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1. GENERAL ISSUES

1.1 Opening of the Meeting

The meeting was opened by Mr Greg Rzentkowski (DIR-NSNI). Mr Rzentkowski mentioned that the Agency in preparation of the 8th Review Meeting of the CNS facilitated the Officers’ Turnover Meeting and the Officers’ Training in Vienna in March 2019 to allow outgoing Officers to share their experience and ensure the transfer of knowledge to incoming Officers. Training was provided in the area of teamwork and in the roles and responsibilities of Country Group Officers.

Based on the Contracting Parties proposals, the Organizational Meeting last October decided that the themes of topical sessions to be held during upcoming Review Meeting would be Ageing Management and Safety Culture. Having in mind that both themes are among the NSNI priorities the Agency technical staff is assisting Presidency to prepare these sessions.

He also informed about the IRRS and OSART missions either already held or being planned for 2019.

1.2 Chairman’s Introduction

Mr Phil Webster, Chairman of NUSSC, welcomed the participants and described the Agenda for this meeting as being quite light; NUSSC was being asked to approve one document at step 13 to proceed to CSS for endorsement to publish, two documents at step 7 to go for Member State review, five Document Preparation Profiles at step 3 to proceed to drafting and one Implementing Guide on nuclear security for clearance. Agenda items 1.8 and 1.9 will be deferred to Wednesday, since Safety Standards Section staff is not able to attend on Tuesday.

WebEx was available for the meeting but nobody had requested it.

Chairman described a number of novel elements in the Agenda, specifically items 1.10, 1.11 and 1.12:

Under item 1.10, he had asked the Technical Officer for DS508 to explain why it is running so late. This is the Safety Guide on ‘Assessment of the Application of General Requirements for Design of Nuclear Power Plants’, which is intended to be derived from TECDOC 1791 ‘Considerations on the Application of the IAEA Safety Requirements for the Design of Nuclear Power Plants’. The focus of the Safety Guide is supposed to be Design Extension Conditions and Practical Elimination. According to the Status Report webpage on the IAEA website, it is at Step 5, whereas according to the DPP, it should be at Step 9. Since this is a priority for this NUSSC term, he had asked him to explain why it is late and what is being done to improve the situation.

Under item 1.11(a), instead of the Scientific Secretary showing the list of all the Safety Reports and TECDOCs being developed, NSNI Director will describe them in categories that align with current challenges/priorities. This was in response to a request from Chairman to focus the presentation on topics which are relevant to NUSSC discussions.

Under item 1.11(b), the IAEA proposes to describe a document which may be of particular interest to NUSSC members, being the recently-published TECDOC-1867 ‘Handbook for Regulatory Inspectors of Nuclear Power Plants’. If NUSSC members find this useful, they may continue the practice as a pilot project.

Under item 1.12, Mr Webster will remind the meeting of the priorities NUSSC identified at the 46th NUSSC meeting and start to review progress against them. Following this meeting, there are only three meetings to make progress against them; it is important that NUSSC will start to review progress now because they have to draft the end-of-Term Report for the 49th NUSSC meeting in June 2020 and approve it at the 50th NUSSC meeting in late-2020. A three-year Term makes it challenging to make progress against priorities before NUSSC has to report on them. This is why Chairman proposed two sets of priorities (one short-term, the other medium-term). It is also why the expectation is that each SSC Chair will serve two terms, subject to mutual agreement, in order to improve the opportunity to make progress, so that CSS can hold the Chairs accountable.
1.3 Adoption of the Agenda of the 47th NUSSC Meeting

The Agenda was approved, subject to the addition of item 5.2 ‘Preparations for CNS 8th Review Meeting’.

1.4 Approval of the Report of the 46th NUSSC Meeting

The draft report had been made available via the NUSSC folder. Comments received from WNA and Japan have been incorporated. The Report was approved.

1.5 Actions of NUSSC Meetings (and decision on part of 6.1)

The progress made on the Actions from NUSSC 46 was presented by Mr Miroslav Svab, NUSSC Scientific Secretary.

He reported that for Action 1.5 to prepare a Safety Report on safety aspects of using smart digital devices in nuclear safety system, one Consultancy Meeting has been held with another planned for November.

Chair reminded the Meeting that Safety Guides DS490 and DS498 are priorities for NUSSC and are the subjects of actions 2.5 and 2.7, seeking approval to submit them for Member States review. The subject of action 2.6, revision of seven closely-interrelated operational Safety Guides, is another priority for NUSSC.

1.6 Dates of the next meetings

The dates of the next NUSSC Meetings were approved:

- 48th NUSSC: 25 – 29 November 2019
- 49th NUSSC: 15 – 19 June 2020

1.7 Report from the previous meeting of the Chairs

The Chairs of CSS, the five SSCs and the vice-chair of NSGC met on 8 April 2019, immediately before CSS 45, along with the Scientific Secretaries and discussed six topics:

- Conclusions of the review of SF-1 ‘Fundamentals of Nuclear Safety’ by the Safety Standards Committees. The general conclusion of each Committee had been that there is no justification for an immediate revision. The reports of the SSCs’ reviews are available on the CSS website. Once we approach having a full set of Safety Guides (being revised following the revision of the Safety Requirements following the Fukushima-Daiichi accident), that may be a good time to revisit the top-down approach (maybe in 3-4 years). NSS-OUI should be used to capture ideas on the current content so that these are available when revision starts.

- Updates to SPESS-C and SPESS-E (following –B and –F). Mr Delattre described that the editorial review in MTCD should now happen before a Safety Guide is submitted to CSS for endorsement for publication.

- Consultancy Meeting to prepare DPP for a Safety Report was held 8-11 March 2019; drafted an annotated DPP, from which the Secretariat drew the DPP which will come to this meeting under Agenda item 1.9; the Report of the Chair of the CS is on the website.

- Format of table of Resolution of MS comments. The general consensus was that this should be in the order of the document, rather than separated by MS.

- DPP for DS513, which is to be a generic guide to GSR Part 2; will be followed by specific guides, one of which is DS477 under WASSC. Ms Rycraft, TO of DS513, briefed the Chairs that a CS had been held in March on ‘Small Organizations’. RASSC did not like the approach of writing a GSG; felt that leadership and safety culture may be common but management differs. TRANSSC will only need an SSG for Transport. The GSG must come
first, to help make the SSGs consistent by informing them. It is important that SSGs do not override or contradict the GSG.

- Meeting room availability. CSS 45 is in late-December, rather than the more usual early October, due to the difficulty of finding a suitable room, even though the search began a year in advance. This means that CSS cannot give direction to the next set of SSC meetings because the availability drives the date.

1.8 (a) CSS 45th Meeting Report

Ms Asfaw reported on behalf of Mr Delattre that the ‘Roadmap’ for the long-term structure of Safety Requirements is now complete with the publication of SSR-1.

A new series of documents is to be created to cover the ‘Safety-Security Interface’. The first will be number 1001, being a report on the Technical Meeting that was held from 29 October to 1 November 2018. The topic for number 1002 has already been selected.

NUSSC Chair raised the topic of delays in final editing, which has now been moved in the process ahead of CSS endorsement for publication, in order that the Commission sees the final document. However, inadequate staffing means that although the time from Step 11 to publication is much longer than it should be.

He informed the meeting that the next CSS meeting in December would be longer than usual in order to hold various policy discussions; asked if NUSSC members wanted to propose any.

1.8 (b) Update on NSS-OUI

Ms Asfaw reported on behalf of Mr Delattre that all published Safety Standards are now in NSS-OUI; new ones are entered within a couple of days of publication. The entries are now being tagged with definitions in the Glossary, the 2018 version of which was recently published and contains definitions of all the Safety Requirements. The on-line version will be brought up to date within a couple of weeks. IAEA hopes that the new Glossary will be used and seeks feedback for the 2018 revision. Some definitions from the Safety Guides are also there but new ones may or may not be added to the online version; discussions continue.

The Security Glossary does not yet contain all the terms used and includes some contradictions; it is not yet mature but has been made available online for comment. It is intended that the two Glossaries will eventually be merged.

Finland asked for ideas on how to use NSS-OUI to help advance the Safety Standards. Response was that it will be used to improve published documents by seeking feedback on them; the next step is to use it for comments on documents under development. NSS-OUI is in a format that allows it to be accessed from smartphones, so can be used on IAEA missions. There are no elaborate plans beyond these.

US asked if it was possible to allow comments to be uploaded in bulk, to help the Technical Officers deal with them. Response was that this is a current initiative.

1.9 Status of a Safety Report on Attributability of Radiation Health Effects and Inferring Risks

Ms Asfaw reported that the goal of the proposed Safety Report is to help clarify how the Safety Standards should be used and not mis-used. The first Consultancy in March prepared an annotated DPP.

Mf Webster briefed the meeting that UNSCEAR had recently appointed a new Secretary, who would participate in any future such consultancy meetings, since the initiative arose from a 2012 UNSCEAR report.

Canada asked if the Safety Report covers worker effects, in which case ILO should be involved. Response was that it does.
WNA noted DS427 which produced GSG-10, that covers impacts on flora and fauna; asked if this might be the subject of an Annex or would the report be limited to human health. Response was that Ms Asfaw will speak to the specialists who will be writing the Safety Report.

Austria noted that since it will not be a consensus document, it can provide practical guidance.

1.10 (a) Status of Safety Standards and TECDOCs being developed

Mr M. Svab described the status of production of the Safety Standards currently under revision and referred the meeting to a status report on TecDocs and Safety Reports in the NUSSC 47 folder.

Mr Webster highlighted that DS490, 497 and 498 which are priorities for NUSSC, are due to come to NUSSC 48 at Step 11 and that another priority DS508 is due to come to NUSSC 50 at Step 11.

Japan feels that some corrections may be needed to DS503. Response was that the draft is at Step 5; it is due to come to NUSSC 48 at Step 7.

Chair described the issue of the backlog of documents in final editing in MTCD. He had mentioned under Agenda item 1.8 that editorial review in MTCD should now happen before a Safety Guide is submitted to CSS for endorsement for publication. However, the editorial resources are inadequate, even for a statutory duty such as Safety Standards, so there is now a backlog of fourteen documents which, at the current rate of progress, will take over two years to clear, even assuming that no new ones are added to the queue in the meantime.

Chair described to the meeting that he had engaged with IAEA senior management on this on behalf of NUSSC. He met three times with the Director of the Office of Coordination in the Department of Nuclear Safety and Security, followed by a meeting with DDG Lentijo to alert him to the situation. On 4 July Chair is going to meet the DDG of the Department of Management to ask what actions she is taking to rectify this. The situation can only get worse because three members of the editorial staff will reach the end of their contracts in the next 12-18 months. Our case is helped by a Recommendation of an external audit of the Financial Statements for 2018 that the Agency “Address the under-resourced editing services at the high level of the Agency management”. Chair promised to report back to NUSSC 48 on progress.

1.10 (b) Status of Development of DS508 ‘Assessment of the Application of General Requirements for Design of Nuclear Power Plants’

Chair had invited Mr Javier Yllera, TO of DS508, to describe progress on the document since, according to the Status Report, it is at Step 5, whereas according to the DPP, it should be at Step 9. Since this is a priority for this NUSSC term, he asked Mr Yllera to explain why it is late and what is being done to improve the situation.

Mr Yllera explained that the initial DPP had been rejected by NUSSC, which requested that the scope be narrowed to design extension conditions and practical elimination. Two consultancies had been held and a third is planned for end-July 2019 to finalize the draft. 1st CS in April 2018 was mostly brainstorming; 2nd CS in December 2018 was presented with draft text on many sections developed by the Secretariat; however, it was not possible to reach agreement. 3rd CS at end-July has the goal of producing a complete draft. Intent is to seek approval for Step 7 at November SSC meetings, which will be one year late. Publication had initially been targeted for Q4 of 2020 but is now hoped to be in Q2 of 2021, which is after the end of the current NUSSC term.

Netherlands asked about the issues the writing team is encountering. Response was that not all members have the same view of the scope of Design Extension Conditions and Practical Elimination, which are being framed in terms of Defence-in-Depth; and how this fits in with the existing family of Safety Guides. SSR-2/1 describes the ‘safety approach’, into which this Safety Guide must fit; being the principles behind the safety approach but the concept of Practical Elimination has eluded consensus so far.
US noted that another meeting on DECs is planned; proposed that the two meetings be scheduled back-to-back or in the same week.

Netherlands noted that NEA and WENRA had also been discussing Practical Elimination; proposed seeking commonality or alignment.

1.11 (a) Status of Safety Reports and TECDOCs being developed

Mr Rzentkowski described the level of effort devoted to the forty-two Safety Reports and TecDocs which are in preparation, grouped under eight priorities.

UK asked how input from Member States is sought; response was from Consultancy Meetings. At the request of NUSSC, Mr Rzentkowski also described briefly the application of a hierarchical structure of safety goals (the newly-published TECDOC-1874) to SMRs and undertook to make fuller presentation on the TECDOC at the next meeting. A systematic, technology-neutral approach to the safety and licensing of SMRs is proposed; development of safety requirements or guidance for a specific SMR technology is not being considered at this time given the limited experience available and the variety of proposed designs. Finland proposed that a technology-neutral approach should be the basis for a future Safety Standard.

1.11 (b) TECDOC: Handbook for Regulatory Inspectors of Nuclear Power Plants

The development of this TECDOC started in 2015, to answer the question “What do I know about inspection now that I wish I knew as a new inspector?” It is intended to help train new inspectors and guide their mentors. It has been used as the basis for a two-week workshop of hands-on inspector training; during week 1 the students develop an inspection plan then in week 2 they practice it at Zwentendorf. The IAEA also runs a course in Member States on the inspection of research reactors.

US noted that knowledge transfer important; asked how feedback would be captured for future revisions. Noted that it highlights fire protection; US feels that flood protection is also important. Asked how do inspectors use risk insights from PSA. Response was that the graded approach is used to identify risk-significant components but there is no direct link to PSA.

Belgium asked if there were plans to prepare a TECDOC on soft skills. Response: not at this time.

1.12 Review of the progress of NUSSC priorities

Chairman reminded the meeting of the priorities that had been approved at the previous meeting NUSSC 46 and asked them to focus on the short-term ones.

A ‘holistic’ review of Safety Guides had been performed at a one-day ‘volunteers’ meeting on 23 June 2017, following NUSSC 43 and is described in section 4.3 of the Seventh Term Report. A presentation made by the then-Chair can be found on the NUSSC 43 website. Chair proposed that the November meeting of NUSSC 48 re-visit the ‘holistic’ review, beginning with a presentation from the Secretariat on how they are progressing against the recommendations of the ‘volunteers’ meeting, along with a report on lessons-learned from projects which deal with multiple Safety Guides together (SSG-15, SSG-39, DS494, DS497, DS509, DS517, DS518). He proposed that participants would then discuss the previous recommendations to see if some may need to be revised, added-to or removed.

US noted that there is a need to brainstorm before the November meeting; it is not enough to add one day to the meeting schedule. Asked how to look at documents in a harmonized way and eliminate duplication; also how to leverage attendance.

The meeting turned to the priority item to “Identify ways to improve DPP descriptions of the need for a new or updated document”. Mr Peter Shaw noted that the template is not the problem but rather the instructions or implementation; templates are not always completed thoroughly or consistently.
USA noted that DPPs should link to other documents that already exist or are in preparation (which is already done but perhaps could be explained more clearly).

WNA noted that Steps 1 and 2 of SPESS-A, where choices and decisions are made, are internal to the IAEA; asked if it is possible to get some feedback from the internal review. Response was that the Coordination Committee is quite tough and often sends DPPs back; however the record of the meetings is very brief. Most problems can be traced back to inadequate DPPs.

Netherlands noted that NUSSC should scrutinize the content of DPPs better, instead of focusing on the number of comments. Finland agreed and requested better presentations which emphasize the resolution of comments.

2. REVIEW OF IAEA SAFETY STANDARDS

2.1 DS494 – Draft Safety Guide: Protection against Internal Hazards in the Design of Nuclear Power Plants

This is a revision and combination of NS-G-1.7 ‘Protection Against Internal Fires and Explosions in the Design of Nuclear Power Plants (2004)’ and NS-G-1.11 ‘Protection against Internal Hazards other than Fires and Explosions in the Design of Nuclear Power Plants (2004)’. It explains how to implement parts of SSR-2/1 Rev 1. It was posted for NUSSC comments on 24 April, with comments due by 24 May.

Finland asked about a comment that they had submitted via EPRSc, requesting that GSR Part 7 be added as a Reference. Speaker responded that the comment was general, with no wording offered and had not been offered at Step 7 as per the process.

→ NUSSC approved DS494 for submission to CSS.

2.2 DS510 - Draft Safety Guide: Revision of SSG-20 and SSG-24

This is a revision of SSG-20 ‘Safety Assessment for Research Reactors and Preparation of the Safety Analysis Report’ and SSG-24 ‘Safety in the Utilization and Modification of Research Reactors’, which describe how to implement SSR-3 ‘Safety of Research Reactors’. The revised Safety Guides were posted for NUSSC comments on 16 April, with comments due by 17 May.

Germany noted their comment that sometimes sub-critical assemblies contain more fissile material than critical assemblies. Also noted that the SSG is missing a chapter on human factors, which can play a large role on research reactors. Response – the list of DECs in the document is from SSR-3, so cannot be changed. Safety Report Series 80 lists DECs for research reactors. One DEC from a list provided by Germany has been included; the others are not applicable. Human factors are considered in the document; perhaps Germany meant to say that human errors should be included in the safety analysis report. This is a revision by amendment only; it may cause problems for end users if significant changes are made. German asked that cross-references be made to the other documents.

→ NUSSC approved DS510 for submission to Member States for review and comment.

2.3 DS514 – Draft Safety Guide: Equipment qualification of items important to safety in nuclear power plants

This is a new Safety Guide. It was posted for NUSSC comments on 24 April with comments due by 29 May. Safety Report Series 3 on the same topic was published twenty years ago. The title had been changed from that in the DPP to ‘Equipment Qualification for Nuclear Installations’.

Finland asked why the document does not recommend that qualification is needed for equipment which is not exposed to harsh environment. Response was that qualified life is required for any equipment which is exposed to a harsh environment and for accident conditions; type tests are required to demonstrate qualified life. However, for equipment which is exposed only to a mild environment, the qualified life is defined by the manufacturer; tests are not necessary. Nothing
in the document prevents Member States going beyond the recommendations and qualifying components that are only exposed to mild environments.

UK asked if the change in title indicates an increase in scope. Response: No.

WNA asked about the reference to DS514 for seismic qualification. Response was that DS514 covers EQ and EMI and interfaces with NS-G-1.6 for seismic qualification, which is being revised under DS490.

Japan noted that paragraph 5.8a includes a ‘shall’ statement. Response: this will be removed.

→ NUSSC approved DS514 for submission to Member States for review and comment.

3. REVIEW OF DOCUMENT PREPARATION PROFILES (DPPs)


Chair described the history of this DPP to revise and expand GS-G-3.1. NUSSC 45 in June 2018 did not approve the DPP because its scope and the interface with other documents needed to be clarified. A subsequent attempt by the SSC Chairs to reach consensus was not successful, since several of the other Committees also had concerns. The topic was discussed at the meeting of the SSC Chairs on 13 November 2018 prior to CSS 44, which concluded that the DPP would be reworded to clarify the objectives and its place within the overall set of safety standards. Following CSS 44, Mr Webster attempted to persuade the Chairs to review and approve the revised DPP electronically but was unsuccessful. Instead, the Chairs decided that the DPP should come to the meetings in mid-2019; hence its re-appearance here.

Ms Rycraft described that leadership and culture will be dealt with together but management is in a separate section. Core concepts and core principles.

Finland asked about the interface with other SSGs which exist or are planned. Response was that DS513 is generic, high-level guidance; discussions have been held with TOs for other SSGs that contain the topics of leadership, management and culture for safety, such as DS477 which is out for MS review. Characteristics, attributes and other high-level stuff from GS-G-3.1 will go in DS513. DS477 will just say that safety culture is needed. Guides in development can just reference DS513.

Canada asked for a better description of what topics will be covered in what document.

Since there will be another NUSSC meeting before the document is tabled at CSS46, Chair asked that the DPP be presented again at NUSSC 48 with a more comprehensive Table of Contents to clarify that it covers core concepts and to show the interfaces with the content of other documents.

→ NUSSC approved the DPP DS513 for submission to CSS.

3.2 DPP DS520 – Draft Safety Guide: External Human Induced Hazards in Site Evaluation for Nuclear Installations

The DPP was posted for NUSSC comments on 16 April, with comments due by 17 May. The title had been changed to ‘Hazards Associated with External Human Induced Events in Site Evaluation for Nuclear Installations’, to better align with the IAEA Safety Glossary and SSR-1.

→ NUSSC approved the DPP DS520 for submission to CSS.

3.3 DPP DS522 - Draft Safety Guide: Evaluation of Seismic Safety for Existing Nuclear Installations

The DPP was posted for NUSSC comments on 16 April, with comments due by 17 May. It contains new recommendations for sites with multiple facilities. Significant feedback had been received from IAEA technical safety review services and advisory services.
A WNA comment regarding downgrading the Review Level Earthquake based on remaining lifetime was not accepted since this is not regarded as appropriate.

UK noted that their specialists were satisfied with the broad scope but the comment on EPR was rejected; they are not looking for a close link but an expansion of horizons for walkdowns to look for safety functions which may need to be considered. Response was that the document focusses on the facility itself; site infrastructure and level 3 PSA are not included in the scope. The Technical Officer was requested to include the interface with other documents in section 6, especially where there are off-site implications.

→ NUSSC approved the DPP DS522 for submission to CSS.

3.4 DPP DS523 - Draft Safety Guide: Development and Application of Level 1 PSA for Nuclear Power Plants

The DPP was posted for NUSSC comments on 24 April, with comments due by 24 May. It proposes a refinement rather than a revision, with the addition of some new scope. It was noted that several GC Resolutions had requested development of guidance on PSA in multiunit context.

→ NUSSC approved the DPP DS523 for submission to CSS.

3.5 DPP DS524 - Draft Safety Guide: Radiation Protection Aspects of Design for NPPs

The DPP was posted for NUSSC comments on 24 April, with comments due by 24 May.

→ NUSSC approved the DPP DS524 for submission to CSS.

4. NSGC DOCUMENTS FOR CLEARANCE

4.1 NST058 – Draft Implementing Guide: Nuclear Security Threat Assessment and Threat Statements

This is to be a revision of an existing document (NSS-10) with an extended scope. NSS-10 covers nuclear material and facilities; this will also include radioactive material. The Design-Basis Threat is facility-specific; threats beyond that are the responsibility of the State.

→ NUSSC cleared NST058 for submission to the DDG.

5. MISCELLANEOUS

5.1 Feedback on Regulatory Arrangements and Current Developments in NUSSC Member States (Egypt, Netherlands, ENISS)

Egypt: ENRRA was established in 2012 and covers safety, security and safeguards. NPPA is operator. EAEA operates two RR. NMA covers mines and materials. El-Dabaa to have four units of VVER 1200. Vendor regulations should be considered for first NPP.

Netherlands: Five year external evaluation of effectiveness is required by the ANVS Act; first one is being done now, after only two years of its existence. IRRS November 2014 was before ANVS were formed; made 26 recommendations and 19 suggestions. Follow-up mission November 2018, looked at policy issue of regulatory independence related to political responsibility. IAEA Safety Standards were to be included in regulations in 1990s but it was found difficult to translate the technical text into legal text. A practical solution was found to transpose the Safety Requirements and Safety Guides into ‘Dutch safety rules’ (NVRs) which were attached to the licence of Borssele NPP, so with which compliance is required. A new set of NVRs for Research Reactors is being considered. Overall revision of regulatory system should happen in the longer term.

Austria asked what happens if a Safety Standard is revised. Response was that the former ones are replaced with revised ones as they are published; but ANVS is now re-visiting the NVRs.
Finland asked who does the external evaluation. Response was that a team is drawn from a pool of former senior DGs or policy consultants from various Ministries.

Canada asked how long is the NPP licence. Response was that there is no end-date but in 2006, Parliament decided to end nuclear by 2033, by which time Borssele will be sixty years old (having been given an extra 20 years in 2013).

Lithuania asked how better cross-border communication and consultation would be handled, noting that Borssele and Doel are close to the border between Netherlands and Belgium. Response was that one issue is making the public aware that they can intervene during licence hearings. Better communication on EPR is another but this is complicated because both states have complex arrangements.

Austria asked if the two countries have the same EPZs and intervention levels? Response: no.

**ENISS:** ENISS represents licensees and operators from 16 European countries with NPP programmes, including Switzerland and Ukraine and is hosted by Foratom. The Reactor Safety Group and Waste & Decommissioning Safety Group meet monthly or more often if needed; the Steering Committee meets three times per year. They develop Position Papers in an attempt to be more proactive on topics of particular importance. ENISS licensees seek to contribute to an unambiguous discussion to enhance nuclear safety on a common and shared ground; they also seek a dialogue with regulators.

A Position Paper on the concepts of risk-informed, reasonably practicable and cost-benefit analysis was published in November 2018. The ENISS perspective is captured in eight Principles, of which number 1 is “Investment for nuclear safety should provide significant safety improvements.” ENISS considers that the value of operating experience on a stable installation should be considered to support the option of not making modifications.

ENISS is currently working on four more Position Papers: defence-in-depth implementation, practical elimination, definition & application of maximum credible hazard and safety improvements to existing NPPs (methodology, risks and safety dis-benefits), which should be published in about a month. Another on emergency preparedness and response is planned.

ENISS believes that less-restrictive Operating Limits and Conditions could lead to fewer unplanned shutdowns, which would be safer.

US noted that they are moving towards risk-informing their regulatory oversight programs and allowing more flexibility; holding discussions about risk insights between regulator and operator is important. Response was that risk awareness is important.

UK asked if the papers on Defence-in-Depth and Practical Elimination are consistent with the work underway in other bodies. Response was that ENISS starts by capturing the current situation then proposes how to change things.

US asked about the goal of the Position Papers. Response was that they seek to start a discussion with other bodies to support harmonization in Europe.
5.2 Preparations for CNS 8th Review

Mr M. Svab informed about the status of preparations for the 8th Review Meeting of Contracting Parties to the Convention on Nuclear Safety. There will be a special Officers Meeting 24-25 September 2019 to prepare templates for 8th RM.

6. CLOSURE OF THE MEETING

6.1 Actions following the 47th NUSSC Meeting

Actions were described and agreed.

6.2 Conclusions

Meeting closed.
AGENDA
47th Meeting of the Nuclear Safety Standards Committee (NUSSC)
25 to 27 June 2019, Vienna
VIC, M Building, M3

Tuesday, 25 June 2019, at 14:00 – Thursday, 27 June 2019, till lunchtime

<table>
<thead>
<tr>
<th>1.</th>
<th>GENERAL ISSUES</th>
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<tbody>
<tr>
<td>1.1</td>
<td>Opening of the Meeting</td>
<td>Mr G. Rzentkowski/DIR-NSNI</td>
</tr>
<tr>
<td>1.2</td>
<td>Chairman’s Introduction</td>
<td>Mr P. Webster</td>
</tr>
<tr>
<td>1.3</td>
<td>Adoption of the Agenda of the 47th NUSSC Meeting</td>
<td>For approval NUSSC Members</td>
</tr>
<tr>
<td>1.4</td>
<td>Approval of the Report of the 46th NUSSC Meeting</td>
<td>For approval NUSSC Members</td>
</tr>
<tr>
<td>1.5</td>
<td>Actions of NUSSC Meetings</td>
<td>For information Mr M. Svab</td>
</tr>
<tr>
<td>1.7</td>
<td>Report from the previous meeting of the Chairs</td>
<td>For information Mr P. Webster</td>
</tr>
<tr>
<td>1.8</td>
<td>a) CSS 45th Meeting Report b) Update on NSS – OUI</td>
<td>For information Mr D. Delattre</td>
</tr>
<tr>
<td>1.9</td>
<td>Status of a Safety Report on Attributability of Radiation Health Effects and Inferring Risks</td>
<td>For information and discussion Mr D. Delattre Ms K. Asfaw</td>
</tr>
<tr>
<td>1.10</td>
<td>Status of Safety Standards to be reviewed by NUSSC</td>
<td>For information Mr J. Yllera Mr M. Svab</td>
</tr>
<tr>
<td>1.11</td>
<td>a) Status of Safety Reports and TECDOCs being developed b) TECDOC: Handbook for Regulatory Inspectors of Nuclear Power Plants</td>
<td>For information Mr G. Rzentkowski Mr M. Svab Mr T. Kobetz</td>
</tr>
<tr>
<td>1.12</td>
<td>Review of the progress of NUSSC priorities</td>
<td>For discussion NUSSC Members</td>
</tr>
</tbody>
</table>

2. REVIEW OF IAEA SAFETY STANDARDS

| 2.1 | DS494 - SG Protection against Internal Hazards in the Design of Nuclear Power Plants (NUSSC, EPreSC, NSGC) - Step 11 | For approval for submission to CSS Mr A. Amri |
### 2.2
**DS510** - SG Revision of SSG-20 and SSG-24 (All Committees and NSGC) – Step 7

*For approval for submission to MS*

**Ms F. Naseer**

### 2.3
**DS514** - SG Equipment qualification of items important to safety in nuclear power plants (NUSSC) – Step 7

*For approval for submission to MS*

**Mr A. Duchac**

### 3. REVIEW OF DOCUMENT PREPARATION PROFILES (DPPs) – Safety Standards

#### 3.1
**DPP DS513** - SG Leadership, Management and Culture for Safety (All Committees and NSGC) - Step 3

*For approval for submission to CSS*

**Ms H. Rycraft**

#### 3.2
**DPP DS520** - SG External Human Induced Hazards in Site Evaluation for Nuclear Installations (NUSSC, WASSC) – Step 3

*For approval for submission to CSS*

**Mr A. Altinyollar**

#### 3.3
**DPP DS522** - SG Evaluation of Seismic Safety for Existing Nuclear Installations (NUSSC, WASSC) – Step 3

*For approval for submission to CSS*

**Mr O. Coman**

#### 3.4
**DPP DS523** - SG Development and Application of Level 1 PSA for Nuclear Power Plants (Revision of SSG-3; NUSSC) – Step 3

*For approval for submission to CSS*

**Mr S. Poghosyan**

#### 3.5
**DPP DS524** - SG Radiation Protection Aspects of Design for NPPs (Revision of NS-G-1.13; NUSSC, RASSC, WASSC, EPreSC and NSGC) - Step 3

*For approval for submission to CSS*

**Ms C. Toth**

### 4. NSGC DOCUMENTS FOR CLEARANCE

#### 4.1

*For clearance*

**Mr K. Horvath**

### 5. MISCELLANEOUS

#### 5.1
Feedback on Regulatory Arrangements and Current Developments in NUSSC Member States (*Egypt, Netherlands, ENISS*)

*For information*

**Mr. M.S. Ibrahim**  
**Ms G. Delfini**  
**Mr G. Bassing**

#### 5.2
Status of preparation for the 8th Review Meeting of Contracting Parties to the CNS

*For information*

**Mr M. Svab**
<table>
<thead>
<tr>
<th>6.</th>
<th>CLOSURE OF THE MEETING</th>
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<tbody>
<tr>
<td>6.1</td>
<td>Actions following the 47th NUSSC Meeting</td>
</tr>
<tr>
<td>6.2</td>
<td>Conclusions</td>
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<thead>
<tr>
<th></th>
<th>Event Description</th>
<th>Dates</th>
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<tbody>
<tr>
<td>CSS 46</td>
<td></td>
<td>16 – 20 December 2019</td>
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<tr>
<td>EPreSC 8</td>
<td></td>
<td>25 – 28 June 2019</td>
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<tr>
<td>EPreSC 9</td>
<td></td>
<td>3 – 5 December 2019</td>
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<tr>
<td>NSGC 15</td>
<td></td>
<td>1 – 4 July 2019</td>
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<tr>
<td>NSGC 16</td>
<td></td>
<td>18 – 21 November 2019</td>
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<tr>
<td>NUSSC 48</td>
<td></td>
<td>24 – 28 November 2019</td>
</tr>
<tr>
<td>NUSSC 49</td>
<td></td>
<td>15 - 19 June 2020</td>
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<tr>
<td>NUSSC 50</td>
<td></td>
<td>23 – 27 November 2020</td>
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<tr>
<td>RASSC 46</td>
<td></td>
<td>24 – 28 June 2019</td>
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<td>RASSC 47</td>
<td></td>
<td>18 – 22 November 2019</td>
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<tr>
<td>TRANSSC 38</td>
<td></td>
<td>17 – 21 June 2019</td>
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<td>TRANSSC 39</td>
<td></td>
<td>28 October – 1 November 2019</td>
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<td>WASSC 47</td>
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<td>17 – 21 June 2019</td>
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<tr>
<td>WASSC 48</td>
<td></td>
<td>28 October – 1 November 2019</td>
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ANNEX II - Actions following the 47th NUSSC Meeting

<table>
<thead>
<tr>
<th>Item</th>
<th>Action</th>
<th>Who</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.8.1</td>
<td>To enter the NUSSC comments on SF-1 into NSS-OUI.</td>
<td>Chair</td>
<td>ASAP</td>
</tr>
<tr>
<td>1.8.2</td>
<td>NUSSC Members to consider proposing topics for the CSS policy discussions in December 2019.</td>
<td>NUSSC Members</td>
<td>ASAP</td>
</tr>
<tr>
<td>1.11</td>
<td>More detailed presentation on TECDOC 1874 on Safety Goals to be presented at the NUSSC 48.</td>
<td>Secretariat</td>
<td>ASAP</td>
</tr>
<tr>
<td></td>
<td>To select and post only those slides from DIR NSNI SMR presentation on the NUSSC website.</td>
<td>Secretariat</td>
<td>ASAP</td>
</tr>
<tr>
<td>1.12.1</td>
<td>To prepare a presentation on activities in response to the recommendations of the 2017 holistic review.</td>
<td>Secretariat</td>
<td>ASAP</td>
</tr>
<tr>
<td></td>
<td>To add agenda item for NUSSC 48 to revisit 2017 holistic review.</td>
<td>Secretariat</td>
<td>ASAP</td>
</tr>
<tr>
<td>1.12.2</td>
<td>Secretariat to update the future presentations on DPPs to better communicate the resolution of comments.</td>
<td>Secretariat</td>
<td>ASAP</td>
</tr>
<tr>
<td></td>
<td>Secretariat to update their presentation template for SGs &amp; DPPs.</td>
<td>Secretariat</td>
<td>ASAP</td>
</tr>
<tr>
<td>1.12.3</td>
<td>To provide a list of safety guides which might be reviewed and updated and have the list ready for November 2019 48th NUSSC meeting.</td>
<td>Chair</td>
<td>ASAP</td>
</tr>
<tr>
<td>1.12.4</td>
<td>To provide feedback to the IAEA on MS experience on the process of revision of seven closely-interrelated operational Safety Guides (DS497) at NUSSC 48.</td>
<td>NUSSC Members</td>
<td>ASAP</td>
</tr>
<tr>
<td>2.1</td>
<td><strong>DS494</strong> - SG Protection against Internal Hazards in the Design of Nuclear Power Plants. Approved for submission to CSS.</td>
<td>Secretariat</td>
<td>ASAP</td>
</tr>
<tr>
<td>2.2</td>
<td><strong>DS510</strong> - SG Revision of SSG-20 and SSG-24. To add cross-reference to other documents before sending for MS review. Approved for submission to MS.</td>
<td>Secretariat</td>
<td>ASAP</td>
</tr>
<tr>
<td>Section</td>
<td>Document</td>
<td>Title</td>
<td>Approved for</td>
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</tr>
<tr>
<td>2.3</td>
<td>DS514</td>
<td>SG Equipment qualification of items important to safety in nuclear power plants.</td>
<td>submission to MS.</td>
</tr>
<tr>
<td>3.1</td>
<td>DPP DS513</td>
<td>SG Leadership, Management and Culture for Safety</td>
<td>submission to CSS subject to further discussion at NUSSC 48 on a more fulsome DPP clarifying that it will cover core concepts and interfaces with the content of other documents. Display more comprehensive ToC.</td>
</tr>
<tr>
<td>3.2</td>
<td>DPP DS520</td>
<td>SG External Human Induced Hazards in Site Evaluation for Nuclear Installations.</td>
<td>submission to CSS.</td>
</tr>
<tr>
<td>3.3</td>
<td>DPP DS522</td>
<td>SG Evaluation of Seismic Safety for Existing Nuclear Installations.</td>
<td>Include the interface with other documents in section 6 of the DDP, especially where there are off-site implications.</td>
</tr>
<tr>
<td>3.4</td>
<td>DPP DS523</td>
<td>SG Development and Application of Level 1 PSA for Nuclear Power Plants.</td>
<td>submission to CSS.</td>
</tr>
<tr>
<td>3.5</td>
<td>DPP DS524</td>
<td>SG Radiation Protection Aspects of Design for NPPs</td>
<td>submission to CSS.</td>
</tr>
<tr>
<td>4.1</td>
<td>NST058</td>
<td>Draft Implementing Guide: Nuclear Security Threat Assessment and Threat Statements.</td>
<td>Cleared for submission to the DDG.</td>
</tr>
</tbody>
</table>
|         | **National Presentation** | at the NUSSC 48: Germany, India, Sweden. | National Presentation at the NUSSC 49: Spain, Iran, Japan. | NUSSC Members | }
Annex III - Priorities for NUSSC 8th Term 2018-2020 (and beyond)

Achievable Short-Term Priorities for NUSSC 8th Term:

- Complete publication of priority Safety Guides for revision (DS498, 490, 494 remain);
- Re-visit ‘holistic’ review of Safety Guides performed post-NUSSC 43 (section 4.3 of 7th Term Report) to identify further priority revisions of Safety Guides compared against ongoing work;
- Complete the revision of seven closely-interrelated operational Safety Guides (DS497);
- Complete drafting of Safety Guide on Design Extension Conditions and Practical Elimination (DS508);
- Identify ways to improve DPP descriptions of the need for a new or updated document;
- Improve interactions with Nuclear Security Guidance Committee to identify topics or DS of common interest and to agree the path forward.

Challenging Mid-Term Priorities for NUSSC 8th Term and into the 9th Term:

- Consider creating additional guidance on Risk-informed decision-making and use of the Graded Approach, such as for use in Multi-Facility (or Site) PSA;
- Work more closely with other Review Committees, such as by holding joint sessions or establishing joint working groups. Possible topics are:
  - Safety Fundamentals
  - Common Glossary for Safety and Security
  - Small Modular Reactors
  - Transportable Reactors
  - Leadership and management for safety;
- Propose ways to improve the overall management of the Safety Standards programme:
  - Streamline SPESS to allow revisions to move faster;
  - Learn lessons from the simultaneous revision of multiple Safety Guides;
    - Establish timelines and practices for use in similar future DPPs;
  - Describe how to implement in existing plants Safety Guides on design, when revised;
    - Use Annexes as appropriate;
  - Adhere better to timeline for commenting; post resolution tables earlier;
  - Request more presentations for Information, on topics of interest.
# ANNEX IV - List of Participants

<table>
<thead>
<tr>
<th>NUSSC Member</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr N. Müllner</td>
<td>Austria</td>
</tr>
<tr>
<td>Mr Simon Coenen</td>
<td>Belgium</td>
</tr>
<tr>
<td>Mr Marcos Eduardo Costa Nunes</td>
<td>Brazil</td>
</tr>
<tr>
<td>Mr Philip Webster</td>
<td>Canada - Chairman</td>
</tr>
<tr>
<td>Mr Hatem Khouaja</td>
<td>Canada</td>
</tr>
<tr>
<td>Mr John Moore</td>
<td>Candu</td>
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<tr>
<td>Mr Hao</td>
<td>China</td>
</tr>
<tr>
<td>Mr Mohamed Abd El-Monm Gaheen</td>
<td>Egypt</td>
</tr>
<tr>
<td>Mr Mustafa Ibrahim</td>
<td>Egypt</td>
</tr>
<tr>
<td>Ms M. Järvinen</td>
<td>Finland</td>
</tr>
<tr>
<td>Ms Stephanie Peiro</td>
<td>France</td>
</tr>
<tr>
<td>Mr Emanuel Watelle</td>
<td>France</td>
</tr>
<tr>
<td>Mr Patrick Bringel</td>
<td>Germany</td>
</tr>
<tr>
<td>Mr Eckhard Westermeier</td>
<td>Germany</td>
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<tr>
<td>Mr Sreejith</td>
<td>India</td>
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<tr>
<td>Mr R. Jafarian</td>
<td>Iran</td>
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<tr>
<td>Mr Ami Nagler</td>
<td>Israel</td>
</tr>
<tr>
<td>Mr Hiroshi Tsujihara</td>
<td>Japan</td>
</tr>
<tr>
<td>Mr Tsuyoshi Nakajima</td>
<td>Japan</td>
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<tr>
<td>Ms Yoshiko Aoyama</td>
<td>Japan</td>
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<tr>
<td>Mr Takeshi Kanasaki</td>
<td>Japan</td>
</tr>
<tr>
<td>Mr Young Hwan Choi</td>
<td>Rep. of Korea</td>
</tr>
<tr>
<td>Mr S. Šlepavičius</td>
<td>Lithuania</td>
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<tr>
<td>Ms G. Delfini</td>
<td>Netherlands</td>
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<tr>
<td>Ms Tonje Sekse</td>
<td>Norway</td>
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<tr>
<td>Mr P. Domitr</td>
<td>Poland</td>
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<tr>
<td>Mr Dmitrii Sviridov</td>
<td>Russian Federation</td>
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<tr>
<td>Mr Sergey Krechetov</td>
<td>Russian Federation</td>
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<tr>
<td>Ms Elizabeth Wong</td>
<td>Singapore</td>
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<tr>
<td>Mr Peter Uhrík</td>
<td>Slovakia</td>
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<tr>
<td>Ms Noletu Nandi Moti</td>
<td>South Africa</td>
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<tr>
<td>Ms Cristina Les Gil</td>
<td>Spain</td>
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<tr>
<td>Mr Anders Hallman</td>
<td>Sweden</td>
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<tr>
<td>Mr Klaus Theiss</td>
<td>Switzerland</td>
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<tr>
<td>Ms Hanan Al Jneibi</td>
<td>UAE</td>
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<tr>
<td>Mr Robert Exley</td>
<td>UK</td>
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<tr>
<td>Ms Kitenge</td>
<td>UK</td>
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<tr>
<td>Mr Mike Franovich</td>
<td>USA</td>
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<tr>
<td>Ms Veronica Rodriguez</td>
<td>USA</td>
</tr>
<tr>
<td>Name</td>
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<tr>
<td>Mr Simon Murphy</td>
<td>EC</td>
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<tr>
<td>Mr Gerd Bassing</td>
<td>ENISS</td>
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<tr>
<td>Mr Willian Ranval</td>
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<tr>
<td>Mr Peter Nemetvarga</td>
<td>EUR</td>
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<tr>
<td>Mr Jean-Paul Bouard</td>
<td>IEC</td>
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<tr>
<td>Mr Bertrand de L’Epinois</td>
<td>WANO</td>
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<tr>
<td>Mr Franck Lignini</td>
<td>WNA</td>
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