td>Mr Alessandro Fracure Neves de Salles Soares</td>
<td>(Alternate)</td>
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<td>China</td>
<td>Mr Huating Yang</td>
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<td>Croatia</td>
<td>Ms Ivana Kralik</td>
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<td>Czech Republic</td>
<td>Ms Karla Petrova</td>
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<td>Denmark</td>
<td>Ms Mette Ohlenschlaeger</td>
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<td>Egypt</td>
<td>Mr Mohammed Ezz El Din</td>
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<td>Finland</td>
<td>Ms Ritva Bly</td>
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<td>France</td>
<td>Mr Jean-Luc Godet</td>
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<td>Germany</td>
<td>Mr Axel Boettger</td>
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<td>Hungary</td>
<td>Mr Arpad Vincze</td>
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<td>India</td>
<td>Mr Rayroth Kunhanveettl Gopalakrishnan</td>
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<td>Indonesia</td>
<td>Mr Yus Rusdian Ahmad</td>
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<td>Iran</td>
<td>Mr Sayed Hosseini</td>
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<td>Ireland</td>
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<td>Italy</td>
<td>Mr Luciano Bologna</td>
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<td>Japan</td>
<td>Mr Hidenor Yonehara</td>
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<td>Korea, Republic of</td>
<td>Mr Jai Kwong Chang</td>
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<td>Luxembourg</td>
<td>Mr Patrick Majerus</td>
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<td>Netherlands</td>
<td>Ms Miriam Tjismans</td>
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<td>New Zealand</td>
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<td>Norway</td>
<td>Mr Gunnar Saxebo</td>
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<td>Pakistan</td>
<td>Ms Ameena Bano</td>
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<td>Poland</td>
<td>Mr Szymon Kawa</td>
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<td>Russian Federation</td>
<td>Mr Sergey Mikheenko</td>
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<td>Slovakia</td>
<td>Mr Vladimir Jurina</td>
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<td>South Africa</td>
<td>Mr John Pule</td>
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<td>Spain</td>
<td>Ms Carmen Álvarez García</td>
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<td>Sweden</td>
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<td>Switzerland</td>
<td>Mr Andreas Leupin</td>
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<tr>
<td>Ukraine</td>
<td>Ms Tatyana Pavlenko</td>
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<tr>
<td>United Kingdom</td>
<td>Ms Liz Thomas</td>
<td>(Alternate)</td>
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<tr>
<td>United States of America</td>
<td>Mr Daniel Collins</td>
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**Advisors**

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<thead>
<tr>
<th>Country</th>
<th>Advisor Name</th>
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<tbody>
<tr>
<td>France</td>
<td>Mr Jean-Francois Lecomte</td>
</tr>
<tr>
<td>Germany</td>
<td>Ms Annemarie Schmitt-Hannig</td>
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<tr>
<td></td>
<td>Ms Manuela Richartz</td>
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<tr>
<td>Japan</td>
<td>Mr Isao Kawaguchi</td>
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<tr>
<td>Korea, Republic of</td>
<td>Mr Doh Yun Jang</td>
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<tr>
<td>Norway</td>
<td>Mr Sindre Overgaard</td>
</tr>
<tr>
<td>United States of America</td>
<td>Ms Cindy Flannery</td>
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United Nations Organizations

FAO  Mr Carl Blackburn
ILO  Mr Shengli Niu
     Mr Michael Gaunt
     Mr Tasos Zodiates
UNSCERAR  Mr Ferid Shannoun

International Organizations

EC  Mr Stefan Mundigl
NEA/OECD  Ms Olvido Guzman
ISO  Mr Yann Billarand

Other Organizations

ENISS  Mr Bernd Lorenz
ICRP  Mr Haruyuki Ogino
IRPA  Mr Roger Coates
ISSPA  Mr Wolfgang Fasten
WNA  Ms Binika Shah

Waste Safety Standards Committee (WASSC)

Argentina  Ms Marcela Medici
Australia  Mr Geoff Williams (CHAIR)
Belgium  Mr Walter Blommaert
Brazil  Mr Nerbe Jose Ruperti Junior
Denmark  Mr David Ulfbeck
Egypt  Mr Yasser Selim
Finland  Mr Jaako Leino
Iran, Islamic Republic of  Mr Hossein Sadeghloo
Israel  Mr Roni Hakmon
Russian Federation  Mr Andrei Sobolev
South Africa  Ms Vanessa Maree
Sweden  Mr Bengt Hedberg
Switzerland  Mr Olivier Beffort
United Kingdom  Ms Denise Varley
United States of America  Mr John Tappert

Alternates/Advisors

Australia  Mr Peter Hondros
Canada  Ms Karine Glenn
France  Mr Christophe Serres
Germany  Mr Markus Archinger
Germany  Mr Klemens Hummelsheim
Hungary  Mr Gabor Nagy
Japan  Mr Tatsuya Kijima
<table>
<thead>
<tr>
<th>Country</th>
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<tbody>
<tr>
<td>Japan</td>
<td>Mr Hirokazu Tachikawa</td>
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<tr>
<td>Japan</td>
<td>Mr Taiki Yoshii</td>
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<tr>
<td>Korea, Republic of</td>
<td>Mr Won Jae Park</td>
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<tr>
<td>United States of America</td>
<td>Mr Rateb Abu-Eid</td>
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**International Organizations**

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<tr>
<td>ENISS</td>
<td>Mr Pierre Nocture</td>
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<tr>
<td>ISSPA</td>
<td>Mr Wolfgang Fasten</td>
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<tr>
<td>UNEP</td>
<td>Mr Ferid Shannoun</td>
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