INTERNATIONAL ATOMIC ENERGY AGENCY
DIVISION OF RADIATION, TRANSPORT AND WASTE SAFETY

WASTE SAFETY STANDARDS COMMITTEE
(WASSC)

26-28 November 2012

IAEA HEADQUARTERS, VIENNA, AUSTRIA

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WASSC MEETING
IAEA HEADQUARTERS, VIENNA
26-27 November 2012

W.1 OPENING OF WASSC MEETING

The 34th WASSC meeting was opened by Mr. M. Vesterlind, head of the Waste and Environmental Safety Section (WES), Division of Radiation, Transport and Waste Safety, Department of Nuclear Safety and Security.

Mr. Vesterlind gave the WASSC members an update on the most significant events in the section, which were not covered by other presentations in the agenda.

- The Joint Convention (JC) Secretariat has conducted the editorial review of the proposed changes agreed by the Contracting Parties (CP) at the 4th Review Meeting to the Rules and Guidelines of the JC: INFCIRC 602/Rev4, INFCIRCS 603/Rev5, INFCIRCS 604/Rev2. This action has now been completed and the updated documents are available on the JC web site.

- A Regional Promotional Workshop of the JC was held in October in the Africa region in cooperation with South Africa, with the participation of 15 Member States of the region.

- The JC Contacting Parties will hold an Inter-Sessional meeting in Vienna, in April 2013.

- The JC Contacting Parties also suggested to arrange a topical meeting before the 5th RM, on a topic originally proposed by USA to JC 4th RM-Open-Ended-Working-Group, on the back end of the nuclear fuel cycle. This meeting is scheduled for October 2013.

- In the field of waste predisposal activities, the CRAFT project and the joint working group on guidance for integrated safety case for spent fuel transport and storage (dual) use casks have had their technical meeting this year. Specific technical meetings of CRAFT working groups are organized to facilitate the coordination of the project activities.

- In the field of waste disposal, the first steps to set up an activity related to human intrusion and future human action, informed to WASSC members at the last meeting, have been taken forward. The first TM took place this year, and as a result, a specific project was launched and a detailed presentation is included in the agenda of this WASSC session.

- The second phase of the GEOSAF Project was launched this year with the aim to harmonize approaches on the development of an integrated safety case covering both operational and long-term safety.

- The PRISM project will hold its final TM next week and no firm decision has been made on the scope and content for continuing its activity.

- Last week, a fairly large technical meeting, based on a new project on modelling and data for radiological impact assessment (MODARIA) was held, with over 140 participants from about 45
Member States taking part in the meeting. Ten working groups were established within the MODARIA project, in order to develop concrete working plans for the next 3-4 years. MODARIA has some components that are aimed at supporting the Agency and its Member States in the implementation of the Nuclear Safety Action Plan.

- The 3rd Annual meeting of the international working forum on Regulatory Supervision of Legacy Sites was held in October 2012. In the context of this initiative, a fairly large international workshop combined with scientific visits to 5 former uranium production sites in the USA were held in August 2012. More than 30 Member States had the opportunity to attend the scientific visits and the workshop.

- The annual meeting of Iraq Decommissioning Project was held earlier this year. A specific side event will be arranged during the IAEA General Conference in 2013, to report on the progress made in Iraq, promote the results achieved and to share the experience with other Member States.

- The research reactor decommissioning (R2D2) project, initiated in 2006, will hold a workshop next week in Buffalo, USA. To date we have had 11 workshops around the world at different facilities. The WES and WTS are planning to continue this topic in two new projects related to decommissioning, namely, cost estimation for decommissioning of Research Reactors and Risk management.

- The IEM on decommissioning and remediation will take place in Vienna in late January of 2013 and it will be a full-week meeting.

Mr Vesterlind closed his opening remarks by wishing all participants a productive meeting.

W.2 CHAIRMAN’S REMARKS

The Chairman, Mr G. Williams, welcomed all WASSC participants and referred to the main topics in the agenda of the WASSC sessions. Mr Williams noted that if DS356 and DS357 were approved at this meeting, this would pave the way to have for first time the complete suite of Safety Standards in the Waste Safety area, as discussed with WASSC in the early stages of development of the Safety Standards plan, in 1996. Mr Williams also highlighted the importance of an integrated approach for Safety and Security being addressed currently within the IAEA, and noted the activity of the Interface Group for such purpose. In the case of DS356 and DS357, specific paragraphs on the interface of Safety and Security were agreed amongst the Chairs of both committees. Mr Williams also noted the importance of the feedback of the WASSC committee for the work of the Interface Group, as the case of the document DS468, the Safety Guide on the Remediation Process for Areas with Residual Radioactive Material (Revision of WS-G-3.1). In addition, Mr Williams highlighted the revision of the Specific Safety Guide for the storage of spent fuel, mainly to address the treatment of the beyond-design basis accidents, and current WES activity related to preparation of a document on the large amounts of waste to treat after an accident. Mr Williams also underlined the importance of the implementation of the Safety Standards, and to have the reports of the WASSC members on how the Safety Standards are being implemented by Member States, including discussion of any problems found while implementing them. He also informed WASSC members on an informal meeting of JC-
officers, to be held at the end of WASSC34 meeting, with the aim to provide their inputs as experienced officers to the JC-review process.

W.3 ADOPTION OF AGENDA FOR THE WASSC MEETING
The meeting adopted the WASSC 34th draft agenda without modification. The adopted agenda is attached to this report as Annex I.

W.4 REPORT FROM 33RD MEETING
The meeting approved the WASSC 33rd meeting report without modification.

W.5 STATUS OF ACTIONS ARISING FROM WASSC 33
Ms G. Siraky, Coordinator of WASSC (WES-NSRW) presented the current status of actions arising from the previous meeting, attached to this report as Annex II.

W.6 ADMINISTRATIVE ARRANGEMENTS FOR THE MEETING
Ms G. Siraky informed WASSC members on the administrative arrangements for the meeting. It was noted that the meeting will be paper-free to the extent possible; therefore electronic versions of the presentations made during the session would be posted on the WASSC34 web folder at the end of each day.

W.7 WASTE SAFETY STANDARDS STATUS AND FUTURE STEPS
Ms Siraky presented the current status of the Waste Safety Standards. The most relevant news in this area was:

- The publication in September 2012 of the Safety Guide on The Safety Case and Safety Assessment for the Disposal of Radioactive Waste, as SSG-23 (former DS355);
- The set of draft Safety Standards on Environment Safety (DS427, DS432 and DS442) are near completion, and most probably on the Agenda for next meeting;
- The revision of the draft Safety Guides on Predisposal Management of Radioactive Waste for different type of facilities (DS447, DS448 and DS454) are near completion, and likely to be on the Agenda for next meeting;

After the presentation, Committee members discussed the number of documents foreseen to be on the agenda of the next WASSC meeting and advised on the need to prioritize the documents for approval
as there seems to be a large number of them ready to be submitted to the Safety Standards committees for their review.

W.8 REVIEW OF DOCUMENTS FOR APPROVAL


Mr G. Bruno, WES-NSRW, presented the draft Safety Guide on near surface disposal of radioactive waste, by addressing the chronology of its development, the results of the Member States comments, the subsequent drafting process, the comments received from WASSC and its resolution.

The topics highlighted in the presentation were:

- Around 800 comments were received from Member States;
- WASSC was informed at WASSC29 on the need for further work after Member States comments were received, with the aim being to add further guidance based on the Safety Requirements and on the needs expressed in the comments received from Member States;
- The comments were discussed at the PRISM technical meeting (Project on the Practical Illustration and Use of the Safety Case Concept in the Management of Near-Surface Disposal) and four consultancy meetings were held to address and develop draft guidance material.
- The resolution of Member States’ comments on DS356 was made available in the specific web folder at the time of WASSC34;
- Interface of Safety with Security: A paragraph was added to DS356 based on the recommendation of the Interface Group, and agreed at the meeting;
- WASSC members provided 257 comments on the draft sent for their review; from them, 205 were accepted, and the corresponding updated version developed accordingly;
- From the comments received, no major issue was identified, all comments have been addressed; and the comments that were not accepted were discussed with the WASSC.

WASSC members thanked Mr Bruno for the presentation and the work done to finalize the document and incorporate the comments. Nearly all commenters indicated that they were satisfied on the way their comments have been addressed.

WASSC members discussed the following:

- Suitability of near surface disposal of DSS, only when the Safety Case and associated Safety Assessment supports such disposal; committee members agreed that further detail on this matter might be developed at the level of a TECDOC;
- Consistency of Passive Safety with site markers, in the period of institutional control, and that the presence of site makers has not to be mandatory and to be left to consideration of the Member States.

WASSC members agreed the document be forwarded to next step, for the endorsement of CSS for publication.
**Action:** The Secretariat to submit DS356 to the CSS for endorsement

**W.9 DISCUSSION ON DOCUMENTS FOR APPROVAL**


Mr K. Moeller, WES-NSRW, presented the draft safety guide for Monitoring and Surveillance of Radioactive Waste Disposal Facilities. Mr Moeller highlighted that this is a new safety guide, of which the DPP was approved by CSS in June 2007 and was redrafted following WASSC27 inputs, then sent for Member States for comments in March 2011. There were almost 600 comments received from MS and two Consultancy meetings were held for its resolution. Before WASSC34, four WASSC members provided 155 comments, most of them being of editorial nature. The majority of comments, (over 90%), were accepted.

Mr Moeller noted the following:

- As a consequence of the interaction of Security and Safety and the recommendation of the Interface Group, a paragraph was added to the scope of the document to note that nuclear security aspects of the monitoring and surveillance of disposal facilities are outside the scope of this document;

- The subsection “type and frequency of inspections”, was modified after Member States comments, and detailed inspections are no longer referred;

- The scope of the document is to cover near surface and geological disposal facilities, with a specific chapter distinguishing between monitoring activities appropriate to different type of disposal facilities

- Technical details e.g. in terms of waste inventory, site intrusion, location and frequency of surveillance are not covered in the draft Safety Guide, and more detailed elaborations seem to be appropriate for a TECDOC

- The definitions of monitoring and surveillance are placed in the document following the approach according to the usual structure of a Safety Guide;

- A quotation on the relationship between natural analogues and monitoring programme was included, highlighting that natural analogues help to understand and interpret monitoring data;

- Differences between measured and calculated results should be elaborated with the aim to decide on the performance of a disposal facility.

WASSC members were satisfied on the way the Secretariat dealt with their comments and agreed to forward the document for its approval at the joint sessions of WASSC and RASSC for sending the document for CSS endorsement for publication.
W.10 PROGRESS REPORT ON DOCUMENTS UNDER DEVELOPMENT


Ms M. Kinker, WES-NSRW, briefly informed WASSC members on the status of development of the Draft Safety Guide on Predisposal Management of Radioactive Waste from Fuel Cycle Facilities. The presentation touched briefly on the history of the document, the work done, the current content of the document, and the next steps foreseen. A consultancy meeting will be held in January 2013 to take into consideration interdependencies of safety and security, facility-specific waste management issues within a national strategy, waste categorization and development of acceptance criteria, management of spent fuel when classified as waste, safety case and associated safety assessment, and Fukushima lessons learnt. The submission for approval of the revised draft by the Coordination Committee (NS-SSCS) is scheduled for the first quarter of 2013.


Ms M. Kinker, WES-NSRW, presented a status report on the draft Safety Guide on Predisposal management of Radioactive Waste from Reactors. Ms Kinker briefed committee members on the history of development of the document, the work done, the current content of the document, and the next steps foreseen. During early 2013, parallel consultancy meetings will be held to take into consideration recently gained knowledge and experience of Member States, including safety implications of very long storage periods and delayed disposal of spent fuel and radioactive waste, and consideration of interdependencies during design, and operation of long term waste management strategies. The submission for approval of the revised draft by the Coordination Committee (NS-SSCS) is scheduled for the first quarter of 2013.

After both presentations, committee members sought clarification on the intended future of both documents, as its consolidation in one document might be considered. Ms Kinker stressed the fact that originally the intention to have both documents as standalone safety guides was a matter of demand by the side of the users therefore both documents have to have incorporated facility specific material for the time of their review. This situation comes from feedback from users and the need of facility specific guidance based on user-friendliness. It is also important to bear in mind that both communities (reactors and NFC facilities) are different.

Finally, committee members endorsed the original decision not to amalgamate into one document but keep both facility-specific documents, and recommended the Secretariat examine ways to integrate more of the facility-specific guidance into the document itself and not in annexes. In addition, WASSC members recommended to have removed Vitrification facilities from the scope of this document and to prepare a specific guidance document (at the level of Safety Report?).
W.10.3 DS452 Decommissioning of Nuclear Facilities, except facilities using NORM, medical, industrial, research and disposal facilities

Mr V. Ljubenov (WES-NSRW) presented a status report on the draft Safety Guide on Decommissioning of Nuclear Facilities, except Facilities Using NORM, medical, Industrial, Research and Disposal facilities. The document is in drafting process and a consultancy meeting was held in August 2012. The topics discussed were:

- Decommissioning strategies (entombment downgraded to an option);
- Safety assessment in different stages of Decommissioning Plan preparation;
- Defence in depth in context of decommissioning;
- Options for “end-state”;
- Physical characterization (asset description);
- Decommissioning of buildings associated to the mines or disposals to be closed;
- Involvement of interested parties in the review of the final Decommissioning Plan;
- Transition;
- Scope of the post-operational clean-out (POCO) and what remains for decommissioning;
- Financial resources and assurances for dealing with accidents;
- Final decommissioning report (content, level of details, graded approach);
- Change of the end-state;
- Retention of records after termination of license;
- Waste stored on site after completion of decommissioning;
- Partial decommissioning followed by a partial site release, gradual (progressive) site release during conduct;
- Review of strategy in case of unplanned shutdown;

Mr Ljubenov informed the WASSC that the new structure of the document will follow the structure of revised DS450 requirements and a review of the draft still has to be undertaken by the consultants, to address remaining comments from the TM 2012, and review the draft in May 2013.

Committee members’ discussions after the presentation were about the current title of the document and the convenience to change it to: “Decommissioning of Nuclear Installations”, to reflect the recent update in the definition of “Nuclear Installations”, while recommending that the Technical Officer avoid losing the details of the intended scope in the text of the document. In addition, WASSC members discussed about how to capture the lessons learnt from the TEPCO’s Fukushima Daiichi NPP accident. According to the expectations of Mr Ljubenov, the document is focused on decommissioning after a planned shutdown, but will also address post-accident decommissioning, the inter-relation with Emergency Preparedness, changes needed in the decommissioning strategy, the financial resources and their protection, and the case of remote access to specific areas. A committee
member suggested leaving the details of the decommissioning after an accident to another document, of lower level, either a TECDOC or a Safety Report.

**W.11 GENERAL SESSION**


Mr Williams opened the discussion, seeking the feedback from WASSC members on both documents and on the project to combine both Safety Guides.

Mr. Camper, WASSC member for USA, reported that the processes and system in place in the USA are somewhat different, as the U.S. regulations were in place for the storage and disposal of RW when the Safety Guides GS-G3.3 and GS-G-3.4 had been established. A critical review was undertaken to determine if there is harmony between the existing regulations and both management system SGs. The result of the review indicated that there is harmony between them. In terms of long-term storage of HLW, there were few issues in moving ahead with the repository, and right now, an environmental impact assessment (EIA) is under development for the long term storage of HLW, and for a new rule making (called Waste Confidence decision). Of importance to note was that the methodologies of assessment and classification of RW are different in the USA from IAEA.

Ms Necheva, EU observer, indicated that the EU legislation contains provisions on (integrated) management systems for RWM, at an organizational and national level. The European Nuclear Safety Regulators Group (ENSREG), where all 27 EU MS are represented, is developing a paper on this matter. Combination of both documents would be highly appreciated, as the current approach is to provide national policies, frameworks and programs for the integrated management of radioactive waste from generation to disposal. All stages of radioactive waste management should be integrated. Discussion went on the distinction between the management of safety (for all activities), at operators’ level from the management of safety at country level, and on the need for the integration to ensure that the transition between organizations are properly managed.

Mr Hedberg, WASSC member for Sweden, indicated that a long time ago, Sweden introduced the requirements for management systems into their national regulations. Now, Sweden is revisiting its national framework, and will take the new safety requirements and safety guides into account. In this regard, the IAEA’s Safety Standards will continue to be used as a reference.

Speaking as the WASSC member for Australia, Mr Williams noted that the management systems for predisposal and disposal of radioactive waste documents are not widely used in Australia, however with regards to safety requirements, the regulations are consistent. In Australia, the management systems are quite different for predisposal and disposal, therefore, the revision suggested of both safety guides, aiming to the integration and consistency is a real necessity. Mr Williams believes it is important to put the effort into recognizing the correct meaning of the Management System regarding the management of safety.
Committee member discussion on this topic recognized that the management systems for predisposal activities seem to be quite straightforward, as their most important objective is to prepare the waste for disposal. It was noted that the application of the same MS for both predisposal and disposal might be more challenging, as for example, in the USA there is a complete regimen set in the regulations for waste disposal.

Action: Committee members were requested to provide their feedback on the use of both Safety Guides until the end of January 2013.

W.11.2 Lessons learnt by Member States from the TEPCO Fukushima Daiichi NPP Accident or other past historical situations on:

- Results of stress tests on WM and SFM facilities
- Management of large amounts of waste
- Decommissioning following severe accidents

W.11.2 (a) Stress tests and management of large amounts of waste

Ms L. Evrard (ASN, France) presented the French processes for stress tests and Complementary Safety Assessments (CSA) and information on the management of large amount of waste. In addition, Ms Evrard provided a general overview on the French civil nuclear facilities, on the milestones and technical scope of CSAs, on the ASN’s opinion on CSA and requirements post-CSA, and on the management of large amounts of waste.

Ms L. Evrard reported the following:

- In France, one major operator is in charge of 80% of the French electricity production, with a standardized fleet of 58 (+1) PWRs, and there are about 90 other nuclear facilities: nuclear facilities of whole fuel cycle (enrichment, fabrication, retreatment), research facilities, waste management facilities.

- The French process was initiated on two requests, one from the Prime Minister, asking for CSAs for all nuclear facilities, and the second one, from the conclusions of the European Council asking for stress tests for nuclear power plants. Complementary specifications to ENSREG’s ones were added, then, the French specifications are relevant for all facilities.

- CSA (Complementary Safety Assessment) process was based on the European Stress Test specifications. It concerns 150 nuclear installations and 12 licensees in 2011-2012. The priorities were set to the 58 NPPs and the EPR under construction, 14 fuel cycle facilities, 5 research facilities, 2 waste management facilities. It includes social, human and organizational factors. There was a high involvement of stakeholders and targeted inspections were also conducted on the issues related to TEPCO’s Fukushima Daiichi NPP accident (earthquake, flooding, emergency preparedness)

- The technical scope of the CSA was related to the initiating events to be taken into account (earthquake, flooding, other extreme natural events). The consequent loss of safety functions were analyzed (loss of electrical power, including station blackout, loss of the ultimate heat
sink, combination of both), and severe accident management issues (loss of the core cooling function, loss of the spent fuel storage pool cooling function, other severe accidents)

- The following information was requested from the licensees in the CSA reports: Safety margins taken from the facilities design basis and plant conformity in relation to its design requirement; assessment of the robustness of the facilities beyond their design basis; identification of means to maintain fundamental safety functions, including support functions taking into account the damage that would be likely done, the possibility of mobile external means and the conditions of their use, the possibility of mutual help between units from the same site, and the identification of weak points and cliff-edge effects with the aim to define potential improvements.

- ASN made publicly available its report on the CSA, which was carried out on the priority facilities (2011) and considered that the facilities offer a sufficient level of safety, so that ASN didn’t request the immediate shutdown of any of them. At the same time, for the continuation of their operation, an increase of the robustness of the facilities to extreme situations beyond their existing safety margins was considered necessary. ASN therefore would require that the licensees take measures to reinforce the safety requirements related to natural hazards (earthquake and flooding).

- Regarding the management of emergency situations, a steering committee for the management of post-nuclear or radiological emergency situations (CODIRPA) was created. CODIRPA has the following objectives, principles and key points: Immediate delineation of a post-accident (PA) zoning for the contaminated area, with an evolution during the transition period. Those affected by the consequences of the accident should benefit from medical and psychological care, radiation monitoring, financial support, and compensation; and for permanent radiological characterization of the environment, foodstuffs and drinking water provision. In addition, the rapid implementation of a specific approach to the management of foodstuffs and drinking water was considered, including sustainable waste management solutions in response to the rapid increase of the volume of contaminated waste.

- Regarding the management of large amount of waste, a seminar indicated that the waste management routes for post-nuclear accidents have to be defined according to the level of radioactivity in waste and the delineation of these areas and work still on-going in the context of the Post-Nuclear Accident Management processes.

WASSC members thanked Ms Evrard for the completeness of the presentation and sought further clarification on the assessment of sites with multiple facilities, criteria to select the targets for CSA, the inclusion of the HLW predisposal facilities from reprocessing, and the specifications for NFCF and chemical facilities.

W.11.2 (b) Experience and lessons learnt by Ukraine in dealing with the large amounts of wastes generated during the accident of Chernobyl NPP

Ms T. Kilochytska, SNRC-Ukraine, presented the “Experience and lessons learnt by Ukraine after the accident at Chernobyl NPP (ChNPP)”. The accident occurred on 26th of April, 1986, and because of accident at Unit #4, the reactor core was totally destroyed, and the systems related to safety were also
totally destroyed. Huge amounts of activity were released; and the surrounding area was contaminated, resulting with high levels of exposure doses and fragments of nuclear fuel and graphite around the destroyed unit.

Regarding the mitigation of the accident consequences Ms. Kilochytska noted the following:

- **Organizational issue**: the creation of Special Governmental Commission for brain-storming the decision-making process; with full power, clear responsibility, availability of resources, scientific support, immediate involvement of different specialist if needed.

- **Technical issues**:
  
  a) The overall decontamination of the industrial site and surrounding residential areas and roads. Its main goals were to decrease the exposure doses, to allow workers to provide measures related to the mitigation of accident subsequences, to allow staff of Chernobyl NPP to continue activities at the units # 1, 2, 3, and to allow people re-evacuation (this purpose was not reached as the 30 km Exclusion Zone was established).
  
  b) Arrangement of facilities for decontamination, special treatment of trucks and personnel involved in the accident mitigation;
  
  c) Collection and removal of Radioactive Waste (RAW); organization of temporary RAW Points, designing and construction of RAW Facilities; and concerning of territories (Chernobyl NPP site).

Ms Kilochytska concluded that from the Chernobyl Accident, the following lessons were learned:

- There was no preparedness for this type of accident, as nobody believed that such an accident was possible;

- There was a lack of a prompt monitoring system for using in emergency situations, such system could be very helpful in decision-making process;

- Overall/total decontamination was not always effective because of secondary radioactive contamination with wind flows and adverse weather conditions;

- The need for a centralized management of situation, like a high level governmental commission, to take effective measures;

- The creation of “radioactive waste storage/facilities” that needed further re-disposal; as there was no experience in managing huge amounts of emergency radioactive waste; storage/disposal for “Chernobyl waste” were conducted in extreme conditions, without adequate waste isolation technology and classification and registering of waste (its amount and activity); environmental impact of storage/disposal sites was not considered; “Chernobyl waste” was stored/disposed under conditions that do not fully comply with safety requirements; and needs to be re-disposed;

- An object of “Shelter” type was constructed to cover destroyed Unit #4. The Shelter Object was qualified as not organized storage for not organized waste. Different materials were dropped to provide fuel cooling (lead) to prevent self-sustained chain reaction (boron
carbide), to cease graphite burning (dolomite) and to filtrate the fission products release (sand and clay). Then, by April and May 1986, about 15,000 t of material was dropped. An underground layer of the local zone around the shelter object had 15000 m³ of RAW (contaminated soil, concrete pieces and slabs, metal structures, debris). Inside the shelter object there are RAW such like fragment of building structures, reactor core, materials thrown inside during the accident, irradiated graphite, fuel containing materials, radioactive dust, and liquid RAW;

- Due to the lack of the infrastructure for treatment of the large amount of “emergency RAW” (waste produced after Chernobyl Accident), the decision was made to place it in unorganized trenches, so-called “temporary RAW localization points”. Such localization points were set up nearby the ChNPP and they lacked either the design documentation or the records on characteristics of the waste. It is the lack of records on the “RAW temporary localization points” which nowadays create many problems, and consequently, delays decisions on further waste treatment.

In summary, 90 % of the radioactive wastes amount in Ukraine is “Chernobyl waste”. They contain waste with variable composition of radionuclides, and contain long lived nuclides. They are placed mostly in the Exclusion Zone, and because of the above mentioned, they need to be re-disposed. For this purpose, the following should be taken into account:

- A lot of pre-operational work should be done with the “Chernobyl waste” before their disposal;
- In this context, there is a need for the development and implementation of projects for RAW retrieval, removal, treatment;
- There is a need to prioritize the retrieval RAW from the “points” that mostly influence environment due to flooding and barriers fault;
- There are not many options for disposal: near surface for low- and intermediate level short-lived RW and geological disposal for long lived RAW, high level RAW, fuel containing materials from Shelter Object. In addition, improvement of RAW classification is needed, to consider very low level waste;
- Improvement of national legislation (safety requirements) is needed, taking into account peculiarity of “Chernobyl waste” and disposal such waste inside Exclusion Zone (safety analysis of long-term safety, dose limits);
- Development of facilities on the Vector site and siting of the “Geological Repository”;  
- In Ukrainian legislation, there is one definition of “radioactive waste”, and there is no difference made between “Classic RAW” (produced after the operation of nuclear facilities or the use of radiation source) and “Chernobyl waste” (large amount of waste produced after the severe accident).

WASSC members thanked Ms Kilochytska for the detailed presentation, recognized that Ukraine was facing many challenges and sought clarification on the current situation and on the future plans. In addition, it was recognized that any intention of remediation in the exclusion zone should have a clear
end-point, and a definition of how clean would be the site after the remediation. In the process of defining end-points, the need to incorporate the societal factor was stressed, to take into account the willingness of the society.

W.11.2 (c) Lessons from the clean-up of bulk contaminated soil at the Maralinga test site

Mr G. Williams, presenting on behalf of ARPANSA-Australia, gave an informative paper on the management of the remediation of contaminated soil at the former UK atomic weapons test site at Maralinga. The topics addressed were: the discovery of the problem, its characterization, determination of the clean-up criteria and strategy, performance and verification. Mr Williams also reported on the lessons learned from Maralinga, as follows:

- The remediation process and needs are very different for every case.
- At the time the contamination occurred, the land was considered worthless and uninhabitable. As a result, actions were taken that made future clean-up far more difficult and costly.
- Forty years later, the views of society had completely changed and it was resolved to return the land, now highly valued, to its Aboriginal owners.
- Technology had advanced making clean-up more feasible.
- 13 steps summarised in the report worked well for the situation at Maralinga, and the resultant clean-up has exceeded expectations in respect of hazards removed and potential doses averted.
- The recommended approach for remediation processes is:
  - To focus on fixing the possibilities for giving very high doses.
  - To include stakeholder consultation and feedback as this is of critical importance in building trust and confidence.
  - To highlight the need for scientific expertise – available to both the project manager and regulator – for determining clean-up criteria and strategies, and for informing regulatory decisions.
  - To highlight the need for efficient and effective regulatory processes.
  - To highlight the need for excellent engineering and technical support (specialised monitoring equipment and software development).
  - To break the remediation activities down into manageable tasks;
  - To keep the project as simple as possible, to ensure less complications in the future.
- During the technical assessment phase (characterising the problem, consulting, determining clean-up criteria and strategies), there are benefits of cooperation and collaboration between the regulator and the organization responsible for managing the clean-up. Note: in remediation, the goal is common.
• Balance absolute requirement for independent regulatory decisions where needed, and scientific/technical cooperation wherever possible to aid in meeting the common clean-up goals as quickly as possible.

• In trialing new technologies (ISV treatment of legacy burial pits in Maralinga case), be prepared with a plan to abandon the trial and move to an alternative option if necessary.

Finally Mr. Williams concluded on the following:

• The restriction on permanent occupancy within the ‘restricted land-use’ (non-residential) boundary can be seen as a purely precautionary measure as doses due to inhalation for permanent occupancy of all but a few areas (essentially within the untreated plumes) are well below the 1 mSv/y limit for members of the public.

• For a semi-traditional Aboriginal lifestyle, with camp sites occupying considerable area and moving regularly, it is difficult to envisage circumstances which would lead to inhalation doses, even within most of the restricted zone, above acceptable limits.

• The argument for maintaining restrictions on land-use at central Taranaki is to restrict access to the sites of the new burial trenches (and thus discourage intrusion).

• The restricted access also reduces the highly unpredictable (stochastic) and essentially non-assessable hazard from possible contact with any undiscovered active particles remaining in the plumes adjacent to the soil-removal areas.

• At some time in the future, consideration could be given (based on the new dosimetry) to contract the restricted area to only include the burial trenches and inner plume areas (where any remaining particles will be).

• The new dosimetry, based as it is on a revised kinetic and dosimetric model of the human respiratory tract, has resulted in decreases of the doses due to inhalation of plutonium and americium of the order of 75%.

• As a consequence of the combined effects of the revised dosimetry and better-than-expected level of clean-up of residual contamination, the estimated inhalation dose for the worst-case three square kilometres within the ‘restricted land-use’ zone is 3.6 mSv/y and a restricted area is not strictly required to meet the regulatory objective for the inhalation pathway.

• It is now impossible for casual visitors making intermittent forays to the area, for example tourists, geological prospectors and surveyors, who do not engage in abnormal dust raising or large-scale soil-disturbance activities, to receive a committed effective dose by inhalation of anything approaching 1mSv.

• The estimated doses received during ambient (calm) conditions are very low, and exposure to the substantial dust loadings observed during times of severe dust storms also results in doses which are essentially insignificant.

WASSC members thanked Mr Williams for the excellent presentation and sought further clarification on the following details:

• Definition of the radiological criteria used as end-point in the remediation;

• More details of the surface characterization, and the means used;
• Terminology used to describe the material removed: contaminated soil (not radioactive waste) – avoiding the stigma that “radioactive waste” carries in Australia;
• Restrictions enforced on the burial trenches; the risk factors considered (public and workers);
• Regulatory scheme for the oversight;
• Monitoring of workers and public;
• Ground water pathway and monitoring of volumetric presence of radionuclides.

W.11.3 Report on the CS meeting on the revision of SSG-15 in light of the TEPCO Fukushima Daiichi NPP Accident

Ms Y. Kumano, WES-NSRW, presented the report on the consultants meeting for the revision of SSG-15 in light of the TEPCO Fukushima Daiichi NPP Accident. The WG of WASSC, that met in October 2011 concluded that most waste management requirements are applicable also to post-accident conditions so it doesn’t need to be amended. In addition, they recommended that the requirements should not be too prescriptive and considered that the problems that Japan were facing were not necessarily all safety-related, therefore identifying a series of issues. Regarding the management of spent fuel (SF), the WG of WASSC advised the following:

• The safety of SF should be ensured at all times.
• Strategies for SF management should be re-examined in the light of the lessons learnt from the accident and the results of the work on stress tests.
• This examination should be done with respect to the various options available [type of storage, time limitations for storage in NPPs and other facilities, safety implications of the options chosen, etc.].
• The SGs should be reviewed/ revised after the reexamination exercise finishes.

Now, this consultancy was held to provide experts’ opinion on the necessity of the revision and recommendation on IAEA’s future activity regarding SSG-15.

The outcome and conclusions of the consultancy discussion are the following:

• Main lessons coming from the Fukushima Daiichi NPP accident: in case of a severe event or a combination of events occurred at a site, all the facilities at that site are likely to be impacted, the organization operating the facility and a crisis management organization should be capable to deal with severe accident situations, and the vital functions of the facility, necessary to limit the consequence of severe situations, should be maintained.
• The “defence in depth” should be strengthened and mainly the last levels: control of severe plant conditions and mitigation of radiological consequences.
• Vital functions for SF storage are cooling and radiological shielding. The need to implement strategies to prevent further deterioration and to mitigate the consequences of the severe accident was highlighted. Furthermore, the emergency equipment should be operational at any time.
• Monitoring the key parameters is essential. In the case of wet storage: water temperature / level. In the case of dry storage: air temperature / cask temperature / dose rate. Such monitoring should be available at any time. Additionally para 6.61 could be modified to include a recommendation for monitoring equipment to be available after a Beyond Design Basis Accident.

• Redundancy and diversity principles should be applied. Redundancy is addressed for SSC, but not for monitoring equipment, and diversity is not addressed in SSG-15.

• Not clear if requirements address conditions beyond design basis event (e.g. NS-R-5 para 6.26 appears to address accidents within design basis)

• Current SSG-15 is largely in a very good shape for its intended purpose. The recommendation is to develop an addendum to the document, adding some paragraphs in order to better capture extreme situations such as multiple initiating events occurring simultaneously. The recommendation is to make this addition at the safety guide level.

And there are some additional recommendations from the consultancy as following;

• The operator should ensure that monitoring equipment for key safety functions is available and operating after BDBA. Therefore, the addendum should also have this amendment to para. 6.61.

• Para 6.98 should be amplified to the extent that combinations of initiating events are considered.

• It is recommended that an addendum should be added to SSG-15, dedicated to the beyond design basis accidents and addressing the points in the discussion.

• Relevant Safety Requirements documents should be reviewed to ensure that these are consistent with the recommendations made to SSG-15.

WASSC members agreed that a DPP for the addendum to SSG-15 be prepared following up activities on the revision process of relevant safety requirements that are undergoing or planned in relation to the Nuclear Safety Action Plan.

W.11.4 Report on a meeting on the management of large amount of radioactive waste after an emergency situation

Ms Y. Kumano, WES-NSRW, presented a report on the consultancy meeting for the management of large amount of radioactive waste after an emergency situation. Ms Kumano recalled the waste safety issues identified by the WG of WASSC for these situations:

• Management of large amounts of contaminated waste - solid and liquid - resulting from remediation (including monitoring criteria and decision on reuse/recycling), and

• Acceleration of licensing process to ensure availability of treatment / storage / disposal facilities for the type and amount of wastes generated during an accident or as a result of remediation activities.

It was also noted that the advice of the WG of WASSC was that guidance related to these issues should be drafted.
The aim of this consultancy meeting was then to prepare a work plan for a new document after this advice. The main focus of the discussions was on:

- How to develop a strategy for waste management associated with remediation activities;
- Responsibilities of stakeholders (governments, regulators, operators, etc.);
- How to develop and adapt licensing procedure and framework in / after emergency situations;
- What to consider when planning waste management at the early stage of the recovery work; and
- How to develop safety cases and conduct a safety assessment, in line with the WM strategy, in particular for predisposal management of RW, interim storage facilities and disposal facilities.

The consultancy was held on 1-3 October 2012. Its objectives were to share experiences on issues related to WM after emergency situations and to prepare a work plan for the development of a guidance document focusing on:

- The safety of radioactive waste management after emergency, especially on management of large amounts of contaminated waste after an emergency situation, and
- Acceleration of licensing process to ensure availability of treatment/ storage/ disposal facilities for the type and amount of wastes generated during an accident.

It is foreseen that further discussions will take place during the International Experts Meeting (#4), in January 2013, and during the second consultancy to be held in February 2013.

Some outcomes of the consultancy held in October 2012 were as follows:

- Planning should start well in advance, before any accident happens, as a proactive rather than reactive measure. The following items were identified as requiring advanced planning: Emergency response plan, design of temporary storage for wastes and develop standard designs to enable immediate implementation of storage capacity [with the possibility to implement without further design and licensing activities]; develop or provide approaches for characterization and segregation for large volumes of waste; identify legal and regulatory responsibilities for WM, identify responsibilities for financial support, and considerations for amendments of the existing legal framework.

- Considerations during the early phases of the accident: Decisions made in order to avoid creating WM problems in the future (interdependencies). The considerations to be taken into account during the accident management phase are: identify requirements (what should be done / should not be done) for the time frame immediately following accident, record keeping and documentation of situation (sampling results, monitoring, locations of waste storage/disposal and characteristics, extent and levels of contamination), graded disposal/storage approach and different levels of barriers depending on the waste type.

- Longer-term considerations: Planning and optimization of waste management: Radioactive waste reduction, the Safety Assessment and Safety Case, international advice and support, public communication and involvement of interested parties.

WASSC members thanked Ms Kumano for her presentation and provided their feedback regarding these topics:
The terms storage and disposal have to be used in this context with great care: In the case of the first phase, after the emergency, it is recommended to focus on storage of waste, with “disposal” being considered as a decision for the long-term (final solution). Notwithstanding this, it is important to keep in mind, while preparing the document, to recognize to avoid early and not well funded decisions regarding disposal.

Differentiation of the waste management in-situ and off-site remediation: In the latter case, most of the material resulting would be contaminated soil, and for this case, there seems to be limited differences between storage and disposal.

Waste types arising from remediation: it would be convenient having “standard” types of wastes arising from remediation activities.

Pre-planning, seems very judicious and challenging. It should imply definitions on what criteria to be used as end-points and on life-style. However, taking into account that the current document focuses only on WM, and these matters are related to the criteria for the remediation, that is a cross-cutting matter with RASSC, and should be subject of another document.

Caution was raised for the planning phase, as other topics are also relevant: remediation planning, end-points, insurances and liabilities.

**W.11.5 Report on the TM to discuss human intrusion and future human actions in relation to disposal of Radioactive Waste**

Ms Y. Kumano, WES-NSRW, presented a report on the technical meeting (TM) to discuss human intrusion and future human action in relation to disposal of Radioactive Waste, based on the Safety Guide on the Safety Cases and Safety Assessment for disposal of radioactive waste (SSG-23). The TM was held on 24-28 September with 34 participants from 21 member States. The topics discussed were about the past / current activity on human intrusion scenario for both geological and near-surface disposal facilities (difference in scenarios for different disposal concepts, common methodology being applied to all disposal concepts), on issues related to the human intrusion scenarios, and on setting up an international Working Group to address the issue of human action and human intrusion. At the TM, agreed on launching a new international project HIDRA, Human Intrusion in the context of Disposal of Radioactive waste, which is a two-year project (annual plenary meeting, task group activities) and consist of three task groups (focused on technical, societal, design aspects, respectively).

Ms Kumano informed WASSC on the details of the HIDRA project as follows:

- **HIDRA objectives** are to share experience and practical considerations, to elaborate a guidance document including: role of Human Intrusion in context of the Safety Case (methodology or process, examples), and suggestions for communication strategies, in particular, to describe the rationale for assessments of FHAs and interpretation of the results of those assessment for the public. In addition, the project will provide recommendations for WASSC / RASSC for clarification on this matter of existing IAEA SSs.

- **HIDRA project scope** is related to future human action, emphasizing on inadvertent human intrusion. This is related to the post-closure phase for a properly closed repository, assuming loss of passive and active institutional controls (consider optimisation of design for potential partial closure), and considering factors that influence the results, like timing of loss of
institutional controls. It will address different type of disposal facilities: geologic and near-surface, including boreholes and intermediate depth facilities (VLLW, L/ILW, HLW, SF).

- HIDRA project will integrate the results of the three WGs with the safety case, including Technical Aspects (WG1), Societal Aspects (WG2), and Design Aspects (WG3). Each WG cover different topics. WG1 will provide a document that address the technical criteria related to potential scenarios of future human intrusion such as Drilling (Water resource/ Mineral Exploration), Excavation (Residential/Roadway), and Deep Georgic Disposal (Drilling/Mining/ Solution Mining). WG2 will share, exchange information and communicate good practices on how societal aspects drive the generation of FHA scenarios, how the use of FHA scenarios helps to build confidence in the overall safety of the radioactive disposal facility, how to preserve knowledge throughout the life cycle, and how to involve and communicate with stakeholders. WG3 will link the technical and societal conditions with design and siting: considering the synthesis of site and societal considerations with the actual repository design and siting to develop the full scenarios to be considered as plausible. All these elements will take into account the effectiveness of barriers as a function of time, the linkages between natural processes and intrusion, what types of barriers are effective against drilling or excavation, how does design minimize impact / contact with any specific waste package (spatial issue).

W.11.6 Feedback from WASSC members on implementations of IAEA Safety Standards

This topic was requested to be adjourned to the next meeting, as this session ran out of time. It will be included in next meeting Agenda.

W.11.7 Reports from International Organizations

W.11.7 (a) Latest developments at the EU

Ms C. Necheva, from the European Commission, informed on the latest developments in the EU:

- Facilitating the implementation of the Council Directive 2011/70/Euratom establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (SF & RW Management Directive), at the level of EC initiatives and ENSREG work:
  - EC initiatives: Workshop on drafting and implementation of the national programmes, including discussion on the ENEF-NAPRO guidelines for the establishment and notification of national programmes was held on 25-26 September 2013. Final guidelines are expected in August 2013. Following workshops dedicated on the national programmes for EU MS with small nuclear programmes and for all EU MS are planned respectively in April 2013 and spring 2014.
  - The European Nuclear Safety Regulators Group (ENSREG) work on: self-assessments and peer reviews, in particular potentially efficient approach under both
Nuclear Safety Directive and SF & RW Management Directive - a single self-assessment covering national frameworks and competent regulatory authorities (both Directives) as well as the national programme and its implementation (RW&SF Safety Directive) and a single peer review covering the national frameworks, competent regulatory authorities (both Directives) and/or national programme (SF & RW Management Directive) - and launching a preparatory interaction with IAEA in this respect; draft guidelines for MS Reports; and implementing national (SF and RW) Management Systems;

- A communication from the Commission to the Council and the European Parliament on the comprehensive risk and safety assessments (“stress test”) of nuclear power plants in the European Union and related activities, COM(2012) 571 final; and

- Commission proposal for a Council Regulation establishing a Community system for registration of carriers of radioactive material.

**W.11.7 (b) Manufacturers’ Role in Long Term Management of Disused Radioactive Sources**

Mr W. Fasten, representative of the International Source Suppliers and Producers Association (observer organization of WASSC), presented the manufactures’ role in long term management of disused radioactive sources, which are:

- ISSPA was founded several years ago to address many international and national initiatives to improve source safety and security.

- ISSPA has currently seventeen members in 9 countries to ensure that the beneficial use of radioactive sources continues to be regarded by the public, the media, legislators, and regulators as a safe, secure, viable technology for medical, industrial, and research applications.

- Radioactive sources are used worldwide in a wide range of beneficial applications that supports infrastructure of our daily lives, and vital applications, such as cancer treatment oil exploration, process control, industrial radiography and security screening make extensive use of radioactive sources.

- Strategies which are related to long term management of DSRS includes: Recycling as the basis of the strategies including reutilization of resources, recover material and re-life the source.

- DSRS should not be declared as waste as long as a long-term storage (LTS) or disposal option is not defined and available.

- Regardless of the end-of-life management option selected, a big challenge that suppliers face, is simply getting a DSRS from country A to country B. There are three challenges which are source pedigree, container availability and transportation costs and logistics.
There are different approaches to handling sources that may be considered “disused”. Recycling for recovering material or resourcing, modifying device to utilize in order to use lower activity sources, and retesting a source for a different application.

In conclusion, ultimate disposal of disused sources needs to be addressed. Sealed sources should not be considered a waste until it goes to its final disposal. One-for-one source exchanges and recycling initiatives should be encouraged. Seamless revalidations of type B(U) package certificates supports the movement of new and disused sources. And lastly Transport security requirements should be harmonized and risk based.

W.12 CONCLUSIONS OF THE SESSION

Mr Williams, Chair of the meeting, concluded the session thanking all WASSC members as he was very satisfied with the level of discussions held during the WASSC sessions. He highlighted that discussions were very stimulating and there is a good motivation for the work ahead. Mr Williams noted that the discussions will continue in the afternoon, at the joint session of RASSC and WASSC.

W.13 CLOSURE OF WASSC SESSION

Mr Vesterlind, head of the Waste and Environment Safety Section of the IAEA, thanked all WASSC members for their useful comments and committed the Secretariat to continue drafting and revising the safety documents as recommended by WASSC, and noted that in sixty minutes the joint sessions would start in the same meeting room.

W.14 DATES OF FUTURE MEETINGS

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<td>36th WASSC</td>
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RW.1 OPENING OF JOINT SESSIONS

The meeting was opened by Mr P-S. Hahn (DIR-NSRW) who welcomed all participants. Mr Hahn referred to the progress that has been achieved in implementation of the Nuclear Safety Action Plan, including the review and revision of safety standards. While in the immediate aftermath of the Fukushima accident the initial focus was on the safety of the damaged reactors, attention quickly moved to radiation protection issues and the management of the large volumes of contaminated waste that have been generated. These issues along with many other topics will be discussed at the forthcoming Fukushima Ministerial Conference on Nuclear Safety to be held in Japan in December 2012 and the Agency stands ready to cooperate with the local authorities in managing the current situation.

Mr Hahn also referred to the Senior Regulator's Meeting, held every year during the General Conference, which this year focussed on specific challenges in implementing remediation and on regulatory challenges in nuclear security. He also referred to the launch in 2010 by the Agency of the International Forum for Regulatory Supervision of Legacy Sites and the on-going work within NSRW on the management of waste, the regulatory control of NORM residues and the management of occupational exposure. The recent meeting of the Inter Agency Committee on Radiation Safety (IACRS) was highlighted.

In relation to important upcoming international meetings and conferences, Mr Hahn referred to, among others, the "International Conference on Radiation Protection in Medicine – Setting the Scene for the Next Decade" that takes place in Bonn, Germany from 3 to 7 December 2012, the Inter-sessional Meeting of Contracting Parties of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management to be held in Vienna in April 2013 and the International Conference "Safety and Security of Radioactive Sources: Maintaining the Continuous Global Control of Sources throughout their Life Cycle" to be held in Abu Dhabi, United Arab Emirates in October 2013.

RW.2 CHAIRMEN’S REMARKS

The joint Chairmen, Mr G. Massera (RASSC) and Mr G. Williams (WASSC) welcomed all participants. They briefly reviewed the agenda, noting the several important items on which members of the Committees were invited to comment.
RW.3 ADOPTION OF THE AGENDA FOR THE JOINT SESSION

The agenda was adopted without any change.

RW.4 ADMINISTRATIVE ARRANGEMENTS FOR THE MEETING

The Secretariat drew attention to the location of the emergency exits, introduced the administrative support staff for the meeting and summarized the administrative arrangements.

RW.5 GENERAL SAFETY STANDARDS AND RELATED ISSUES

RW.5.1 Feedback from the Commission on Safety Standards (CSS 32)

Mr D. Delattre (NSS-SSCS) summarized the progress on development of the safety standards. Completion of the general safety requirements by the end of 2013 and the specific safety requirements by the end of 2015 is on target. Nine safety standards have been published to date in 2012 and currently 114 of 130 safety standards are published. There are a further 53 safety standards at various stages of preparation, many of which are revisions of existing documents.

The IAEA glossary is to be revised and future editions will be available online with a tracking mechanism to manage changes in definitions. Mr Delattre informed on the latest changes agreed by the CSS on the definition of “nuclear installation”, for the purposes of specifying clearly and consistently the titles and scope of the safety standards (e.g. those on site evaluation). The revised definition of ‘nuclear installation’ (for the purposes of the safety standards) includes facilities for the predisposal management of radioactive waste arising from nuclear fuel cycle facilities, and have been set to:

- **nuclear installation:** Any nuclear facility subject to authorization that is part of the nuclear fuel cycle, except facilities for the mining or processing of uranium ores or thorium ores and radioactive waste disposal facilities.

The new definition of ‘nuclear installation’ thus includes: nuclear power plants; research reactors (including subcritical and critical assemblies) and any adjoining radioisotope production facilities; spent fuel storage facilities; facilities for the enrichment of uranium; nuclear fuel fabrication facilities; conversion facilities; facilities for the reprocessing of spent fuel; facilities for the predisposal management of radioactive waste arising from nuclear fuel cycle facilities; and nuclear fuel cycle related research and development facilities.

RW.5.2 Feedback from the Meeting of the Five Chairs

Mr G. Massera reported on the Meeting of the Five Chairs (of the four Safety Committees and the Nuclear Safety Guidance Committee). The Terms of Reference of the NSGC were compared with those of the Safety Committees and, while some differences exist, these were considered necessary and overall the terms of Reference were found to be generally consistent. The meeting also considered
feedback from the Interface Group and discussed the working arrangements for review of DPPs, safety standards and nuclear security documents. The necessary changes to SPESS, to take account of the development process for nuclear security documents, were also reviewed.

**RW.5.3 Feedback from the Interface Group**

The Interface Group consists of the Chairs of the four Safety Standards Committees and four representatives of the Nuclear Safety Guidance Committee (NSGC) from India, Switzerland, the United Kingdom and the United States. Mr D. Delattre reported on the outcome of the first meeting of the Interface Group that took place 24 to 25 September 2012.

Important decisions were reached on working methods and the criteria for identifying documents with a safety/security interface. It is agreed that the Interface Group will meet once per year and that the review of DPPs to identify those with a safety/security interface will be carried out online; DPPs approved by the Coordination Committee will be accumulated and reviewed on a quarterly basis. For those draft safety standards and nuclear security documents that are close to being finalized, it has been agreed that they do not need to be reviewed in the same way as other publications.

The criterion applied in deciding on the existence of a safety/security interface is to assume that such an interface exists *a priori* and the document should be referred to the relevant Safety Standards Committees and the NSGC for review. Only if such an interface clearly does not exist is the document not referred for review. For consistency of policy, all General Safety Requirements documents will be reviewed by the NSGC. To date, the Interface Group has reviewed 44 DPPs for safety standards and 33 of these have an interface with security. Of the 16 DPPs for security documents that have been reviewed, 12 have an interface with RASSC, eight have an interface with WASSC, seven have an interface with TRANSSC and six have an interface with NUSSC. Only three nuclear security documents have no interface with safety.

**RW.5.4 Work of the Nuclear Security Guidance Committee**

Mr I. Barraclough (NSS-SSCS) reviewed the history of the establishment of the NSGC and reported on its first meeting that took place in June 2012. The procedures for approval of nuclear security documents have been established and transitional arrangements have been agreed for certain documents in the process of development. A decision has been made to develop a nuclear security glossary for use by drafters and reviewers. The Terms of Reference of the NSGC allow for observer organizations but no applications for observer status have yet been received.

Mr Barraclough described the nuclear security documents to be referred to RASSC and WASSC over the next 12 to 18 months, indicating that an average of one or two might need to be considered at each meeting. The next meeting of the NSGC, at which a number of safety DPPs and draft safety standards will be considered, will take place from 10 to 14 December 2012.

**RW.5.5 Revision of SPESS A and SPESS B**

Mr D. Delattre summarized the changes that have been necessary to the Strategy and Processes for the Establishment of IAEA Safety Standards (SPESS) to take account of the existence of the Interface
Group and management of the interface between safety and security. SPESS A has been revised but continues to refer only to the process for the development of safety standards. An equivalent procedures document will be developed for the development of nuclear security documents and, in due course, both documents may be merged. SPESS B, which describes the step-by-step preparation and review process, has been extended to also cover nuclear security documents.

**RW.5.6 Future Challenges for the Publications Process**

Mr D. Delattre summarized recent discussions within the Secretariat and at the most recent CSS meeting. Now that many of the safety standards are already published, more work than in the past is being undertaken on revision and updating of existing safety standards. It is considered desirable to move to a "topical" revision process, where all safety standards dealing with the same topic are reviewed in parallel. This is expected to provide greater consistency and stability.

An important issue is to maintain consistency of terminology throughout the safety standards series and this can be achieved through an online glossary (see item RW5.1 above). While there is strong support to publish only electronic versions of safety standards in the future, the Agency has a statutory obligation to produce hard copies of its publications. It is also necessary to take into account that not all Member States may have full online access to IAEA publications. Mr Delattre confirmed that electronic copies of all safety standards under development will continue to be available to the Safety Standards Committees.

**RW.5.7 Superseded and Obsolete Publications in the Safety Standards Series**

Ms K. Asfaw (NSS-SSCS) reviewed the development and publication of documents as part of three IAEA Safety Series (1958 to 1976, 1978 to 1990 and 1991 to 1996) and the IAEA Safety Standards Series (since 1996). Hard copies of the IAEA Safety Series publications are no longer available, but these have now been digitilized and are available online on the IAEA website and can be downloaded. All IAEA Safety Series publications are clearly marked "no longer valid". Publications in the IAEA Safety Standards Series that have been superseded are also clearly marked and a link is provided to the appropriate current standard. However, for a number of reasons the table identifying superseded safety standards and providing the link to the current valid standard is not complete.

Ms Asfaw asked members of the Committees to check if they provide online access to an electronic version of an IAEA Safety Series publication and, if so, to mark it as "no longer valid". This is to ensure that those who use online search engines do not continue to use such documents, mistakenly believing that they are still valid. The Committees were also asked to review the table of superseded safety standards (see http://www-ns.iaea.org/downloads/standards/supersededsafety-standards.pdf) and report any errors or updated information to the Secretariat.

**RW.5.8 Discussion**

In response to comments from the Committees, Mr Delattre clarified that the focus of the Safety Standards Committees when reviewing nuclear security documents should be to ensure that the safety/security interface was correctly identified and adequately addressed, in which case the
document could be approved to progress to the next stage of development. At this stage there is no intention to produce documents that address all safety and security issues in an integrated manner.

There were no additional questions from the Committees.

**RW.6 DOCUMENT PREPARATION PROFILES FOR APPROVAL – SAFETY STANDARDS**

**RW.6.1 DS470 Draft Safety Guide: Radiation Safety of Radiation Sources used in Research and Education**

Mr T. Boal (NSRW- RSM) introduced the DPP and noted that this safety guide is part of the reference set of safety standards agreed in 2009. He reviewed the scope of the document, which covers sealed and unsealed sources and radiation generators. In the case of universities, account needs to be taken of the fact that research may be undertaken at several different locations within the campus, and radioactive material may be transferred between these locations. The students over 18 years of age who undertake such research also need to be clarified.

A total of 78 comments were received from the Safety Standards Committees (Germany, Japan, Sweden, Ukraine and USA) and all have been accepted. TRANSSC will be added as a review committee for the safety guide and a separate section will be added dealing with the use of sources in secondary schools. Exempt sources will also be covered by the safety guide.

The UAE noted that the changes requested to the DPP increased both its scope and complexity and urged that the safety guide be simple and direct for maximum effectiveness. The Committees supported that this approach be adopted for all safety guides under development. RASSC and WASSC noted that the DPP will also be reviewed by the NSGC and approved the DPP for submission to the CSS for endorsement.

*Action: Subject to approval by the NSGC, the Secretariat to submit the DPP of DS470 to the CSS for approval.*

**RW.6.2 DS471 Draft Safety Guide: Radiation Safety of X-Ray Generators and Radiation Sources used for Inspection purposes and for non-medical imaging**

Mr T. Boal introduced the DPP, and noted that this safety guide is part of the reference set of safety standards established in 2009. Together with the DPP for DS470, this completes the full set of safety guides for which RASSC is the lead Committee.

Mr Boal referred to the discussion at the RASSC 32 meeting in June 2012 when it was agreed to extend the scope of the document to cover X-ray generating equipment used for non-medical human imaging, in addition to equipment used to detect concealed objects in cargo or vehicles and equipment used to detect concealed objects on or within the human body. While DS401 addresses the justification of equipment used for non-medical human imaging, DS471 deals with how such equipment, once deemed to be justified, should be used.
A total of 55 comments were received from the Safety Standards Committees (Germany, Japan, Ukraine and USA). Comments were also submitted by the NSGC members from Canada and Finland. It was agreed that TRANSSC be added as a review committee and that TRANSSC should be consulted at the next stage of development of the safety guide. In relation to the request that the document should address the management of radioactive material identified by any of the practices covered by the safety guide, the Committees considered that this represented a significant change to the scope of the document that was not appropriate.

The ILO reported the concern of the International Road Transportation Union that its members were, or could be, exposed unnecessarily as part of the screening process for cargo and asked that this group be involved in the development of the document. The WHO indicated its interest in those aspects of the safety guide that deal with non-medical human imaging and offered to ensure feedback from its Member States on the draft text. The ICRP reported that a new draft publication "Radiological Protection in Security Screening" is available on its website.

The Committees considered that this is an important document for which there is a need in Member States. RASSC and WASSC noted that the DPP will also be reviewed by the NSGC and approved the DPP for submission to the CSS for endorsement.

**Action:** Subject to approval by the NSGC, the Secretariat to submit the DPP of DS471 to the CSS for approval.

**RW.7 DOCUMENT PREPARATION PROFILES FOR APPROVAL – SECURITY SERIES**

**RW.7.1 NST023 Physical Protection of Nuclear Facilities and Nuclear Material in Use and Storage**

Mr M. Khaliq (NSNS) introduced the document, which provides guidance on how to apply the recommendations in INFCIRC/225/revision 5 with respect to unauthorized removal of nuclear material in use or in storage and sabotage of nuclear facilities and nuclear material in use or in storage. Comments were received from France, UK, Ukraine and USA, primarily in relation to the safety/security interface.

Mr Khaliq confirmed that physical protection of waste disposal facilities fell within the scope of the document, as it covers all nuclear facilities, and committed to ensuring that the relevant safety/security interfaces are adequately addressed during drafting. On that basis, RASSC and WASSC approved the development of the document.

**Action:** Subject to the approval of the NSGC, the Secretariat to commence work on development of NST023.
RW.7.2 NST024 Management for the Security of Radioactive Material and Associated Facilities

Mr B. Waud (NSNS) introduced the document, which will provide guidance to both regulators and operators on the use and storage of high activity radioactive sources (categories I to III) as specified in the Code of Conduct on the Safety and Security of Radioactive Sources. The document will provide guidance on how to establish, implement, assess and improve security management for radioactive material (including sealed radioactive sources) and associated facilities, defining international recommendations for national requirements, with the ultimate ambition of providing greater international confidence that high-activity radioactive materials are adequately secured. Comments on the DPP were received from France, UK and USA.

The Committees welcomed the development of the document and noted the importance of an integrated management approach to safety and security issues. As many industrial users of sealed sources do not have a sophisticated management system, it is important that both the conflicts and synergies between safety and security are discussed in this document. RASSC and WASSC underlined the importance of maximizing the interface with safety standards such as the safety guides supporting GS-R-3 and recommended close co-operation between the technical officer for NST024 and the technical officer responsible for the revision of the safety guides on the management systems for predisposal management and disposal of radioactive waste.

WASSC and RASSC recommended the document has also a Technical Officer from NSRW to ensure the appropriate treatment of the integrated management system for safety and security.

The Committees welcomed the document and asked that their comments be addressed during drafting. On that basis, RASSC and WASSC approved the development of the document.

Action: Subject to the approval of the NSGC, the Secretariat to commence work on development of NST024.

RW.8 REVIEW OF DOCUMENTS FOR APPROVAL


Mr K. Moeller (NSRW-WES) introduced the document, which applies to all waste disposal facilities. The DPP was first approved in June 2007 and the draft text was submitted for Member States consultation in 2011. Over 600 comments were received after Member States consultation and these were resolved through two consultancies held in early 2012. Following posting on the Committees website, a further 155 comments were received from WASSC members and one International Organization (Belgium, Germany, Japan, USA and ENISS). Based on the recommendation of the interface group on Safety and Security a new paragraph was added on nuclear security. Mr Moeller provided feedback to WASSC and RASSC on the resolution of the comments received in advance to the WASSC and RASSC meeting. These particularly referred to the distinction between "monitoring" and "surveillance", on the treatment of several definitions, and noted that the expression "detailed
inspection" is no longer used after a request from a Member State after the 120-days-period of commenting.

There were no questions or comments. RASSC and WASSC approved the safety guide for submission to the CSS for approval for publication.

**Action: The Secretariat to submit DS357 to the CSS for endorsement**

**RW.8.2 DS419 Draft Safety Guide: Radiation Safety in Well Logging**

Mr I. Gusev (NSRW-RSM) introduced this technology-specific safety guide and noted that, at the time the DPP was approved, the need to address the safety/security interface was identified. Mr Gusev described the proposed structure of the document, which addresses the design, construction and performance criteria for radiation sources used in the well-logging industry.

A total of 66 comments were received from the Safety Standards Committees (Algeria, Canada, India, Japan, UK and USA), of which only one was rejected. Based on the comments received, it was proposed to add additional text on the use of the graded approach as the sources used cover D-values categories III, IV and V. The draft text was approved by TRANSSC at its meeting in October 2012.

The Committees considered the draft text has too much repetition from the BSS, and that it was important to have a Safety Guide useful for the operator, to be of a high standard, and suggested that some of the introductory material, which was not of a technical nature, could be removed. A number of comments were received on the safety/security interface and it was highlighted that the safety guide will be reviewed by the NSGC. It was noted that many of the sources covered by the safety guide are used only on highly secure sites and this needs to be reflected in how the safety/security interface is addressed.

RASSC and WASSC asked that any changes proposed by the NSGC be discussed with the Chairs and authorized the Chairs to agree to any such changes. On that basis, RASSC and WASSC approved the document for submission to Member States for 120-day comment.

**Action: Subject to any changes proposed by the NSGC being agreed with the Chairs of RASSC and WASSC, the Secretariat to submit DS419 to Member States for 120-day comment.**

**RW.8.3 DS439 Draft Safety Requirements: Addendum to Safety Requirement NS-R-5**

Mr G. Jones (NSNI) introduced the document, which is an addendum to the safety requirements "Safety of Nuclear Fuel Cycle Facilities" (NS-R-5) on reprocessing and fuel cycle research and development facilities. The draft text was submitted to Member States for 120-day comment in January 2012. In total, 263 comments were received from nine Member States and these were resolved through a consultants’ meeting in June 2012. The final draft text was posted on the Committees’ website and a further 127 comments were received, of which 79 were accepted and 49 were rejected. During the most recent meeting of NUSSC, a further 14 changes were agreed, mainly of an editorial nature and for clarification and the document was approved for publication.
The WASSC representative from ENISS stated that his organization was unhappy with how their comments had been addressed and considered that there was inconsistency in the approach adopted in the different annexes, and with the main body of the text. ENISS claimed that a greater level of detail should be included in the annex related to reprocessing facilities and that some of the requirements were not sufficiently strong. The Secretariat considered that the requirements were appropriate and that additional detail would be included in supporting safety guides.

In light of the serious concerns expressed by ENISS and supported by some WASSC members, the Committees decided to refer the document back to the Chair of NUSSC for a decision on whether it should proceed or be referred back to the Secretariat and NUSSC for further review and editing. Subject to the concerns expressed ENISS being resolved, RASSC and WASSC approved DS439 for submission to the CSS for approval for publication.

**Action:** The Secretariat to consult with the Chair of NUSSC in relation to the comments received from ENISS. Once all outstanding issues have been resolved, the Secretariat to submit DS439 to the CSS for approval for publication.

**RW.8.4 DS458 Draft Safety Guide: Radiation Safety and regulatory Control for Consumer Products**

Mr I. Gusev outlined the history of development of the document. A revised document structure was approved by all three Safety Standards Committees in May/June 2012. The text was developed during two consultants' meetings and close co-operation was maintained during the drafting process with the Office of Nuclear Security and with the staff responsible for waste management, transport safety and research reactors. Comments from the two potential co-sponsors, EC and NEA/OECD, were sought and addressed during the drafting.

A total of 146 comments were received from the Safety Standards Committees (Argentina, France, Germany, India, Indonesia, Japan and USA), of which 130 were accepted. Many of the comments were editorial in nature and those proposing a change to the definition of "consumer products" as used in the BSS were rejected. The Secretariat posted the resolution of comments table on the website, highlighting the issues to be discussed at the meeting. Based on the issues identified by the Secretariat, RASSC and WASSC agreed the following:

1. The title of the safety guide should not be changed;
2. References to transport throughout the document are specific only to the transport of consumer products and should be retained;
3. An annex on TIG welding could be added but it was not essential and should not delay progression of the document;
4. A diagram on the process of regulatory control should be added in section 3;
5. The figure in section 5 dealing with the regulatory control of irradiated gemstones should be retained;
6. The text in Para.I-6 in annex I relating to collective dose should be deleted; and
(7) All other annexes are appropriate and useful and should be retained.

The Committees considered that the document was well written and would be helpful to Member States. In relation to alternate technologies, there was support for the manner in which this has been addressed in the document - specifically, it was agreed that para. 3.6 was appropriate and, as a result, para. 3.10 should be deleted.

Hungary noted that the internet marketing of consumer products is increasing and is difficult, if not impossible, to control. Although the focus of the safety guide is to ensure that products which are not considered justified and do not meet the criteria for exemption are not available for supply to the public, reaching a uniform view on these issues across all regulatory bodies and in all Member States is unrealistic.

RASSC and WASSC approved the document for submission to Member States for 120-day comment.

Action: Following the agreed changes being made, the Secretariat to submit DS458 to Member States for 120-day comment.

RW.9 PROGRESS REPORTS ON DOCUMENTS UNDER DEVELOPMENT

RW.9.1 DS457 Draft Safety Requirements: Preparedness and Response for a Nuclear or Radiological Emergency (revision of GS-R-2)

Ms E. Buglova (IEC-Head) reported on the status of the revision of the Safety Requirements on Preparedness and Response for a Nuclear or Radiological Emergency (GS-R-2). In particular, Ms Buglova addressed the recent activities undertaken, namely: the assessment of the need for the revision of GS-R-2, request of feedback from Member States based on a Questionnaire sent, on-going review of GS-R-2 in light of the TEPCO’s Fukushima Daiichi NPP accident and lessons identified in responses to emergencies and conducted exercises. Some highlights of these activities were:

- The usefulness and appropriateness of GS-R-2 was acknowledged
- There was broad acceptance of GS-R-2 content and structure by Member States
- No missing requirements were identified, and some requirements need to be edited to emphasise certain sections;
- The areas requiring special attention were identified, and
- IACRNE (Inter-Agency Committee on Radiological and Nuclear Emergencies) members were invited to co-sponsor, and as a result 12 International Organizations indicated their potential interest in doing so.

Following this advice, several Consultancies were held addressing:

- Accidental medical overexposures;

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• Protection of emergency workers;
• Nuclear security elements;
• Mitigating non-radiological consequences; and
• Transition from emergency exposure situation to existing exposure situation

In addition, an ad-hoc IACRNE meeting and a Technical Meeting were held to review and discuss major topical revisions undertaken so far.

The planned activities include consultancies on emergency workers in light of the findings of ICRP-TG84, and on EPR issues in waste management.

It is planned that the revision of GS-R-2 will be sent for the first review by the SSC’s for their meetings in June/July 2013.

Following the update of the Safety Requirement documents, Ms Buglova highlighted the related topics to be developed in Safety Guides: public communication in an emergency, transition from emergency to existing exposure situation; health hazards in perspective, OILs (operational intervention levels), concept of operations; emergency facilities and locations and emergency planning zones and distances.

After the presentation, RASSC and WASSC members sought feedback on the following topics:

• Volunteers intervening during the response phase, data logging, training;
• Transition from emergency situation exposures to existing exposure situations;
• Medical accidents; and
• Additional guidance, possibly needed for waste management in emergency situations.

**RW.9.2 DS456 Draft Safety Requirements: Leadership and Management for Safety (revision of GS-R-3)**

Mr P. Gest (NSNI) provided a status report on the revision of the Safety Requirement on the Management System for facilities and activities, GS-R-3. Mr Gest referred to the outcome of several technical and consultancy meetings convened in 2012, to elaborate on the draft document. Mr Gest also noted the importance of the lessons learnt from the Fukushima Daiichi NPP accident, particularly in regard to the safety culture, and furthermore underlined the objective of the document and the areas needing further clarification.

The objective of DS456 is to establish requirements with respect to Fundamental Safety Principle 3, Leadership and Management for Safety, to ensure that:

• every individual in an organization understands why activities have to be performed safely and how they have to be performed to guarantee the highest safety level,
• there are continuous improvements of a strong culture for safety, and
the systematic approach to the whole range of interactions of individuals with the technology and the organization in order to prevent human and organization failures.

The areas needing clarification are the graded approach and knowledge management. Comments of WASSC and RASSC members afterwards highlighted the need to consider integration of safety and security in the development of this document.

The Draft Safety Guide is expected to be finalized for the review of the Safety Standards Committees at their meetings in June/July 2013.

RW.10 GENERAL SESSION

RW.10.1 Management of off-site Waste Contaminated with Radioactive Material due to the Accident at Fukushima Nuclear Power Plant

Mr T. Nomoto and Mr K. Ono from the Ministry of the Environment, Japan, presented the current situation, countermeasures taken and the challenges faced in the management of off-site waste contaminated with radioactive materials due to the accident at the Fukushima Nuclear Power Plant.

WASSC and RASSC members sought clarification on dose constraints used for workers, volume reduction technologies, status of storage facilities and plans for disposal facilities, waste management at the storage facilities, involvement of stakeholders and communication with the public, terminology/definitions for the wastes generated in the remediation, disaster waste, and low level contaminated material, radionuclides relevant in making decisions, role of the existing repositories, the concept of decontaminated soil and waste [soil and waste removed from the decontaminated areas], availability of treatment facilities (incinerators) and the fulfillment of the role of the regulator and the role of the operator.

WASSC and RASSC members showed appreciation for the detailed and comprehensive presentation and clarification of topics and expressed the need to have presentations at forthcoming WASSC meetings about waste management and clean-up activities on-site the region of the Fukushima Daiichi NPP.

RW.10.2 Convention on Nuclear Safety – Report on the 2nd Extraordinary Meeting

Ms A. Nicic (NSNI-RAS-ASH) provided the Secretariat’s report on the second extraordinary meeting of the Contracting Parties to the Convention on Nuclear Safety, agreed during the 5th Review Meeting (April 2011). Ms Nicic highlighted the objectives of the meeting and its structure. The objectives were:

- To review and discuss lessons learned from the accident at TEPCO’s Fukushima Daiichi nuclear power plant, and
- To review the effectiveness of the provisions of the CNS.
The meeting was organized on the basis of sessions to discuss the 6 topical areas to address the lessons learned from the accident, namely: external event, design issues, severe accident management and recovery, national organizations, emergency preparedness and response, post-accident management, and international cooperation. In addition, plenary sessions were held to discuss the effectiveness of the CNS.

The actions taken by the Contracting Parties to address initial lessons learnt from the accident were:

- Re-evaluating the hazards posed by external events, such as earthquakes, floods and extreme weather conditions, for each NPP site through targeted reassessment of safety;

- Upgrading safety systems or installing additional equipment and instrumentation to enhance the ability of each NPP to withstand an unexpected natural event without access to the electrical power grid for an extended period of time, including an external event affecting multiple units.

- Installing additional equipment and instrumentation in spent fuel pools to ensure cooling can be maintained or restored in all circumstances, or performing additional technical evaluations to determine if additional equipment and instrumentation are needed.

- Performing or planning an evaluation of the guidance that is to be used by the operator to manage emergency situations resulting from severe accidents caused by extreme natural phenomena at NPPs, including low power and shutdown conditions.

These documents include emergency operating procedures to prevent core damage, severe accident management guidelines to prevent containment failure, and extensive damage mitigation guidelines to address accidents that result in fires or explosions that affect a large portion of a NPP.

- Developing probabilistic safety assessments to identify additional accident management measures or changes in radiation protection measures for workers on the site that might be needed to perform necessary activities in the event of a severe accident;

- Reviewing and updating national, regional, provincial, municipal and local emergency plans and conducting exercises to encourage greater coordination among the different organization;

- Improving radiation monitoring and communications capabilities, and enhancing public communications, such as via dedicated public websites;

- Upgrading regional, off-site and on-site emergency response centres;

- Undertaking review and revision of the legislative framework and undertaking changes to the functions and responsibilities of the regulatory body, and

- Strengthening bilateral and regional collaboration, hosting or planning to host international peer review missions, and participating in IAEA Action Plan activities and implementing recommendations of the WANO Fukushima Commission.

In addition, the following issues were identified to be considered in the preparation of the National Reports for the 6th Review Meeting (April 2014):

For existing NPPs:
• the results of reassessments of external events, of periodic safety assessments and of any peer reviews, and any follow-up actions taken or planned, including upgrading measures, and

• any actions taken or planned to cope with natural hazards more severe than those considered in the design basis.

For new NPPs:

• improved safety features and additional improvements, if any, to address external hazards and to prevent accidents and, should an accident occur, to mitigate its effects and avoid off-site contamination; Upgrading of accident management measures for extreme natural events, including for example:
  - measures to ensure core cooling and spent fuel pool cooling, the provision of alternate water sources for the reactor and for the spent fuel pool, the availability of the electrical power supply, measures to ensure containment integrity, and filtration strategies and hydrogen management for the containment; and
  - the development of probabilistic safety assessments to identify additional accident management measures should be considered as a possible future activity.

• Measures taken or planned to ensure the effective independence of the regulatory body from undue influence, including, where appropriate, information on the hosting of IRRS missions;

• Enhancement of emergency preparedness and response measures, including for example for multi-unit sites, approaches and methods of source term estimation and initiatives in the field of remediation;

• The enhancements should include defining the additional responsibilities up to appropriate levels of the national government and the development of procedures and joint actions of various agencies and improvements in international cooperation;

• Information on how IAEA safety standards are taken into account;

• Information on activities undertaken to enhance openness and transparency for all stakeholders; and

• Safety culture and human and organizational factors were identified as cross-cutting issues, to be given particular attention, as they affect the consideration of external events, design, severe accident management, including operator training, the good functioning of national organizations and emergency preparedness and response.

Regarding the discussions on the Effectiveness of the CNS provisions the following were accomplished and agreed:

• Revised versions of the Guidance documents, based on proposals submitted by 11 Contracting parties, were developed in advance to the EM to facilitate discussion with all the Contracting Parties at the EM, and agreed by consensus during the EM.

• A set of action-oriented objectives for strengthening nuclear safety, annexed to the Summary Report, concerning the use of the IAEA safety standards, the enhancement of transparency,
the regulatory effectiveness, the use of international peer review missions, whose primary importance has been highlighted by the first lessons learnt from the Fukushima Daiichi accident.

The CNS Contracting Parties recognized the necessity to further improve the overall Convention Review Process. In this regard, an Effectiveness and Transparency Working Group was established, open to all Contracting Parties, with the task of reporting to the next review meeting on a list of actions to strengthen the CNS and on the proposals to amend, where necessary, the convention, taking into account the overall output of the EM and the initial proposal to amend the CNS submitted by Switzerland and by the Russian Federation.

Ms Nicic also informed WASSC and RASSC about the press release statement and on the composition of the leadership of the CNS as elected at the last Organizational meeting.

**RW.11 IAEA ACTION PLAN ON NUCLEAR SAFETY: REVIEW OF SAFETY STANDARDS FOLLOWING FUKUSHIMA**

**RW.11.1 Status Report on the implementation of the Nuclear Safety Action Plan**

Mr G Caruso (NSS-NSAP Coordinator) presented the Secretariat’s briefing on the progress in the implementation of the IAEA’s Action Plan on Nuclear Safety, as related to each action of such plan:

*Assessment of the safety vulnerabilities of NPPs*

An international expert mission was conducted in July/August 2012 to examine the effects of the Great East Japan earthquake on the Onagawa NPP. An international Experts’Meeting on the protection against extreme earthquakes and tsunamis was held in September 2012 and a meeting on Instrumentation and control, mainly focused on post-accident monitoring systems were held in Japan in September 2012.

The following reports were prepared based on the insights gained from IEMs, the experience from relevant IAEA activities and from the INSAG perspectives:

- Reactor and Spent Fuel Safety in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant.
- Enhancing Transparency and Communications Effectiveness in the Event of a Nuclear or Radiological Emergency.
- Protection against Extreme Earthquakes and Tsunamis in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant.

*Strengthen IAEAs peer reviews*

Several peer reviews were conducted in this period: EPREV (to Armenia, Kazakhstan, Lithuania and Uruguay), IRRS (to Finland) and OSART to Angra I (Brazil), Laguna Verde (Mexico) and Mühleberg (Switzerland). In addition improvements were made to the methodology to assess the safety vulnerabilities of NPPs, previous IRRS missions were analyses to introduce further improvements, and a Design and safety Assessment review advisory service were developed to assist Member States embarking on nuclear power programmes.
Strengthen the effectiveness of national regulatory bodies:

A methodology for self-assessment of regulatory infrastructure for safety (SARIS) was developed to support Member States regulatory infrastructure development (it is available on the IAEA web page). Guidance was developed for managing regulatory body competence.

An international conference will be held in April 2012 on “Effective nuclear regulatory systems”.

There was agreed a new memorandum of understanding with the World Association of Nuclear Operators (WANO), and during the 56th regular session of the IAEA General Conference there was held a Nuclear operating Organization cooperation forum, mainly addressed to newcomer countries.

Review and strengthen IAEA Safety Standards and improve their implementation:

It was highlighted that the CSS had agreed the process for revision of the safety Standards by Addenda and on the prioritization for the review of the Safety Guides, and on the systematic review of several Safety Requirement documents.

Improve the effectiveness of the international legal framework

The following activities were highlighted:

- Extraordinary meeting of the Contracting Parties to the Convention on Nuclear Safety (CNS) August 2012;
- The second session of the Nuclear Law Institute (September 2012);
- Accession to the Conventions (UAE to the Joint Protocol, Vienna Convention and the Paris Convention, and Bosnia and Herzegovina to the Joint Convention); and
- A workshop for diplomats on Nuclear Law (July 2012).

Embarking Countries and capacity building:

- A methodology to support the self-assessment of national infrastructures for safety was developed: the integrated review of infrastructure for safety (IRIS);
- Assistance packages were developed for site selection and management systems; and
- A Technical meeting were held on capacity building and human resource development for new and expanding nuclear power programmes.

Protection of people and the environment from ionizing radiation

The radiation criteria for food, animal feed and drinking water needs further work with the other international organizations.

Two reports are being drafted on decommissioning and remediation:

- Worldwide Experiences in Clean-up and Decommissioning of Nuclear Facilities in the Aftermath of Accidents;
- Management of Large Quantities of Low Radioactive Waste from Remediation Activities in Areas Surrounding Nuclear Installations, following a Major Nuclear or Radiological Accident.
The MODARIA (Modelling and Data for Radiological Impact Assessments) project was launched in 2012.

Two International Experts Meetings will be held in this area, namely:

- Decommissioning and Remediation after a Nuclear Accident in January 2013, and
- Radiation protection in the aftermath of the Fukushima Accident, in early 2014

*Enhance transparency and effectiveness of communication*

- The Member States’ national assessment capabilities that may assist the Secretariat in assessing potential consequences of an emergency were discussed in September 2012.
- The Unified System for information exchange in incidents and emergencies (USIE) is being further enhanced;
- The IAEA is preparing a draft safety Guide on communication and guidance and good practices for regulatory bodies, and
- The INES scale is under review for its application as a communication tool and further guidance is under preparation.

*Research and development*

In this area the following activities were reported:

- The technical and scientific Support Organization (TSO) Forum, held during the 2012 General Conference, and two technical meetings, one on small and medium sized reactors (SMRs) and the other on flow accelerated corrosion.

- In addition the preparation of a IAEA Fukushima Report was announced and it is expected to be issued in 2014. The main features of this report are the two sections, an informative and with plain language for the general public and a scientific/technical section, including information with sufficient technical depth but easily understandable.

There were no questions raised by committee members.

**RW.11.2 Status of the CSS/Secretariat Plan for the Review of Safety Standards after Fukushima**

Mr D. Delattre briefed RASSC and WASSC members on the status of the CSS and the Secretariat Plan for the Review of Safety Standards after Fukushima. Mr Delattre focused on the timing of the initial reports made or received by the Secretariat, the gap analysis on the Safety Requirements based on the lessons learned extracted from such reports and the reports of the committees submitted to CSS, its main conclusions on the requirements, the identification of the need of further guidance and on the basic concepts for the prioritization of the review of Safety Guides. Mr Delattre also pointed out the areas identified as needing additional guidance such as design extension condition and independence of safety systems, provision of alternative sources for power and on health hazard in perspective in case of emergencies.
There were no gaps identified in the main overarching requirements but there was room for strengthening the requirements.

Committee members sought clarification on the duration of the process for the review of these Safety Standards, and on the number of documents to be reviewed for the meeting of the committees to be held in July 2013.

**RW.11.3 DS462 – Revision through Addenda of GSR Part 1, NS-R-3, SSR-2/1, SSR-2/2, GSR Part-4**

Mr Delattre reported on the status of development of the revision of the different parts of DS462. The addendum to GSR Part 1 is ready and includes the lessons learned from the first gap analysis as well as lessons learned from additional reports and the 2nd CNS extraordinary meeting. The revision by Addendum to NS-R-3 is progressing and further work is needed. It might imply the recommendation of a new format for the Safety Requirements. The addenda to SSR-2/1, 2/2 and GSR Part 4 are nearly finalized. The close collaboration was highlighted in the review of GSR-2 (DS547) and GSR-3 (DS456) as the development of the drafts is progressing in parallel to DS462. In addition, the work carried out will help to maintain traceability of all lessons learned, including their source.

**RW.11.4 RSM and WES activities under the Action Plan**

Mr M. Vesterlind summarized the activities of the Waste and Environmental Safety Section and the Radiation Safety and Monitoring Section of NSRW under the Nuclear Safety Action Plan. These activities are related to the following actions of the Nuclear Safety Action Plan (NSAP): Review and strengthen IAEA Safety Standards, improve the effectiveness of the international legal framework (in particular to the Joint Convention), and protection of people and the environment from ionizing radiation. As Mr Vesterlind informed at the previous WASSC meeting, many of these activities were on-going in the WES programme at the time of the NSAP agreement, and after that, they were modified to be aligned to it. These activities are covered by Regular Budget, while the new activities have to be covered by Extra-Budgetary contributions, when available.

The specific activities reported by WES by topical area were:

A) **Assessment of environmental releases:**

- Work will start shortly on strategies to reduce radiological impacts to the population in inhabited and agricultural areas;
- Work is on-going on updating radionuclide concentrations in environmental media as the basis for deciding on protective and remedial measures; and
- The International Programme Modelling and Data for Radiological Impact Assessments (MODARIA) to develop, test and compare methodologies for the assessment of public exposures and radiological impacts, was launched last week (November 2012) with high interest (more than 100 participants, and more than 40 Members States sent delegations).
B) Decommissioning and remediation

- The main event will be the International Experts Meeting on Decommissioning and remediation after a nuclear accident that is scheduled to be held 28 January to 1st February 2013;
- There is an on-going activity related to the review of the experiences and lessons learned worldwide in clean-up and decommissioning in the aftermath of accidents; and
- There are plans to initiate an international project on decommissioning of nuclear facilities and environmental remediation after an accident, and at the moment it seems that there will be funds available in 2014 to initiate this project.

C) Waste Management

- There is an initiative of work on the management of large quantities of waste that covers licensing processes involved to take action quickly, and the safety case and the safety assessment supporting the SC. WASSC members received a detailed presentation on it under Agenda item W.11.4.
- Evaluation of the review process of the Joint Convention: over the next few years; there will be JC inter-sessional meetings to discuss further improvements to the JC review process, and to ensure also continuity between review meetings.

RSM activities related to the NSAP:

“Strengthening capabilities for radiation protection of workers in emergency situation and occupational radiation protection appraisal services”

Strategy for monitoring and emergency workers training

- Revision of the Safety Guide on Occupational Radiation Protection
- Current training course material reviewed and the plan for the training material on monitoring in emergency situation discussed
- Regional Meeting on Occupational Radiation Protection in Emergency Exposure Situations, 22-25 November 2011 was organized together with NIRS (Japan)
- An expert mission to give a presentation on occupational radiation protection in existing exposure situations in the workshop of European ALARA Network in September 2012
- A Technical Meeting on occupational radiation protection for itinerant workers was held. The radiation protection for itinerant workers in an emergency situation was also discussed

Occupational Radiation Appraisal Services (ORPAS)
Updates were made to the questionnaires for the Self-Assessment Tool for ORPAS in accordance with the newly revised BSS; and

- Requests for ORPAS services were received from Peru and Venezuela and the missions are under preparation.

**RW.12 RADIATION PROTECTION FOLLOWING THE FUKUSHIMA ACCIDENT**

**RW.12.1 Radiation protection issues following Fukushima – report of the ICRP Task Group 84**

Mr A. González (Vice-Chairperson of ICRP) presented the report of the Task Group 84 of the ICRP on radiation protection issues after the Fukushima Daiichi Nuclear Power Plant accident, including some personal reflections on the lessons learnt from the accident. The presentation of Mr González is available on the Committees’ web folders.

Highlights of the lessons learnt:

- Radiation risk can only be inferred and deduced by reasoning through a process of probability (risk predicted but always with uncertain outcome);
- Health effects due to radiation exposures using Radiation risk coefficients cannot be proved unequivocally proven;
- Accidents might happen. The TEPCO’s Fukushima Daiichi NPP accident demonstrated the dominance of the unpredictable over the unlikely but foreseeable events; and
- Mitigation should become paramount for nuclear safety, as there is always the possibility of implausible and unpreventable events, even when robust the prevention is in place.

In this context, the ICRP TG84 proposes the following:

- Radiation risk coefficients of potential health effects be properly interpreted and the limitations of epidemiological studies for attributing radiation effects following low exposures be understood;
- Any confusion on protection quantities and units should be resolved;
- The potential hazard from the intake of radionuclides into the body should be elucidated;
- Rescuers and volunteers should be protected with an ad hoc system;
- Clear recommendations on crisis management, medical care, recovery and rehabilitation should be available;
- Recommendations on public protection levels (including infant, children and pregnant women and their expected offspring) and associated issues should be consistent and understandable;
- Updated recommendations on public monitoring policy should be available;
- Acceptable (or tolerable) ‘contamination’ levels should be clearly stated and defined;
- Strategies for mitigating the serious psychological consequences arising from radiological accidents be sought; and, last but not least,
• Failures in fostering information sharing on radiological protection policy after an accident should be addressed with recommendations to minimize such communication lapses.

The WASSC and RASSC members welcomed the thorough and enlightening presentation, and discussed the following topics:

• Communication of radiation risks, as it seems that the public expect a reply in absolute terms. Mr González views on the topic were that the professionals should convey a response expressing the level that is “safe enough”. It was also noted the importance of listen more to the public, that would point to the message that needs to be translated to plain language. As a result of this lesson, the IAEA is developing a document “Communication with the public”.

• Examples of other industries on how they communicate risks (e.g. car industry, when the exit gases of cars are below certain limits, car and benzin are allowed to be sold). This calls to ethical concerns, as it is known that the genotoxic compounds do not have thresholds of risk.

• Translation of standards to other languages: Mr Gonzalez recommended to avoid the use of jargon in the Safety Standards, not to use nouns as adjectives, to use always English words with roots in Greek and Latin languages and to prepare standards thinking that they have to be translated in a way that can be communicated.

• Waste Management after the accident: it was noted that the public does not want additional exposure due to this activity;

• Limitations of radiation exposure of the public: participants pointed to the fact that the current limits to public radiation exposure is 1 mSv in a year, while the limit of Radon in houses implies a higher dose, therefore there is a contradiction in the system as the public is better protected outside than inside their homes. In addition, the justification of the protective measures should be included in the IAEA standards.

RW.13 CLOSING OF THE MEETING

RW.13.1 Other business

There were no other businesses to address at this joint session.

RW.13.2 Conclusions and closing of the Joint Session

Mr Massera, Chairperson of RASSC, concluded the meeting, recognizing the intense agenda of the joint sessions, which included the approval of four Document Preparation Profiles and four draft Safety Standards; reports on the activities of the Secretariat; the presentation of an update of the situation in Japan, and on the lessons learnt on the Fukushima Daiichi NPP accident, by Mr González, Chair of the Task-Group 84 of ICRP, dealing with radiation protection issues following the Fukushima accident.

Mr Massera thanked all contributors to this meeting and wished WASSC members good trip back home, and noted that the RASSC-only session will be held the following day in the same meeting room.
Mr Williams, Chairperson of WASSC, echoed the RASSC Chair thanking all contributors to the meeting and expressed that WASSC looks forward to meeting again in a joint sessions with RASSC at the meeting in July 2013.
ANNEX I TO THE WASSC SESSION:
34th Meeting of the Waste Safety Standards Committee (WASSC)

26 - 27 November 2012, Vienna
Room M1, First Floor, M Building

AGENDA

10:00 – Monday, 26 November 2012

W.1. Opening of WASSC meeting M. Vesterlind (SH-WES)
W.2. Chairman’s remarks G. Williams
W.3. Adoption of agenda for the WASSC Meeting For approval G. Williams
W.4. Report from 33rd meeting For approval G. Siraky
W.5. Status of actions arising from WASSC33 For information G. Siraky
W.6. Administrative arrangements for the meeting For information G. Siraky
W.7. Waste Safety Standards status and future steps For information G. Siraky

W.8. Review of documents for approval


W.9. Discussion on documents for approval


| W.10.2 | DS448 | Draft Safety Guide: Predisposal Management of Radioactive Waste from Reactors | For information and comment | M. Kinker |
## W.11. General session

<table>
<thead>
<tr>
<th>W.11.1</th>
<th>WASSC Members feedback on the use of the Safety Guides on Management Systems for Predisposal Management and Disposal of Radioactive Waste (GS-G-3.3 and GS-G-3.4)</th>
<th>For discussion</th>
<th>WASSC members</th>
</tr>
</thead>
<tbody>
<tr>
<td>W.11.2</td>
<td>Lessons learnt by Member States from the TEPCO Fukushima Daiichi NPP Accident or other past historical situations on: • Results of stress tests on WM and SFM facilities • Management of large amounts of waste • Decommissioning following severe accidents</td>
<td>For discussion</td>
<td>WASSC members</td>
</tr>
<tr>
<td>W.11.2 (a)</td>
<td>Stress tests and management of large amount of waste</td>
<td></td>
<td>L. Evrard</td>
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<tr>
<td>W.11.2 (b)</td>
<td>Experience and lessons learnt by Ukraine in dealing with the large amounts of wastes generated during the accident of Chernobyl NPP</td>
<td></td>
<td>T. Kilochytska</td>
</tr>
<tr>
<td>W.11.2 (c)</td>
<td>Lessons from the clean-up of bulk contaminated soil at the Maralinga test site</td>
<td></td>
<td>G. Williams</td>
</tr>
<tr>
<td>W.11.3</td>
<td>Report on the CS meeting on the revision of SSG-15 in light of the TEPCO Fukushima Daiichi NPP Accident</td>
<td>For information and comment</td>
<td>Y. Kumano</td>
</tr>
<tr>
<td>W.11.4</td>
<td>Report on the CS meeting on the management of large amount of radioactive waste after an emergency situation</td>
<td>For information and comment</td>
<td>Y. Kumano</td>
</tr>
<tr>
<td>W.11.5</td>
<td>Report on the TM to discuss human intrusion and future human actions in relation to disposal of Radioactive Waste</td>
<td>For information and comment</td>
<td>Y. Kumano</td>
</tr>
<tr>
<td>W.11.6</td>
<td>Feedback from WASSC members on implementation of IAEA Safety Standards</td>
<td>For information</td>
<td>WASSC members</td>
</tr>
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<td>W.11.7</td>
<td>Reports from International Organizations</td>
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<td>WASSC Observers</td>
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<tr>
<td>W.11.7(a)</td>
<td>Latest developments at the EU</td>
<td></td>
<td>C. Necheva</td>
</tr>
<tr>
<td>W.11.7(b)</td>
<td>Manufactures’ Role in Long Term Management of Disused Radioactive Sources</td>
<td></td>
<td>W. Fasten</td>
</tr>
</tbody>
</table>

### Conclusions of the session

**G. Williams**

### Closure of WASSC meeting

**M. Vesterlind**

### Dates of future meetings

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Dates</th>
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<tr>
<td>33rd CSS meeting</td>
<td>18-21 March 2013</td>
</tr>
<tr>
<td>35th NUSSC</td>
<td>24-28 June 2013</td>
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<tr>
<td>26th TRANSSC</td>
<td>24-28 June 2013</td>
</tr>
<tr>
<td>34th RASSC</td>
<td>1-5 July 2013</td>
</tr>
<tr>
<td>35th WASSC</td>
<td>1-5 July 2013</td>
</tr>
<tr>
<td>36th WASSC</td>
<td>18-22 November 2013</td>
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# AGENDA

## RASSC/WASSC Joint Session

**14:00 – Tuesday, 27 November 2012 – M1 (M Building)**

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<th>RW1.</th>
<th>Opening of Joint Sessions</th>
<th>P-S. Hahn, DIR-NSRW</th>
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<tr>
<td>RW2.</td>
<td>Chairmen’s Remarks</td>
<td>G. Williams/G. Massera</td>
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<tr>
<td>RW3.</td>
<td>Adoption of agenda for the Joint Session</td>
<td>G. Williams/G. Massera</td>
</tr>
<tr>
<td>RW4.</td>
<td>Administrative arrangements for the meeting</td>
<td>G. Siraky/T. Colgan</td>
</tr>
</tbody>
</table>

## RW5. General Safety Standards and Related Issues

| RW5.1 | Feedback from the Commission on Safety Standards (CSS 32) | For information | D. Delattre |
| RW5.2 | Feedback from the Meeting of the Five Chairs | G. Williams/G. Massera |
| RW5.3 | Feedback from the Interface Group | D. Delattre |
| RW5.4 | Work of the Nuclear Security Guidance Committee | For information | I. Barraclough |
| RW5.5 | Revision of SPESS A and SPESS B | For discussion | D. Delattre |
| RW5.6 | Future Challenges for the Publication Process | For discussion | D. Delattre |
| RW5.7 | Superseded and Obsolete Publications in the IAEA Safety Series | For information | K. Asfaw |
| RW5.8 | Discussion | G. Williams/G. Massera |

## RW6. DPPs for Approval – Safety Standards

| RW6.1 | DS470 | Draft Safety Guide: Radiation Safety of Radiation Sources used in Research and Education | For approval for submission to CSS | T. Boal |

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33rd Meeting of the Radiation Safety Standards Committee (RASSC)
34th Meeting of the Waste Safety Standards Committee (WASSC)

Room M1, First Floor, M Building
27 – 28 November 2012
**RW6.2. DS471**  
Draft Safety Guide: Radiation Safety of X-Ray Generators and Radiation Sources used for Inspection purposes and for non-medical imaging  
*For approval for submission to CSS*  
T. Boal

**RW7. DPPs for Approval – Security Series**

| RW7.1 | NST023 | Physical Protection of Nuclear Facilities and Nuclear Material in Use and Storage | For approval | M. Khaliq |
| RW7.2 | NST024 | Management for the Security of Radioactive Material and Associated Facilities | For approval | B. Waud |

**RW8. Review of documents for approval**

| RW8.2 | DS419 | Draft Safety Guide: Radiation Safety in Well Logging | For approval for submission to MS comment | I. Gusev |
| RW8.3 | DS439 | Addendum to Safety Requirement NS-R-5 | For approval for submission to CSS | G. Jones |
| RW8.4 | DS458 | Draft Safety Guide on Radiation Safety and Regulatory Control for Consumer Products | For approval for submission to MS comment | I. Gusev |

**RW9. Progress reports on documents under development**

<p>| RW9.1 | DS457 | Draft Safety Requirements: Preparedness and Response for a Nuclear or Radiological Emergency (revision of GS-R-2) | For information | E. Buglova |
| RW9.2 | DS456 | Draft Safety Requirements: Management Systems (revision of GS-R-3) | For information | P. Gest |</p>
<table>
<thead>
<tr>
<th>RW10.</th>
<th>General Session</th>
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</thead>
<tbody>
<tr>
<td>RW10.1</td>
<td>Management of off-site Waste Contaminated with Radioactive Materials due to the Accident at Fukushima Nuclear Power Stations</td>
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<tbody>
<tr>
<td>RW11.1</td>
<td>Status Report on the implementation of the Nuclear Safety Action Plan</td>
</tr>
<tr>
<td>RW11.2</td>
<td>Status of the CSS/Secretariat Plan for the Review of Safety Standards after Fukushima</td>
</tr>
<tr>
<td>RW11.3</td>
<td>DS462 – Revision through Addenda of GSR Part1, NS-R-3, SSR-2/1, SSR-2/2, GSR Part-4</td>
</tr>
<tr>
<td>RW11.4</td>
<td>RSM and WES activities under the Action Plan</td>
</tr>
<tr>
<td>RW11.5</td>
<td>General Discussion</td>
</tr>
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<thead>
<tr>
<th>RW12.</th>
<th>Radiation Protection following the Fukushima Accident</th>
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<tr>
<td>RW12.1</td>
<td>Radiation protection issues following Fukushima- report of ICRP Task Group 84</td>
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<thead>
<tr>
<th>RW13.</th>
<th>Closing of the Meeting</th>
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<tbody>
<tr>
<td>RW13.1</td>
<td>Other Business</td>
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<tr>
<td>RW13.2</td>
<td>Conclusions of the Joint Session</td>
</tr>
<tr>
<td>RW13.3</td>
<td>Closing of the Joint Sessions</td>
</tr>
</tbody>
</table>
# ANNEX II to the WASSC REPORT: ACTIONS FOLLOWING 33rd WASSC JOINT WASSC/NUSSC SESSIONS

<table>
<thead>
<tr>
<th>ITEM AG</th>
<th>ACTION</th>
<th>STATUS</th>
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<tbody>
<tr>
<td>NW1.7</td>
<td>Presentations of the International Expert Meetings related to the Tepco Fukushima Dai-ichi Accident (TFA), should be made available on the Internet and easily downloaded. The Secretariat should check whether this can be free of charge.</td>
<td>Implemented Presentations available on the public web site of the NSAP</td>
</tr>
<tr>
<td>NW1.8</td>
<td>Provide information on the procedure for the development of Security Series documents, including involvement of SSC’s, and for the development of Safety Standards, including involvement of NSGC.</td>
<td>Updated procedures, as contained in SPESS and its Step-by-Step application manual are available at the SSC’s web page (<a href="http://www-ns.iaea.org/committees/wassc/default.asp?fd=947&amp;dt=0">http://www-ns.iaea.org/committees/wassc/default.asp?fd=947&amp;dt=0</a>) and a presentation is scheduled for WASSC34</td>
</tr>
<tr>
<td>NW2.1</td>
<td>DS407 approved to be sent to CSS for endorsement, conditional to incorporation of changes agreed at the meeting.</td>
<td>Implemented DS407 was sent to CSS32 and endorsed by CSS for publication</td>
</tr>
<tr>
<td>NW2.2</td>
<td>DS446 approved to be sent to CSS for endorsement, conditional to incorporation of changes agreed at the meeting.</td>
<td>Implemented DS446 was sent to CSS32 and endorsed by CSS for publication</td>
</tr>
<tr>
<td>NW2.3</td>
<td>DS450 approved to be sent to MS for comment, after incorporating changes agreed at the meeting and approval of the WASSC Chair.</td>
<td>Implemented DS450 was made available for MS comments in the public web page (<a href="http://www-ns.iaea.org/standards/documents/draft-ms-posted.asp?s=11&amp;l=85">http://www-ns.iaea.org/standards/documents/draft-ms-posted.asp?s=11&amp;l=85</a>) and the due date for comments is 31 January 2013</td>
</tr>
<tr>
<td>NW3.1</td>
<td>DPP for DS460 approved to be sent to CSS for CSS approval.</td>
<td>Implemented The DPP for DS460 was sent to CSS32 and approved by CSS for starting its drafting</td>
</tr>
<tr>
<td>NW3.2</td>
<td>Outline for DS462 approved to be sent to CSS for CSS approval.</td>
<td>Implemented The outline for DS462 was sent to CSS32 and approved by CSS</td>
</tr>
<tr>
<td>ITEM AG</td>
<td>ACTION</td>
<td>STATUS</td>
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<td>W.7</td>
<td>To provide feedback on the use of GS-G-3.3 and GS-G3.4, SGs on Management Systems for Predisposal Management and Disposal of Radioactive Waste</td>
<td>No feedback received so far</td>
</tr>
</tbody>
</table>
| W.7.1   | 1. As part of the WASSC strategy for ranking and review of SGs, establish a Point-of-Contact within the Agency to collect all relevant information on “Lessons Learned” from TFA and other past activities.  
2. To provide information to the WASSC Secretariat on the lessons learned from the TFA or other past historical situations (Chernobyl, past practices) on  
   • Results of stress tests on WM and SFM facilities  
   • Management of large amounts of waste  
   • Decommissioning following severe accidents  
   • Other relevant issues for SGs such as confidence building. | Four committee members agreed to present national/institutional experiences |
| W.8.1   | DPP for DS468 approved to be sent to CSS for CSS approval. | Implemented  
The DPP for DS468 was sent to CSS32 and approved by CSS for starting its drafting |
| W10.5   | Provide initial position paper on CSM on Human Action & Intrusion in Disposal Facilities” to WASSC members | Requested documents were distributed to WASSC on 6 July 2012 |
| W10.6   | After finalization of development, provide copy of Assessment Tool for Peer Review in WM to WASSC members | In drafting process |
| W.11a)  | To draft a listing of available information on how the Member States apply the Safety Standards | Working material prepared and distributed before WASSC 34 |
| W.11.b) | Feedback from WASSC members on implementation of IAEA Safety Standards to be a standing item for the following meetings | Implemented  
Point W11.6 of WASSC34 draft Agenda |