NUCLEAR SAFETY STANDARDS COMMITTEE

(NUSSC)

Report of the 39th Meeting

30 June – 2 July 2015

International Atomic Energy Agency
Vienna
N.1. NUSSC SESSION – GENERAL ISSUES

N.1.1 Opening of the Meeting

Mr. G. Rzentkowski had recently taken over from Mr. J. Lyons as DIR-NS. He referred to:

- 8 IRRS “full-scope” missions and 5 IRRS “follow-up” missions conducted since the previous NUSSC Meeting;
- 2 OSART “follow-up” missions.

He highlighted several key points of the agenda.

N.1.2 Chairman’s Remarks

Mr. Fabien Feron, NUSSC Chairman, welcomed the SSCs Members and echoed the words of Mr Williams, WASSC Chairman, about the importance of the joint sessions to discuss and approve important Safety Requirements and Guides as well as Nuclear Security documents.

N.1.3 Adoption of the Agenda

The Agenda (Annex I to this report) of the 39th NUSSC Meeting, including common items with WASSC, was approved.

N.1.4 Approval of the Report of the 38th NUSSC Meeting

The report of the 38th NUSSC Meeting, including common parts with RASSC and WASSC, was approved.

N.1.5 Actions of NUSSC Meetings

The progress made on the implementation of the actions decided at the 38th NUSSC Meeting was presented. The actions were already completed or they were addressed during the meeting.

N.1.6 Dates of the next meeting: 40th NUSSC Meeting: 30 November – 4 December 2015

The dates of the 40th NUSSC Meeting were approved.
N.1.7 Prioritization of the review/revision of IAEA Safety Standards to reflect the Vienna Declaration

This item was introduced to the NUSSC Members by Mr. D. Delattre (SSCS-NS). As stated in the Vienna Declaration, which was adopted at the Diplomatic Conference, “The Contracting Parties to the CNS request the IAEA Director General to […] transmit this Declaration to the IAEA Commission on Safety Standards for its consideration with the four safety standards committees under its aegis, of the technical elements contained therein with a view to incorporating them as appropriate into the relevant IAEA Safety Standards […]”.

In order to take into account this conclusion, the Director General of the IAEA wrote to the President of CSS, so that CSS and the review committees implement this conclusion. In this context, the IAEA quickly carried out a gap analysis of the Safety Requirements, so that DS462 can be approved by the Board of Governors.

The IAEA reached the conclusion that the modifications induced by the Vienna Declaration were already implemented in the relevant Safety Requirements in the aftermath of the accident at the Fukushima Daiichi Nuclear Power Plant (DS462 covers GSR Part 1, GSR Part 4, NS-R-3, SSR-2/1 and SSR-2/2).

As regards the review and possible update of the Safety Guides in the aftermath of the accident at the Fukushima Daiichi Nuclear Power Plant, the IAEA introduced the prioritization plan and explained how this exercise would be combined with the Vienna Declaration. The current challenge is to ensure that the new requirements resulting from DS462 are well used in the Safety Guides. The question is not so much whether the Safety Guides will eventually be updated in order to be consistent with the Safety Requirements, but if such an update should be conducted in the short term.

The IAEA reminded the NUSSC Members that the update of several Safety Guides was already initiated:

- **DS479** Operating Experience Feedback for Nuclear Installations;
- **DS481** Design of the Reactor Coolant System and Associated Systems in Nuclear Power Plants;
- **DS482** Design of Reactor Containment Systems for Nuclear Power Plants;
- **DS483** Severe Accident Management Programme for Nuclear Power Plants;
- **DS484** Site Evaluation for Nuclear Installations;
- **DS485** Ageing Management and Programme for Long term Operation for Nuclear Power Plant;
- **DS487** Design of Fuel Handling and Storage Systems for Nuclear Power Plants;
- **DS489** Storage of Spent Nuclear Fuel;
- **DS490** Seismic Design and Qualification for Nuclear Power Plants; and
- **DS491** Deterministic Safety Analysis for Nuclear Power Plants.

The IAEA considered that other Safety Guides might need to be updated in the short term and that an evaluation on the need for such an update should be conducted:

- **SSG-25** Periodic Safety Review for Nuclear Power Plants (2013) (for confirmation);
- **NS-G-1.5** External Events Excluding Earthquakes in the Design of Nuclear Power Plants (2003);
- **NS-G-1.7** Protection against Internal Fires and Explosions in the Design of Nuclear Power Plants (2004);
- **NS-G-1.11** Protection against Internal Hazards other than Fires and Explosions in the Design of Nuclear Power Plants (2004);
- **NS-G-2.3** Modifications to Nuclear Power Plants (2001); and
- **NS-G-2.6** Maintenance, Surveillance and In-service Inspection in Nuclear Power Plants (2002).
In this context, the situation may be summarized as follows:

During the NUSSC Meeting, the following points were addressed:

- The need for the IAEA to conduct an analysis in order to determine whether an update would be necessary, by focusing on the account taken of the lessons learned from the accident at the Fukushima Daiichi Nuclear Power Plant and the Vienna Declaration. It was recalled that, in the past, such analyses always led to the conclusion that a revision was needed, even in the absence of lessons learned;

- The case of NS-G-1.5, already identified by NUSSC as a standard to be reviewed;

- The capacity of the IAEA and its Member States to conduct a number of updates at the same time. The IAEA stated that the workload was spread between several sections.

NUSSC requested the following:

- The conduct of an analysis on NS-G-1.5, NS-G-1.7 and NS-G-1.11, in order to determine whether they have to be updated or not. NUSSC stressed that the analysis would focus on the principles set out in the Vienna Declaration only.
N.1.8 Final Editing of five parts of DS462

This item was introduced by Mr. D. Delattre and Mr. D. Delves (SSCS-NS) for the information of the NUSSC Members. After the adoption of DS462 by the Board of Governors, the proofreading by the Publication Committee of the IAEA led to a few editorial changes. Two days prior to the NUSSC Meeting, the IAEA posted on the NUSSC website the files presenting these editorial changes and their reasons. These changes allowed significant improvements in the quality of safety norms, their subsequent translations and the consistency between safety norms.

The IAEA stressed that this had already happened in the past and that the presentation delivered was aiming at greater transparency. CSS will be informed of the above-mentioned changes. The latter were available in track changes mode in GSR Part 1, GSR Part 4, NS-R-3, SSR-2/1 and SSR-2/2. At the end of each document, a table highlights the reasons for the changes (consistency with GSR Part 3 or GSR Part 7, linguistic corrections or clarifications).

The IAEA stressed that it was very vigilant on the implementation of changes and that serious internal discussions took place at the IAEA (with Section Heads and Technical Officers). Therefore, some modifications desired by the Editors were not taken into account. The IAEA reminded the NUSSC Members that it only had two Technical Editors and that their review was a bottleneck.

NUSSC stated the following:

- NUSSC was surprised that modifications were still made in DS462, after its approval by the Board of Governors. NUSSC encouraged the IAEA to anticipate the review of documents by the Technical Editors;

- Given the communication of the changes to the NUSSC Members on very short notice, the NUSSC Members could not express their approval or disapproval. The NUSSC Members were given about fifteen days to consider the proposed modifications and, if necessary, raise questions.

N.2. NUSSC SESSION – REVIEW OF IAEA SAFETY STANDARDS

N.2.1 Status of IAEA Safety Standards (including TECDOCs and Safety Reports)

Mr M. Svab (NUSSC Scientific Secretary, NSNI) briefly introduced the progress made on the development of safety norms with regard to the fourteen development steps set out in SPESS. Documents at steps 2, 6 and 10 will be reviewed by NUSSC during its next meetings. The IAEA recalled the time frames for the consultation of NUSSC.

NUSSC confirmed the importance of this information.

Furthermore, the IAEA presented the progress made on TECDOCs and Safety Reports under development. It is the first time that such information is provided to NUSSC. A few questions were raised regarding the development process of TECDOCs, including the possible involvement of Member States. The IAEA referred to the development of a DPP, approved by the Coordination Committee of the IAEA. Experts were invited by the IAEA to draft the document.

Henceforth, the Member States will be informed of the development of a TECDOC by the IAEA.

NUSSC underlined the benefit for its Members to be informed of the development of TECDOCs.
It should be noted that the following safety norms were published since the previous NUSSC Meeting or were in the process of being published:

- **Updates of GSR Part 1, NS-R-3, SSR-2/1, SSR-2/2 and GSR Part 4 (DS462)**, approved by the Board of Governors in March 2015;
- **GSR Part 7** Preparedness and Response for a Nuclear or Radiological Emergency (DS457), approved by the Board of Governors in March 2015;
- Safety Guide on the Design of I & C Systems for Nuclear Power Plants (DS431), approved by the Publication Committee in December 2014;
- **SSG-33** Schedules of Provisions of the IAEA Regulations for the Safe Transport of Radioactive Material (2012 Edition);
- **SSG-35** Site Survey and Site Selection for Nuclear Installation;
- **SSG-37** Instrumentation and Control for Research Reactors.

The following graph shows the current situation in terms of safety norms:

![](image)

**N.3. NUSSC SESSION – MISCELLANEOUS**

**N.3.1 Information on the draft TECDOC Considerations on the Application of the IAEA Safety Requirements for Design of Nuclear Power Plants**

As stated by Mr. J. Yllera (NSNI), who presented the TECDOC to the NUSSC Members, the IAEA continues the drafting of the TECDOC gathering elements of understanding or interpretation about SSR-2/1. Consultancy meetings were organized for that purpose. Moreover, following the communication of this information to the previous CSS Meeting, a few countries issued comments on the TECDOC.

The IAEA reminded the NUSSC Members of the objectives set out in the TECDOC as well as the different topics addressed in this document:

- Plant States considered in the design (for reactor and SFP);
- Design Extension Conditions without and with fuel damage;
- Design basis of structures, system and components;
- Defence-in-depth (DiD) strategy for new plants;
- Independence of the levels of DiD and prevention of common cause failures;
- Concept of “practical elimination”;
- Design margins and cliff-edge effects;
- Design for external hazards (hazards exceeding the input from site evaluation);
- Use of mobile sources of electric power and coolant; and
- Reliability of the heat transfer to the ultimate heat sink.
The IAEA underlined that, despite the consultancy meetings and other presentations (INSAG forum, CSS…), at this stage, the TECDOC did not reflect the results of a large consensus process. Only Germany, Canada, the Republic of Korea, ENISS, the United States of America, France, India and Japan had issued comments on different versions of the TECDOC, once or several times.

Some NUSSC Members requested that the above-mentioned elements of understanding or interpretation, included in the draft TECDOC, be subject to information for NUSSC Members, and, possibly, that the IAEA receive guidance from NUSSC in that respect. The issues involved are:

- The meaning of the term “design basis” for installations;
- The levels of DiD and the case of DEC without core meltdown (levels 3a/3b or 4a/4b);
- The use of mobile equipment;
- The concept of practical elimination; and
- The list of examples of DEC without core meltdown.

N.3.2 Feedback on Regulatory Arrangements and Current Developments in NUSSC Member States (Finland)

STUK published its YVL Guides, a long time ago, in two collections: radioprotection and nuclear safety. The security aspects were directly addressed in these guides (as well as in the regulations to which they belong). The topics related to the management and protection of nuclear material (safeguards) and the emergency preparedness are also addressed in the regulations and in the guides on nuclear safety. Although emergency preparedness with regard to off-site actions is subject to a different regulation, STUK published guides on this matter, approved by the Minister of Home Affairs. The YVL Guides of STUK have a status equivalent to that of Regulatory Guides of US NRC.

In 2008, after the publication of a new Act on atomic energy as well as four decrees of the Government for its application, STUK started the update of all YVL Guides. The objectives were, in particular, to obtain more compact texts, to set out requirements – instead of presenting descriptions – and to take into consideration the safety norms of the American Institute of Electrical Engineers (AIEE) and the works of the Western European Nuclear Regulators Association (WENRA).

The main lines of this development process, including the internal reviews of STUK and the external reviews of the Technical Research Centre of Finland (VTT), for example, were introduced.
STUK also emphasized that it has an IT tool (requirement management system) in order to make the link between the requirements in YVL Guides, the legislation and the Finnish regulation, the European regulations and directives, the IAEA safety norms and the publications of WENRA.

At the beginning of 2016, STUK will have the power to issue regulations, i.e. binding technical requirements. Such requirements will be ready on 1 January 2016 in order to replace the four above-
mentioned decrees (which will be repealed on that date). STUK constituted the VALMA project to that end.

This project, approved at the end of March 2015, called on about twenty experts. Five working groups were established.

**N.4. NUSSC SESSION – CLOSURE OF THE MEETING**

**N.4.1 Conclusions**

The dates of the 41st NUSSC Meeting (second half of June 2016) and the 42nd NUSSC Meeting (end of November 2016) will be confirmed.

Mr F. Feron, NUSSC Chairman, thanked the participants for their productive work and closed the meeting.
NW.1. NUSSC/WASSC JOINT SESSION – GENERAL ISSUES

NW 1.1 Opening of the Meeting

The meeting was opened by Mr Denis Flory (DDG-NS) who welcomed all participants to Vienna and brought to them an update with a number of events that have taken place over the past months and to flag important upcoming meetings.

Mr Flory referred to the Diplomatic Conference to Consider a Proposal by Switzerland to Amend the Convention on Nuclear Safety (CNS) (hereinafter referred as “the Diplomatic Conference”), held in February 2015. He highlighted the Vienna Declaration on Nuclear Safety (hereinafter referred as “the Vienna Declaration”), adopted by consensus at the Diplomatic Conference and transmitted to the CSS and the four Safety Standards Committees (SSCs).

Mr Flory also denoted the Fifth Review Meeting of the Contracting Parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention), held in May 2015, the large number of overarching issues identified by Contracting Parties, including progress made and challenges, the main outcomes and decisions taken by Contracting Parties.

Mr Flory referred in addition to the release of the report on the accident at the Fukushima Daiichi Nuclear Power Plant, foreseen for the 59th regular session of the General Conference; to the creation of an Emergency Preparedness and Response Standards Committee (EPReSC); to the international conferences on Spent Fuel Management and Operational Safety, recently held; to the Seventh Organizational Meeting of the Contracting Parties to the CNS; and to upcoming international conferences to be held in the rest of 2015 and in 2016.

Mr Flory informed the committee members that this will be his last meeting with the SSCs, as he is leaving the Agency at the end of September 2015, and Mr Juan Carlos Lentijo will take over as DDG-NS as of 1 October 2015. He expressed his great pleasure and honor to have worked with all the four SSCs and the CSS.

NW 1.2 Chairmen’s Introduction

Mr Geoff Williams, WASSC Chairman, welcomed the NUSSC and WASSC Members, to discuss documents together and stressed the importance of the cross-fertilization of thoughts of the members of both SSCs. He noted that as all the documents in the joint agenda are led by NUSSC, all the approval sessions will be chaired by the NUSSC Chairman, while he will be chairing the intro, closing and general sessions.

Mr Fabien Feron, NUSSC Chairman, welcomed the SSCs Members and echoed the words of Mr Williams about the importance of the joint sessions to discuss and approve important Safety Requirements and Guides as well as Nuclear Security documents.
NW 1.3  Adoption of the Agenda

The Agenda (Annex II to this report) was adopted with the following amendments:

- Item NW.1.8 will be presented by Ms Svetlana Nestoroska Madjunarova instead of Ms Buglova;
- Item NW.2.2 will be presented for information and discussion and not for approval as originally foreseen.

NW 1.4  Administrative Arrangements

Mr Svab presented few administrative arrangements for the interest of NUSSC Members, just starting with their meeting, while there were no further administrative announcements for the WASSC Members.

NW 1.5  Report from the previous meeting of the Chairs

Mr F. Feron referred to the meeting of the Chairs of the SSCs and the Nuclear Safety Guidance Committee (NSGC), prior to the CSS meeting held in April 2015, and later on, to the meeting of the six Chairs, when the CSS Chair joined the discussion of the Chairs of the SSCs and NSGC. He noted that it is a very sound custom to meet all before the CSS meetings as it is a useful time to talk about the interfaces of the documents under elaboration and on topics of common interest. This time the topics on the agenda were:

- Candidacy of the EUR (European Utility Requirements) to be an observer organization during SSCs meetings: the role of EUR as observer was agreed after the clarification regarding its relation with ENISS. The representative of EUR, present at the meeting of NUSSC and WASSC was then welcomed.
- Creation of EPreSC: Mr Feron referred to discussions on several open questions that were made at that meeting. Now as the topic was decided, the questions were responded in the meantime.
- Vienna Declaration: Chairs agreed that the question of the impact of the Vienna Declaration on Safety Guides should be addressed;
- Office of Internal Oversight Services (OIOS) work: The main objective of the evaluation was to provide Member States and the Secretariat with independent and evidence-based findings, conclusions and recommendations with regard to the relevance, effectiveness, efficiency, impact and sustainability of the IAEA’s work on safety standards for operation of Nuclear Power Plants and Research Reactors. The report highlights the benefits of the SSs development process and identifies opportunities of improvement. The IT platform under development, would contribute to expedite many of the suggestions from OIOS.

NW 1.6  CSS 37th Meeting Report

Mr D. Delattre (SSCS-NS) presented the current status of the Agency Safety Requirements regarding the roadmap for the long term structure agreed in 2008; the status of endorsed Safety Standards, and the status of the whole system of Safety Standards. He also referred to the documents approved at the
CSS 37\textsuperscript{th} Meeting: Document Preparation Profiles (DPPs) for DS489, DS490, DS491 and DS492; Draft Standards for publication: DS447, DS448 and DS453. Mr Delattre also informed on policy discussions (establishment of EPReSC; and approaches on quantitative and qualitative standards and supporting publications) and actions resulting from the meeting.

NUSSC and WASSC Members discussed specifically the impact of the Vienna Declaration on the Safety Guides and noted the importance of Safety Guides on the design of reactor containment systems (NS-G-1.10, under revision by DS482) and the design of the reactor coolant system (NS-G-1.9, under revision by DS481). Some Members highlighted the importance of keeping in the picture of WASSC Safety Guides affected by the Vienna Declaration (DS489, DS468 and DS427) as they will have an impact on the full definition of the definition of the engineering objectives for the design of Nuclear Power Plants.


Mr D. Delattre briefed the committees on the status of development of the IT platform for Safety Standards and Nuclear Security Series Publications, currently under development. The main aim of this tool is to collect feedback from the users, avoid inconsistencies while revising documents that might have an impact one on other, and to ensure that the documents are revised only when justified. The tool will be also used to manage the content of the Safety Guides and will provide user friendliness.

Mr Delattre referred as well as to the history of development of this tool, back in 2013, when more than 500 topical areas covered by the Safety Standards were collated. After the analysis of duplication of topics, this list was shortly reduced to around 350 topics that will allow the management through the IT platform of all the content of the SSs. In the future, the Technical Officers should only deal with the content of them, as its format will be dealt by the specific software (DITA, Darwin Information Typing Architecture).

The platform will be placed in the NUCLEUS area. It will be possible to search, by publication title and by hierarchy, and will have multiple functionalities.

NUSSC and WASSC Members requested the following:

- the electronic version of the documents to be published: what would be their format (xml or pdf) and whether the paper version would still be published to keep stability in the Safety Standards;

- the process for approval the changes to be incorporated to the Safety Standards; recommending keeping the current multiple steps of review/revision by the SSCs and the CSS;

- the traceability of all changes through multiple versions of Safety Standards; committee members recommended that all paper copies should have a table with all changes incorporated.
NW 1.8 Establishment of a new Emergency Preparedness and Response Standards Committee (EPReSC)

Ms S. Nestoroska Madjunarova (IEC-NS) introduced the topic referring to the decision of the DDG-NS to establish EPReSC. The ultimate goal of this SSC is to strengthen the role of EPR subject matter experts in overall process for establishing IAEA Safety Standards, and to contribute to a greater coordination and consistency of EPR aspects within IAEA Safety Standards and to improve coordination of EPR topics between safety and security.

Ms Nestoroska Madjunarova referred to the history of this topic, back to 2004, when first discussions were held about the need of a specific committee to deal with this subject within the framework of the Action Plan for Enhancing International EPR and its endorsement in 2007 by the Meeting of the Competent Authorities under the Early Notification and Assistance Conventions. In 2013, an Emergency Preparedness and Response Expert Group (EPREG) was established to provide advice to DDG-NS in the area of EPR but the need to involve EPR subject matter experts in the process for establishment of IAEA Safety Standards remained. EPREG recommended to DDG-NS to establish EPReSC in 2014.

EPReSC will be responsible for the review and approval as a leading committee of the safety standards underpinning the Fundamental Safety Principle Number 9 on EPR. At present they include GSR Part 7, GS-G-2.1, GSG-2, and the two Safety Guides under development: DS474 and DS475. In addition, EPReSC will review and approve other Safety Standards having interface with EPR and will review nuclear security guidance with interface with EPR together with other SSCs and NSGC. This working interface will be identified as early as during the DPP preparation and approval.

Committee members discussed/looked for more information on the following:

- Date of the first meeting of EPReSC and the timeline for the nominations;
- What would be the process for the documents, particularly for those already being under development?

NW 2. NUSSC/WASSC JOINT SESSION – REVIEW OF IAEA SAFETY STANDARDS

NW 2.1 Draft Safety Requirements: Safety of Nuclear Fuel Cycle Facilities (revision of NS-R-5), DS478

DS478 was introduced by Mr R. Gater (NSNI). The DPP was approved mid-2014. Prior to the meeting, about 280 comments were received and about 30 of them were rejected. More than half of the comments were editorial comments. The table of the actions taken on the comments received and an updated version of DS478 were posted on the website of the IAEA prior to the meeting. The IAEA emphasized that RASSC and NSGC approved the consultation of Member States.

The Technical Officer addressed the main comments received: the use of the term “systems, structures and components” instead of “item important to safety”; the definition of “cliff edge effect” in the safety glossary; the role and independence of the Safety Committee (Requirement 6 and related requirements); the account taken of radioactive releases but also chemical/toxic releases (Requirement 27); the management of radioactive waste and effluents (Requirement 71) – the question whether the formulation was consistent with the one of Requirement 21 in SSR-2/2 arose; the adjustments to the
DiD principle against SSR-2/1; the account taken of Design Extension Conditions (Requirement 22); the establishment of the main safety functions (Requirement 7); criticality safety control during operation (Requirement 69); the status of Annex 3 (safety assessment methods) in the current version of NS-R-5; the interfaces with guides DS360 and DS381 under development and the point in delaying these documents until DS478 is finalized.

During the meeting, the discussions focused on:

- the interfaces with GSR Part 3 – for instance, Requirement 27 of DS478/ requirement 3.131 of GSR Part 3. It would be worthwhile to refer to GSR Part 3 without copying the requirements. The IAEA should check whether Requirement 27 is redundant with GSR Part 3;
- the scope of the document, not including reactors. Despite the statement in paragraph 1.3, it should be more explicit;
- the legal option for the IAEA to set out requirements on hazardous/chemical substances and not only on radiological risks;
- the value of offering flexibility on the analysis of DEC, as it would not be reasonable for some “small” installations – a few questions were asked in order to determine the meaning of DEC for fuel cycle installations, and a few examples were given during the meeting;
- the inclusion of Annex 3 in NS-R-5: according to the IAEA, it would be more relevant in a guide, as, at the level of the requirements, GSR Part 4 addresses this topic. The IAEA stressed its intention to develop a guide on this subject.

NUSSC and WASSC Members requested the following:

- Annex 3 of NS-R-5 should be removed from DS478. The IAEA should take a position on the necessity to develop a guide on the safety analysis of fuel cycle facilities;
- Requirement 22 on DEC should be adjusted in order to clarify that the identification requirement on DEC (and the establishment of related provisions) must be applied with careful consideration, i.e. by taking into account the installation challenges;
- Approval of DS478 for submission to Member States.

**NW 2.2 Draft Safety Requirements: Leadership and Management for Safety, DS456**

Ms H. Rycraft (NSNI) introduced DS456 to the audience. The DPP was approved at the end of 2011. The consultation of Member States took place at the end of 2013 and gave rise to a number of comments. Two consultancy meetings were organized in order to rework DS456. In fine, the IAEA extensively redrafted the document. Therefore, the IAEA did not make available to the SSCs a table summarizing the comments received from Member States and the actions to be taken on.

Prior to the meeting, more than 350 comments were received and two-thirds of them were accepted. At the beginning of the meeting, and following the refusal of RASSC to approve the document, the IAEA stressed that DS456 was introduced for information but not for approval. The IAEA stated that a table showing links between GS-R-3 and DS456 will be prepared for the next meetings of the SSCs. The IAEA insisted on the importance of a graded approach and on the fact that the requirements included in GS-R-3 would not be removed. Two days prior to the meeting, an updated version of DS456 was posted on the website of the IAEA. Several NUSSC and WASSC Members complained about this delay.
During the meeting, the following points were addressed:

- The real possibility to apply some requirements to small organizations. Several participants were concerned about the scope of DS456 and the relevance of this scope. The IAEA considered that medical exposure, which is the main source of public exposure, should not be excluded from the scope. The structure of the document could potentially be changed to distinguish the requirements applicable to all kinds of installations and those applicable to large installations;

- The point in conducting a new consultation of Member States given the number of changes in the version submitted for consultation to the Member States;

- The possibility of creating a NUSSC/ WASSC working group on DS456 in order to facilitate consensus on the document.

The different points of view expressed lead the IAEA to redraft the document with the support of NUSSC and WASSC Members. In order to have a new version available at the time of the next meetings of the SSCs, two planning scenarios were discussed. Following discussions, the following schedule has been adopted:

- 8 July 2015: designation of volunteers from NUSSC and WASSC;

- July/ August: provision of a comparative evaluation between GS-R-3 and DS456 by the IAEA;

- End of August 2015: comments from NUSSC and WASSC on the last version of DS456 (16 June 2015);

- 18 September: provision of the comments received to the group of experts and suggestion on actions to be taken on these comments;

- 5 – 7 October 2015: meeting of a Working Group;

- 26 October 2015: posting of the new version of DS456 on the website of the IAEA;

- November 2015: review for approval during the meetings of the SSCs.

The Scientific Secretary of RASSC underlined that, given the fact that the duration for the review of the “future” version of DS456 would be only one week, there was no guarantee that RASSC would approve the document.

NUSSC and WASSC Members requested the following:

- NUSSC and WASSC noted that the IAEA would continue developing DS456 and confirmed that the document could not be submitted to CSS at this stage;

- NUSSC and WASSC will transmit their comments on the version of DS456 posted online on 26 June 2015 to the IAEA, by 28 August 2015. NUSSC and WASSC noted that the IAEA will ask, for the same date, comments from RASSC, TRANSSC and NSGC;

- NUSSC and WASSC noted that the IAEA will provide a comparative table of GS-R-3 and DS456 at the end of July 2015;
NUSSC and WASSC decided to create a working group to address the comments received with the IAEA. Members of RASSC, TRANSSC and NSGC were welcome to contribute to this process.

Separately from WASSC, NUSSC had further discussions on the following topics:

- The graded approach is related to the concrete implementation of a requirement, and not to the applicability of this requirement. Therefore, the requirement must be written in a way conducive to an implementation proportionate to the challenges;

- Will small businesses be able to apply Requirement 7 (definition and implementation of an integrated management system)? For nuclear operators, the necessity to manage jointly safety and security requirements has become a topic where the management system must be better integrated;

- The requirements of DS456 are probably applicable to organizations of a certain size, with more than 10 persons. The difficulty seems to concern very small organizations/businesses, i.e. a few people, or even one person. An Annex could be included to explain how to apply the requirements. A similar approach could be consistent to address the case of organizations and businesses where nuclear activities are minor;

- The interfaces between management system, safety leadership and safety culture;

- The differences between the responsibilities of the operator (in a broad sense) and the management of the operator;

- The interfaces and synergies/differences between different evaluations (self-assessments, independent evaluations);

- The terms “management for safety” (Principle 3 of SF-1 uses “leadership and management for safety”) and their compatibility with the concept of integrated management system. This inconsistency, clear but groundless according to the IAEA, could be explained at the front of DS456.

NW 2.3 Draft Safety Guide on Safety of Nuclear Fuel Reprocessing Facilities (also to RASSC and NSGC), DS360

Mr R. Gater (NSNI) presented DS360 to the participants. The DPP was approved at the end of 2006. The consultation of Member States took place at the end of 2014. It gave rise to about 370 comments were received and most of them were accepted. Prior to the meeting, about 140 comments were received. The tables of the actions taken on the comments were posted online before the meeting. The IAEA briefly introduced the comments received and the follow-up given to these comments. The IAEA described the comments that were rejected in detail and some changes included in DS360 in order to take the comments from India into account.

There was no updated version of DS360 available during the meeting and, thus, it was not possible to verify the implementation of the comments. The IAEA pointed out that an updated version of DS360 would be posted online in the week after the meeting.

NUSSC and WASSC approved DS360 for submission to the CSS.
NW 2.4 Draft Safety Guide: Safety of Nuclear Fuel Cycle Research and Development Facilities, DS381

Mr R. Gater (NSNI) also introduced DS381 to the participants. The DPP was approved in 2006. The consultation of Member States took place in 2014 and gave rise to nearly 120 comments, almost all accepted. Prior to the meeting, about 120 comments were received and all were accepted apart from a few exceptions. The tables introducing the follow-up to the comments and an updated version of DS381 were posted on the website of the IAEA before the meeting. The IAEA briefly introduced the comments received and the actions taken on these comments. It described in detail the rejected comments, as well as some changes made to take accepted comments into account.

NUSSC and WASSC approved DS381 for submission to the CSS.

NW 2.5 Draft Safety Guide: Communication and Consultation with Interested Parties by the Regulatory Body, DS460

DS460 was introduced by Mr J.-R. Jubin (NSNI). The DPP was approved at the end of 2012. The consultation of Member States took place during the second semester 2014 and gave rise to more than 150 comments, three-quarters of which were accepted. Prior to the meeting, about 20 comments were received. The table of the actions taken on the comments and the updated version of DS460 were posted on the website of the IAEA before the meeting. The Technical Officer stressed notable comments.

During the meeting, the discussions focused on the involvement of interested parties of neighbouring States (paragraph 2.11). Some members considered that the wording used was not sufficient and that it should be strengthened so that consultations of neighbouring countries take place under equivalent conditions as in the country where the installation is located. Following discussions, consensus was reached on the following wording: “Consider international relations and in particular transboundary relations with neighbouring countries. In this respect, together with the competent national authorities, the regulatory body should explore the possibilities of involving the interested parties of neighbouring States as appropriate.”

NUSSC and WASSC approved DS460 for submission to the CSS, as modified in the joint session.

NW 2.6 Draft Safety Guide: Organization, Management and Staffing of a Regulatory Body, DS472

DS472 was presented to the participants by Ms A. Nicic (NSNI). The DPP was approved at the end of 2013. Prior to the meeting, more than 160 comments were received, two-thirds of which were accepted. The table introducing the follow-up to the comments and an updated version of DS472 were posted on the website of the IAEA before the meeting. The IAEA introduced the main comments received and their impact on DS472.

During the meeting, the following points were discussed:

- The consistency of DS472 with DS456, still under development;

- The inspections in facilities dedicated to the manufacture of nuclear equipment (paragraph 4.14). Questions were raised regarding the scope of such inspections as well as the starting point of the capacity to inspect. DS472 will have to be made more consistent with GSR Part 1;
- The understanding of paragraph 4.7, including the fact that there are general regulatory requirements even though the authorization has not been issued yet – and the objective pursued by authorizing an activity. The text will be modified, for example: “The objective of granting authorizations is for the regulatory body to further establish effective regulatory control” or “The objective of granting authorizations is for the regulatory body to exercise effective regulatory control”.

NUSSC and WASSC approved DS472 for submission to the Member States.

**NW 2.7 Draft Safety Guide: Regulatory Body Functions and Processes, DS473**

DS473 was introduced by Mr G. Jones (NSNI). The DPP was approved at the end of 2013. Prior to the meeting, more than 300 comments were received, two-thirds of which were accepted. The table of the actions taken on these comments and an updated version of DS473 were posted on the website of the IAEA before the meeting. The IAEA presented the main comments received and their impact on DS473.

NUSSC and WASSC approved DS473 for submission to the Member States.

**NW 2.8 Draft Safety Guide: Severe Accident Management Programme for Nuclear Power Plants, DS483**

Mr M. Kim (NSNI) introduced DS483 to the audience. The DPP was approved at the beginning of 2014 after the Safety Guide NS-G-2.15 (published in 2009) was selected for pilot review by the CSS, in order to assess the impact of changes to Safety Requirements in the aftermath of the accident at the Fukushima Daiichi Nuclear Power Plant and to incorporate its lessons learned with respect to severe accident management. Prior to the meeting, nearly 290 comments were received and practically all of them were accepted. The table of the actions taken on these comments and an updated version of DS483 were posted on the website of the IAEA before the meeting.

During the meeting, the discussions focused on:

- The change of title of DS483 by deleting “severe”;

- The fact that the annexes address the experience feedback from SAMG in Germany, France and the United States of America, but not in Japan. The Japanese representative stated that Japan will suggest an annex during the consultation of the Member States;

- The fact that the approaches called “FLEX” (Flexible Coping Strategies) and “EMDGs” (extensive damage mitigation guidelines) of the United States of America were mentioned in a footnote only;

- The interface between EOP and SAMG and the time of the rollover. The IAEA stated that the text was modified in the latest version of DS483;

- The link between extreme external events and external hazards in paragraph 2.1. The extreme hazards are related to the SAMG, whereas the scaling related hazards should not lead to an accident. Paragraph 2.1 and the relevant footnote should be revised;

- The changes made to paragraph 1.8 in order to put emphasis on existing installations (“primarily for existing nuclear power plants”) and paragraphs 1.10 and 2.5. The original text of paragraph
1.8 will be kept, by stressing however that some recommendations are more consistent for existing installations.

NUSSC and WASSC approved DS483 for submission to the Member States, provided that the comments expressed in session are taken into account. The initial title will be kept and paragraphs 1.8 and 2.1 will be revised.


Mr A. Polyakov (NSNI) presented DS485 to the participants. The DPP was approved at the end of 2014. It aims at updating the Safety Guide NS-G-2.12 (published in 2009) and expanding its scope for maintaining safety during long term operation (LTO). It is related to Requirement 14 (ageing management) and Requirement 16 (programme for LTO) of SSR-2/2. Prior to the meeting, more than 200 comments were received and 80% were accepted. The table showing the follow-up to the comments and an updated version of DS485 were posted on the website of the IAEA before the meeting.

During the meeting, the following points were discussed:

- The possible confusion between ageing management and LTO. Ageing management is necessary from the start of the operation (and even during the design), not only within the framework of an LTO;

- The reference to TECDOC 1736 (IAEA, Approaches to Ageing Management for Nuclear Power Plants, International Generic Ageing Lessons Learned (IGALL) Final Report) which could appear in a footnote. NUSSC supported this option.

NUSSC and WASSC approved DS485 for submission to the Member States. TECDOC 1736 will be mentioned. NUSSC and WASSC drew attention to the need to dispel ambiguity on the fact that ageing management must occur well before any considerations for an LTO.

NW 3. NUSSC/WASSC JOINT SESSION - REVIEW OF DOCUMENT PREPARATION PROFILES (DPPs) – SAFETY STANDARDS


Mr P. Villalibre (NSNI) introduced the document to the audience. The aim of this DPP is to enable the revision of GS-G-4.1 (2004). A first version of this DPP was discussed in 2010, during the 29th NUSSC Meeting and was not approved. A new version of the DPP was prepared by the IAEA. It aims at taking into account the update of Safety Requirements published over recent years (GSR Part 1, GSR Part 4, NS-R-3, SSR-2/1, SSR-2/2 …), in particular to take into account the lessons learned from the accident at the Fukushima Daiichi Nuclear Power Plant. The IAEA stressed that the guide will comprise, at the front, a paragraph stating that it can also be used to define the content of safety reports of other nuclear installations.

Prior to the meeting, about 40 comments were received. RASSC and NSGC approved the DPP.
During the meeting, the discussions focused on:

- The reasons questioning the previous decision of NUSSC. The IAEA pointed out that a guide on the content of the SAR of research reactors (SSG-20) was available;

- A few differences with the Regulatory Guide 1.70 “Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants” issued by US NRC;

- The account taken of publications from the NSGC series. The IAEA stated that NSGC paid particular attention on this point;

- The annexes (Safety Analysis Report development in the course of the Nuclear Power Plant project evolution; Description of plant design systems). The first one was about the different versions of the safety report. Regarding the second one, questions were raised about the possibility to remain neutral technologically;

- The effective consideration of deterministic and probabilistic analyses as well as DEC (including serious accidents);

- The types of recommendations that could appear in the part “human factors engineering”;

- The link with environmental impact assessment.

NUSSC and WASSC approved the DPP of DS449.

NW.4. SECURITY SERIES DOCUMENTS FOR CLEARANCE


Ms R. Evans (NSNS) presented the document to the audience and reminded the participants of the scope of NST002. About 20 comments were received prior to the meetings of the SSCs, but none of them were from NUSSC or WASSC Members.

RASSC and NSGC approved NST002 for publication.

NW 4.2 Draft Implementing Guide: Physical Protection of Nuclear Material and Nuclear Facilities, NST023

The document was introduced by Mr M. Khaliq (NSNS). The aim of this guide is to issue recommendations for the application of NSS-13/ INFCIRC/ 225/ Rev. 5 (theft of nuclear material or sabotage of installations receiving nuclear material). The development of the guide started mid-2012. Six consultancy meetings and one Technical Meeting were held to draft this document. The consultation of Member States took place mid-2014 and gave rise to 160 comments, the majority of which was issued by the United States of America. The document was updated. The IAEA stated that about 20 comments were received prior to the meetings of the SSCs, but not from NUSSC or WASSC Members.

NSGC gave its consent for the publication of NST023.
NW 4.3 Draft Implementing Guide: Building Capacity for Nuclear Security, NST009

Ms N. Bakri (NSNS) presented the document to the participants. The development of NST009 started mid-2013. Four consultancy meetings took place for drafting this guide.

NUSSC and WASSC approved NST009 for submission to the Member States.

NW 5. NUSSC/WASSC JOINT SESSION - MISCELLANEOUS

NW 5.1 Feedback from the Diplomatic Conference to Consider a Proposal by Switzerland to Amend the Convention on Nuclear Safety

Mr M. Svab (CNS Coordinator, NSNI) reported to WASSC and NUSSC on the outcomes of the Diplomatic Conference. Mr Svab also informed on the preparatory phase of the Diplomatic Conference, that included the preparation of the set of rules and procedures for organizing the Diplomatic Conference, a consultation meeting open to all Contracting Parties, held in October 2014.

To facilitate preparations for the Diplomatic Conference, an Informal Working Group (IWG) was established, chaired by Ambassador Grossi, from Argentina. Eight IWG meetings were organized during the period from July 2014 to February 2015. During these meetings, Contracting Parties discussed draft rules of procedure, related organizational issues, and the substance of the Swiss Proposal.

The main outcome of the Diplomatic Conference was:

“Contracting Parties concluded that it would not be possible to reach consensus on the proposed amendment”.

The Contracting Parties to the CNS developed and adopted, by consensus, the Vienna Declaration, published as INFCIRC/872, with the following key principles to guide them, as appropriate, in the implementation of the objective of the CNS to prevent accidents with radiological consequences and mitigate such consequences should they occur:

- “New nuclear power plants are to be designed, sited, and constructed, consistent with the objective of preventing accidents in the commissioning and operation and, should an accident occur, mitigating possible releases of radionuclides causing long-term off site contamination and avoiding early radioactive releases or radioactive releases large enough to require long-term protective measures and actions.

- Comprehensive and systematic safety assessments are to be carried out periodically and regularly for existing installations throughout their lifetime in order to identify safety improvements that are oriented to meet the above objective. Reasonably practicable or achievable safety improvements are to be implemented in a timely manner”.

In addition, the Contracting Parties to the CNS requested the IAEA Director General to “Transmit this Declaration to the IAEA Commission on Safety Standards for its consideration with the four safety standards committees under its aegis, of the technical elements contained therein with a view to incorporating them as appropriate into the relevant IAEA Safety Standards”. 
Mr Svab reminded the audience of the schedule of the preparations for the Seventh Review Meeting of the Contracting Parties to the CNS, which will take place from 27 March to 7 April 2017. Further references can be found in the dedicated web page.

Members of the SSCs looked further clarification on the following topics:

- Do Review Meetings need to be more technical? Do questions need to be more technically detailed? Does the National Report be more detailed? Does the template for National Reports preparation need to be amended for such reason? Can the IAEA’s Safety Requirements be used to report on the implementation of the relevant CNS articles? Does the objective of the Vienna Convention, to be applied voluntarily to prepare National Reports?

Responses to these questions are mainly pointing to the fact that the Vienna Convention was conceived to help the Contracting Parties to ensure the completeness of their National Reports and to make the review of the NRs much easier.

- Does the Vienna Convention imply the need to review the SSs just approved at past CSS meeting?

As explained earlier by the CSS Scientific Secretary, that the Secretariat provided information to the CSS38 led to the conclusion that the Safety Requirements had addressed the topics in an appropriate manner and that the Vienna Convention should be dealt at the level of Safety Guides.

**NW 5.2 Feedback from the Fifth Review Meeting of the Joint Convention**

Ms G. Siraky (JC Coordinator, NSRW) presented the Secretariat’s Report on the Fifth Review Meeting of the Contracting Parties to the Joint Convention, held in Vienna, from 11 to 22 May 2015.

The Joint Convention has a steady increase of Contracting Parties since it entered into force. Currently the number of Contracting Parties is 69 and 61 has attended for Fifth Review Meeting. The meeting President was Mr David Huizenga, from USA. Mr Philipe Jamet, from France and Mr Myung Song, from ROK, were the Vice-Presidents.

At the opening of the Review Meeting on 11 May 2015, IAEA Deputy Director General Denis Flory, head of the Department of Nuclear Safety and Security, called on countries that have not done so to sign the Joint Convention to help enhance global nuclear safety. Contracting Parties echoed that call, encouraging IAEA Member States to join the Joint Convention and recommending future actions aimed at strengthening the review process, according to Mr Huizenga’s opening statement.

More than 600 delegates participated in the meeting. The Country Group sessions for the peer review of National Reports were conducted in seven country groups, in parallel sessions led by 28 Officers: Chairpersons, Vice-Chairpersons, Rapporteurs and Coordinators. 65 National Reports were reviewed and Rapporteurs Reports were prepared and agreed at each session, summarizing the discussions, relevant points, challenges and positive developments.

The final plenary sessions had devoted to the discussions of the outcomes of the Open-Ended Working Group (OEWG) sessions, a topical session on RW and SF Management after accidents, discussions on overarching issues, as identified at Country Groups and reported in plenary by the Rapporteurs, and agreement on the Summary Report. This report registers general observations, the progress since the Fourth Review meeting, the lessons learnt from the FDA, the measures to improve safety, good practices and overarching issues identified and main conclusions. The Summary report of the meeting is available at the dedicated web page.
The conclusions of the meeting were the following:

- The Joint Convention process of reporting and peer review continues to highlight progress and remaining challenges. It was evident at the Fifth Review Meeting that participating Contracting Parties are working towards enhancing the level of safety in radioactive waste and spent fuel management.

- The number of Contracting Parties increased from 63 to 69 since the Fourth Review Meeting. The number of Contracting Parties to the Joint Convention is still not commensurate with the number of countries having radioactive waste.

- Constructive discussions and sharing of knowledge took place in a frank and open manner and Contracting Parties recognized the importance of the Joint Convention peer review process. However, the Contracting Parties noted that a robust peer review process requires full and active engagement by all Contracting Parties.

- Several Contracting Parties did not provide National Reports to the Joint Convention Review Meeting, did not participate in the questions and answers process, and did not attend the Review Meeting.

- In light of the issues raised after the OEWG discussions the Contracting Parties requested the President of the Fifth Review Meeting to take certain steps to encourage adherence to, and active participation in, the Joint Convention and to further explore other possible steps in this regard.

- Detailed assessments of the national situations in the aftermath of the accident at the Fukushima Daiichi Nuclear Power Plant were carried out by many Contracting Parties. Where relevant, the recommendations arising from these assessments are being implemented in order to improve safety.

- International peer review missions are being widely used and are regarded as an effective process to strengthen the national framework and infrastructure for nuclear and radiation safety. Contracting Parties acknowledged the importance of hosting such missions on a regular basis and were encouraged to make the results of these missions publically available. The voluntary nature of relevant national decisions was underlined.

- The Contracting Parties decided by consensus to hold an Extraordinary Meeting prior to the Sixth Organizational Meeting of the Contracting Parties to the CNS. The agenda of this meeting will include, among other items, the discussion of the conclusions of inter-sessional work agreed as a result of the OEWG.

- The Contracting Parties agreed that National Reports for the next Review Meeting should, as appropriate, address the following:
  - Staffing, staff development, reliability of funding, and other human resource areas;
  - Maintaining or increasing public involvement and engagement on waste management, to provide public confidence and acceptance;
  - Developing and implementing a holistic and sustainable management strategy for radioactive waste and spent fuel at an early stage; and
Management of disused sealed sources.

The Director General, Mr Amano, closed the meeting on 22 May 2015. Mr Amano highlighted the following: "The Joint Convention plays an essential role in the establishment of a comprehensive global nuclear safety and security framework. I look forward to the day when all IAEA Member States are Contracting Parties and participate fully in the review process. The IAEA will do what it can to help achieve this goal."

Ms Siraky also provided the schedule of meetings and deadlines, as agreed by Contracting Parties ahead of the Sixth Review Meeting and the future steps agreed:

- Meetings of Contracting Parties to discuss implementation of the recommendations of the OEWG regarding, in particular,
  - means to improve participation and accession to JC processes; and
  - to organize the topical meeting.
- To held the Topical meeting to discuss safety challenges of SF&RW disposal in another country, preferable in 2016.

NW 5.3 2015 IAEA Operational Safety Conference – Insights on Nuclear Power Plant Operational Safety Standards

Ms V. Rangelova (OSS-NSNI) provided an overview of the International Conference on Operational Safety of Nuclear Power Plants, held in Vienna, in June 2015, with the objective to review the state-of-the-art in operational safety and generate new ideas to facilitate safety improvements worldwide. More than 200 participants from 50 Member States attended the meeting, with representatives from Nuclear Power Plants, utilities, corporate organizations, regulators and technical support organizations.

The conference was structured in six sessions with presentations, panel discussions and poster sessions. The sessions were on: International Operational Safety Peer Reviews, Corporate Management of Safety, Post-Fukushima Operational Safety Improvements, Operating Experience, Leadership and Safety Culture, and Long Term Operation.

The main conclusions from the conference were summarized as:

- International Peer Reviews are a powerful tool for safety improvement. Regulatory Inspections, OSART and WANO peer reviews are essential elements of the global nuclear safety governance. Both IAEA and WANO have taken actions to strengthen their services to help prevent plant accidents.

- Independent safety oversight was developed and implemented for many plants as result from the international peer reviews

- Ensuring actual implementation of the Operational Experience Feedback could be further improved, mechanisms for exchanging data on the implementation shall be sought

- Systemic approach to safety and practical applications of safety culture improvements were reported throughout the industry and regulators
- Long Term Operation – life beyond 60 years – different approaches in the Member States; no technological reasons why this cannot be done have been identified based on R&D to date.

The following conclusions on Peer Reviews were identified:

- An IAEA/WANO working mechanism to communicate and coordinate different international peer review services shall be established to ensure an effective way of performance of peer reviews and to allow plants to optimize the use of their resources

- The IAEA and WANO in cooperation with the nuclear power plant operating countries are encouraged to develop a long term planning for OSART and WANO missions to minimise duplications and ensure that resources are used to the best interests of all stakeholders

- Increased number of international peer reviews. WANO has made significant and commendable efforts to enlarge and strengthen its peer review programme and to “design-informed” its assessment methodology.

- OSART missions as planned by IAEA Action Plan for Safety are not yet completed by all Member States. IAEA recent developments to review and update the OSART methodology in the aftermath of the accident at the Fukushima Daiichi Nuclear Power Plant are acknowledged and shall be followed by revision of the IAEA Operational Safety Guides.

Regarding the revision of the IAEA SSs on operational safety, it was concluded that most of them were developed in the period 2000-2005 and need review following the latest updates of the Safety Requirements after the FDA. This review will have to take into consideration:

- the experience gained with the application of safety standards, e.g. from Member States and from OSART missions;
- the revisions implemented in some of the other safety standards and, in particular, the amendment of the IAEA Safety Requirements undertaken in the aftermath of the accident at the Fukushima Daiichi Nuclear Power Plant ; and
- State-of-the-art in operational safety, eg. consider improvements which have been implemented at many Nuclear Power Plants worldwide.

Ms Rangue lova informed the SSCs that the 9 Safety Guides in the operational safety field (NS-G-2.1 to NS-G-2.8 and NS-G-2.14) will be reviewed in parallel, starting with a Technical Meeting to Review the IAEA Safety Guides on Nuclear Power Plant Operational Safety, from 16 to 20 November 2015. Ms Rangue lova invited NUSSC and WASSC Members to submit nominees to attend the TM.

NW 5.4 Overview on the 2015 International Conference on the Management of Spent Fuel

Mr G. Bruno (WES-NSRW) reported on the International Conference on Management of Spent Fuel from Nuclear Power Reactors: an integrated approach to the back-end of the Fuel Cycle, held in Vienna in June 2015. This conference is held regularly, every 3-5 years, since about 1998 and organized jointly by the Departments of Nuclear Energy and Nuclear Safety and Security of the IAEA.
The conference President was Ms Fiona Rayment (UK) and Mr Amano, IAEA’s Director General, provided opening remarks. Mr Magwood, Director General of the OCED –NEA, gave an opening presentation.

The conference objectives were:

- To raise awareness on how developments in power generation and availability of final disposal can impact on spent fuel management;
- To highlight the progress achieved in connection with the back end of the nuclear fuel cycle as well as associated challenges;
- To present recent developments in technology, regulatory framework and safety aspects;
- To evaluate the advances in management of spent fuel from power reactors since the inception of IAEA conferences on this topic; and
- To identify pending issues and anticipated future challenges.


Regarding statistics, there were 207 registered participants from 39 Member States, from them, 67 participants were from developing Member States and 5 Organizations.

There were 78 presentations, within them, 7 were invited and 4 keynote speakers, from 19 Member States and 4 International Organizations; in addition, there were 7 poster presentations.

The Keynote addresses covered the following topics:

- A holistic view of the nuclear fuel cycle (Mr Magwood, OECD);
- Safety and technological aspects of SFM (Mr Le Bars, France);
- Influence of the end point on SFM (Mr Swift, USA); and
- Influence of fuel design and reactor operation on SFM (Mr Yim, RoK)

The invited presentations covered these matters:

- Nuclear power and fuel cycle options for Jordan;
- Spanish strategy for the management of spent fuel – ATC project;
- Deep geological disposal of spent fuel in Sweden;
- Spent fuel storage at the Fukushima Daiichi Nuclear Power Plant;
- Managing ageing effects on dry cask storage systems for extended long term storage and transportation of used fuel;
• Magnox reprocessing plant 50 years on;
• The French nuclear fuel cycle: Current status and possible future solutions.

The main conclusions of the conference were summarized as:

- Effective public engagement will be key to success;
- There is a need to look at the back-end of the fuel cycle in a holistic, fully integrated manner,
  - Difficulty in designing for an end-point when this is an unknown;
- Target dates for geological disposal programmes vary,
  - Progress in a few countries is applauded / results are awaited,
  - Opportunity to learn from those currently developing GDFs;
- “Wait and see” approach results from the pending decision on reprocessing versus direct disposal;
- Multinational approaches to spent fuel management find a lot of interest (but no host country for a repository),
  - Countries should be committed to a clear pathway as this is important to industry and for public confidence;
- Duration of storage is often extended to beyond the original licensed or design life,
  - Importance of ageing management has become a priority since the last conference,
  - Guidance for ageing management and supporting R&D are being developed to ensure continued safety,
  - Long time frames involved require good understanding of the fuel behaviour within storage, transport after storage and disposal,
  - A lot of effort was presented which was and is going to be undertaken in order to understand the ageing mechanisms in order to be able to judge on the extension of time frames for storage;
- Polarised national views on spent fuel management: Wet versus dry storage; centralised versus local storage; reprocessing versus direct disposal,
  - Managing storage capacity is a key focus and vendors are providing a range of products in response to customer’s needs;
- Knowledge management and the skills to deliver are essential with the long time periods involved; especially in relation to the ‘ageing profile’ of regulators, operators, etc.;
- Recalled the importance of safety in the management of spent nuclear fuel – should this be necessary.
NW.6. NUSSC/WASSC JOINT SESSION - CLOSURE OF THE MEETING

NW 6.1 Conclusions of the Joint Session

Mr F. Feron and Mr G. Williams emphasized the effectiveness of the approval process of Safety Standards as well as the clearance of Security Guidance documents during joint sessions. This also brings the opportunity of cross-fertilization of ways of thinking and gives the opportunity to know better each community member.

NW 6.2 Closing

Mr F. Feron and Mr G. Williams closed the meeting thanking the SSCs Members for their contribution and wishing them a safe and good trip back home.
## ANNEX I TO THE NUSSC REPORT:

### AGENDA

**39th Meeting of the Nuclear Safety Standards Committee (NUSSC)**

30 June 2015  
VIC, C Building, Room C4

Tuesday, 30 June 2015, at 9:00 a.m. (till lunch time)

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| N1.2 Chairman ’s Remarks          | F. Feron |
| N1.3 Adoption of Agenda           | For approval  
|                                   | NUSSC Members |
| N1.4 Approval of the Report of the 38th NUSSC Meeting | For approval  
|                                   | NUSSC Members |
| N1.5 Actions of NUSSC Meetings    | For information  
|                                   | M. Svab |
| N1.6 Dates of the next meeting:   | For approval  
| 40th NUSSC Meeting: 30 November – 4 December 2015 | NUSSC Members |
| N1.7 Prioritization of the review/revision of IAEA Safety Standards to reflect the Vienna Declaration | For information and discussion  
|                                   | D. Delattre  
|                                   | NUSSC Members |
| N1.8 Final Editing of five parts of DS462 | For information  
|                                   | D. Delattre  
|                                   | D. Delves |

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|                                   | M. Svab |

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| N3.1 Information on the draft TECDOC Considerations on the Application of the IAEA Safety Requirements for Design of NPPs *) | For information  
|                                   | J. Yllero |
| N3.2 Feedback on Regulatory Arrangements and Current Developments in NUSSC Member States (Finland) | For information  
|                                   | NUSSC Members |
N4. NUSSC SESSION - CLOSURE OF THE MEETING

N4.1 Conclusions

F. Feron
NUSSC Chairman

*) The NUSSC volunteers will meet on Friday, 3 July, morning to discuss the TECDOC related technical topics which should be clarified. It is expected the discussion should finish by 12:00, at the latest.
## ANNEX II TO THE NUSSC REPORT:

### 39th Meeting of the Nuclear Safety Standards Committee (NUSSC)
### 39th Meeting of the Waste Safety Standards Committee (WASSC)

**30 June – 2 July 2015, Vienna**

*Boardroom C1, Building C, Second floor*

**Tuesday, 30 June 2015, at 14:00 – Thursday, 2 July 2015, 17:00**

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| NW 3.1 | DS449 DPP | Draft Safety Guide: Format and Content of the Safety Analysis Report for Nuclear Power Plants (also to RASSC and NSGC) | P. Villalibre |

| NW 4. | NUSSC/WASSC JOINT SESSION - NSGC DOCUMENTS FOR CLEARANCE |
| NW 4.1 | NST002 | Draft Implementing Guide: Regulations and Associated Administrative Measures for Nuclear Security (also to RASSC, TRANSSC and NSGC) | R. Evans |
| NW 4.2 | NST023 | Draft Implementing Guide: Physical Protection of Nuclear Material and Nuclear Facilities (also to RASSC and NSGC) | M. Khaliq |
| NW 4.3 | NST009 | Draft Implementing Guide: Building Capacity for Nuclear Security (also to RASSC, TRANSSC and NSGC) | N. Bakri |

| NW 5. | NUSSC/WASSC JOINT SESSION - MISCELLANEOUS |
| NW5.1 | Feedback from the Diplomatic Conference to Consider a Proposal by Switzerland to Amend the Convention on Nuclear Safety | For information | M. Svab |
| NW5.2 | Feedback from the 5th Review Meeting of the Joint Convention | For information | G. Siraky |
| NW5.3 | 2015 IAEA Operational Safety Conference – Insights on NPP Operational Safety Standards | For information | V. Rangelova |
| NW5.4 | Overview on the 2015 International Conference on the Management of Spent Fuel | For information | G. Bruno |

**NW 6. NUSSC/WASSC JOINT SESSION - CLOSURE OF THE MEETING**

| NW 6.1 | Conclusions of the Joint Session | F. Feron/ G. Williams |
| NW 6.2 | Closing | F. Feron/ G. Williams |
## Dates of future meetings:

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<th>Meeting</th>
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<tr>
<td>40th WASSC Meeting</td>
<td>2 – 6 November 2015</td>
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<tr>
<td>8th NSGC Meeting</td>
<td>2 – 6 November 2015</td>
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<td>39th RASSC Meeting</td>
<td>4 – 6 November 2015</td>
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<td>31st TRANSSC Meeting</td>
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<td>38th CSS Meeting</td>
<td>9 - 13 November 2015</td>
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<tr>
<td>40th NUSSC Meeting</td>
<td>30 November – 4 December 2015</td>
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## NUSSC SEPARATE SESSION

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<th>ITEM AG</th>
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| N 1.7   | Prioritization of the review/revision of IAEA Safety Standards to reflect the Vienna Declaration on Nuclear Safety  
An analysis of NS-G-1.5, NS-G-1.7 and NS-G-1.11 should be conducted in order to determine whether these standards have to be updated or not in light of the principles set out in the Vienna Declaration. | IAEA Secretariat |
| N 1.8   | Final Editing of five parts of DS462  
Given the communication of the changes to NUSSC Members on very short notice, NUSSC could not express its approval or disapproval on DS462. NUSSC Members were given about 15 days to consider the proposed modifications and, if necessary, raise questions. | NUSSC Members |
## JOINT NUSSC/WASSC SESSIONS

<table>
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<tr>
<th>ITEM AG</th>
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| NW 2.1  | DS478 Draft Safety Requirements: Safety of Nuclear Fuel Cycle Facilities (revision of NS-R-5)  
(also to RASSC, TRANSSC and NSGC)  
Approved for submission to Member States for comment | TO                      |
| NW 2.2  | DS456 Draft Safety Requirements: Leadership and Management for Safety  
(also to RASSC, TRANSSC and NSGC)  
A working group, including NUSSC and WASSC Members, should take place to help the IAEA redraft part of the document according to the comments made during the joint session. | TO and IAEA Secretariat |
| NW 2.3  | DS360 Draft Safety Guide on Safety of Nuclear Fuel Reprocessing Facilities (also to RASSC and NSGC)  
Approved for submission to CSS | TO                      |
| NW 2.4  | DS381 Draft Safety Guide: Safety of Nuclear Fuel Cycle Research and Development Facilities  
(also to RASSC and NSGC)  
Approved for submission to CSS | TO                      |
| NW 2.5  | DS460 Draft Safety Guide: Communication and Consultation with Interested Parties by the Regulatory Body  
(also to RASSC, TRANSSC and NSGC)  
Approved for submission to CSS | TO                      |
| NW 2.6  | DS472 Draft Safety Guide: Organization, Management and Staffing of a Regulatory Body  
(also to RASSC, TRANSSC and NSGC)  
Approved for submission to Member States for comment | TO                      |
| NW 2.7  | DS473 Draft Safety Guide: Regulatory Body Functions and Processes  
(also to RASSC, TRANSSC and NSGC) | TO                      |
| NW 2.8 | Approved for submission to Member States for comment |
| NW 2.8 | DS483 Draft Safety Guide: Severe Accident Management Programme for Nuclear Power Plants (also to RASSC and NSGC) |
| NW 2.9 | Approved for submission to Member States for comment |
| NW 2.9 | DS485 Draft Safety Guide: Ageing Management and Programme for Long Term Operation for Nuclear Power Plants |
| NW 3.1 | Approved for submission to Member States for comment |
| NW 3.1 | DS449 DPP Draft Safety Guide: Format and Content of the Safety Analysis Report for Nuclear Power Plants (also to RASSC and NSGC) |
| NW 3.1 | Approved for submission to CSS |
| NW 4.1 | Approved for publication |
| NW 4.1 | NST002 Draft Implementing Guide: Regulations and Associated Administrative Measures for Nuclear Security (also to RASSC, TRANSSC and NSGC) |
| NW 4.2 | Approved for publication |
| NW 4.2 | NST023 Draft Implementing Guide: Physical Protection of Nuclear Material and Nuclear Facilities (also to RASSC and NSGC) |
| NW 4.3 | Approved for submission to Member States for comment |
| NW 4.3 | NST009 Draft Implementing Guide: Building Capacity for Nuclear Security (also to RASSC, TRANSSC and NSGC) |