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NUCLEAR ENERGY AGENCY

**Committee on Nuclear Regulatory Activities
Working Group on the Regulation of New Reactors**

**Summary Record of the 10th Meeting of the Working Group on the Regulation of New Reactors
(WGRNR)**

26-27th March 2013, NEA Headquarters, Issy-les-Moulineaux, France

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**Summary Record of the 10th Meeting of the
Working Group on the Regulation of New Reactors (WGRNR)**

**NEA Headquarters
Issy-les-Moulineaux, France**

26 - 27 March 2013

Highlights and Actions Taken

Second International WGRNR Workshop

It was agreed that by the end of April 2013 the technical session leaders will provide the summary of their respective session including the main conclusions and recommendations. The goal is to prepare the workshop proceedings and submit it to the CNRA for approval at its June 2013 meeting.

Construction Experience Programme (ConEx)

According to the ConEx procedure the Clearinghouse group reviewed all the events to assure that the information was inputted following the procedure and that it contains the level of detail that allow lessons to be drawn. The ConEx database comprises around 100 events.

Members discussed the ConEx access policy and the possibility of granting access to the industry provided they supported the collection of construction findings.

Members agreed to include events related to large modifications, and construction findings of other nuclear facilities as part of the scope of the database. The ConEx Clearinghouse group will update the ConEx procedure to clarify the scope of the events to be considered

Site Selection and Preparation

It was noted that by the time of the meeting responses have been provided by eight countries to the supplemental 2 to the Survey in the Regulation of Site Selection and Preparation.

Members will review the draft report and verify that it represents the practices and approaches in their country. It was agreed to provide a page describing the key topics regarding external hazards events and its combinations as well as the topic of emergency preparedness at the siting stage.

Licensing Structure of Regulatory Staff and Regulatory Licensing Process

It was noted that the main goal of the Phase 2 - Design survey is to gather information on the level of detail needed for the review and the regulatory authorisation of the reactor design. It is a very complex survey, and only 4 countries have submitted responses.

It was agreed to divide the Phase 2 - Design report into smaller volumes, covering two or three topics of the eleven general topics. It was agreed that the first general technical categories to address are civil engineering works and structures and digital I&C.

Some countries noted that they are now in a position to provide answers to the Phase 2 - Design survey if the survey is split in smaller volumes

WGRNR Programme of Work and Interaction with MDEP

WGRNR members agreed that currently there is no overlap between the group's activities and MDEP.

Considering that the current mandate of the group addresses commissioning, it was agreed to put together a proposal for an activity on the regulatory control during commissioning of new reactors and submit it to the CNRA for approval at its December 2013 meeting. The proposal will consider the main results and conclusions of the MDEP EPR commissioning workshop on June 2013 in China.

WGRNR members agreed to address construction inspection. Considering that the Phase 3 of the current regulatory licensing processes survey addresses construction, it was agreed to review it in order to adequate the scope, objective and working methods. The proposed changes will be submitted to the CNRA for approval at its June 2013 meeting. Members considered important to coordinate this activity with the CNRA/WGIP and to build from the work performed at the IAEA.

Members agreed not to start any activity on Small Modular Reactors (SMR), since for some countries this is not an issue of high priority. However, it was agreed to include an item in the agenda of the next meeting for discussing the regulatory approaches in member countries regarding the licensing of SMR.

Next WGRNR Meeting

The group agreed that the 11th WGRNR meeting will take place will take place on 7-9 October 2013 in Paris, France. Members agreed to convene a one day meeting of the ConEx group on 7 October 2013.

Summary

1. The tenth meeting of the CNRA Working Group on the Regulation of New Reactors (WGRNR) took place on 26 – 27 March 2013 at the Nuclear Energy Agency (NEA) Headquarters, Issy-les-Moulineaux, France.
2. Mr. Steve Gibson, Chairperson of the WGRNR, opened the meeting and welcomed the participants. He asked participant to introduce themselves. The list of participants is in appendix 1.
3. Apologies for absence were received from: Anders Hallman and Annelie Bergman (SSM, Sweden); Ladislav Haluska (UJD, Slovak Republic); Stephen Koenick (IAEA) replaced by Geoffrey Jones, Kazunobu Sakamoto (JNES, Japan); Pablo Abbate (FANR, UAE); Weol Tae Kim (KINS, Korea); Tomasz Jackowski (NCBJ, Poland); Andreja Persic (SNSA, Slovenia).
4. NEA Secretariat noted some changes in the WGRNR membership. Phil Webster (CNSC, Canada) is replaced by Ken Lafrenière, Beatrice Tombuyses (FANC, Belgium) is replaced by Robin Klein; and Mikhail Lankin (SECNRS, Russian Federation) first participation in the group.
5. Members adopted the agenda [[NEA/SEN/NRA/WGRNR/A\(2013\)1](#)].
6. NEA Secretariat noted that the Summary Record of the nine meeting [[NEA/SEN/NRA/WGRNR\(2012\)2](#)] was issued on 23 November 2012 and no comments has been received. Upon agreement, the 9th WGRNR meeting summary records were approved.
7. Mr. Uichiro Yoshimura welcomed participants and provided information concerning the adhesion of the Russian Federation as the new member of the NEA as of 1st January 2013. He also provided information regarding the budget discussions at the NEA Steering Committee that resulted in improvements in the sustainability of the Agency's budget. He also noted that two years has passed since the Fukushima accident and the NEA is continuing supporting the Japanese institutions. He finalised pointing out the need to conclude some of the current activities of the group and to discuss the potential interaction with MDEP.
8. NEA Secretariat gave a concise presentation on the relevant activities of the NEA standing technical committees. He discussed the main highlights of the last meetings of the CSNI and CNRA noting that a joint workshop on Challenges and Enhancements to Defence in Depth will take place on 5 June 2013 at the OECD Convention Centre. He introduced the main activities of the working groups on Inspection Practices, Operating Experience, and Public Communication of NRO. He informed participants that the CNRA approved in 2012 the publication of the Green Booklet on Non-conforming, Counterfeit, Fraudulent,

and Suspect items. It was also noted the discussion that took place at the last CNRA meeting on the Characteristics of Effective Regulator and the related workshop that was proposed by Sweden. He finalised noting that a new Task Group was established on Accident Management aimed to review the regulatory framework for accident management following the Fukushima Accident.

Second International WGRNR Workshop

9. The WGRNR Chair thanked again the NRC for organising the 2nd WGRNR international workshop that took place in October 2012 in Atlanta, Georgia, USA. He noted that the workshop provided the opportunity to discuss different aspects of the licensing, construction and siting of new reactors with the industry. He also expressed appreciation for the well organised technical visit to the Vogtle AP1000 plant under construction.
10. NEA Secretariat noted that as agreed the idea is that each of the workshop technical session chairs provide a summary of the session including the main conclusions and recommendation in order to assemble the workshop proceedings. Some chairs have provided the required summary but there is still need to include a paragraph describing the main conclusions and recommendation.
11. It was agreed that by the end of April 2013 the technical session leaders will provide the summary of their respective session including the main conclusions and recommendations. The goal is to prepare the workshop proceedings and submit it to the CNRA for approval at its June 2013 meeting.

ConEx Programme

12. Mr. José Balmisa informed participants that on Monday 25 March 2013 a one day meeting of the ConEx subgroup took place with the participation of several members. He observed that recently WGRNR members have provided several inputs to the ConEx database and encourage the rigorous to maintain the impetus. According to the ConEx procedure the Clearinghouse group reviewed all the events to assure that the information was inputted following the procedure and that it contains the level of detail that allow lessons to be drawn.
13. Comments were provided for some of the events. He noted that in general the review concluded that there is a need to separate preventive from corrective action; members should make an effort to include an in depth discussion of the root causes; a clear description of the lessons learned from the regulatory point of view should be included; that it is important to complete all fields of the ConEx database; a decision was made to be more inclusive of the organisation involved; to properly define the acronyms used and to insert drawings, report any other helpful information.
14. Mr. Balmisa noted that there is a need to update the ConEx procedure to better define the scope of the events to be considered and to avoid inputting operational events that are within the scope of the IRS unless there are construction lessons learned. He then commented on some other topics such as the need to fix some problems in the ConEx database including the email distribution list.

15. He finalised presenting the table of content for the second ConEx report and the potential list of topics from relevant events such as civil engineering, flooding, mechanical components, commissioning tests, etc.
16. A discussion ensued with the following highlights:
 - a. One aspect that was noted is the importance of identifying organisational issues as cause of the construction findings.
 - b. Since there is a representative of the Russian Federation, members noted the importance of bringing their experience into the ConEx database.
 - c. Members discussed the ConEx access policy and the possibility of granting access to the industry provided they supported the collection of construction findings. It was agreed to bring this issue to the CNRA for guidance.
 - d. Members noted the importance of discussing how the regulatory organisations are using the ConEx information and to share at each meeting the latest findings. An item in the agenda for the next meeting will consider these aspects.
 - e. Members agreed to include events related to large modifications, and construction findings of other nuclear facilities as part of the scope of the database. The ConEx Clearinghouse group will update the ConEx procedure to clarify the scope of the events to be considered.
 - f. Members agreed to include in the agenda of the next meeting some kind of tutorial or training in the use of the ConEx database.
 - g. It was agreed that the deadline for updating the ConEx events considering the comments of the Clearinghouse group is 17 May 2013. Then the Clearinghouse group will review and approve the records by 14 June 2013.

Regulation of Site Selection and Preparation

17. Mr. Philip Webster discussed the status of the Supplemental 2 to the Survey in the Regulation of Site Selection and Preparation. He discussed the background of the supplemental report aimed to enhance the level of detail on the initial survey responses and to assess the changes or modifications in the regulatory approaches used for siting NPPs as a result of the Fukushima accident. He noted that by the time of the meeting responses have been provided by eight countries.
18. He presented the main conclusions on each of the seven questions, dealing with multi-unit sites, site layout considerations, consideration of external hazards or combinations of hazards at the siting stage, land use and population density, emergency preparedness arrangements, social acceptability, practices/assessments to determine if NPP design parameters are enveloped or suitable for a site.

19. He recommended that each member review the draft text and verify that it represents the practices and approaches in their country. He also suggested that each member write down a page describing the key topics regarding external hazards events and its combinations as well as the topic of emergency preparedness at the siting stage.
20. A discussion ensued with the following highlights:
 - a. In general regarding the use of surveys/questionnaires, members considered important to make an effort in assessing the responses in order to derive better practices and recommendations.
 - b. It was agreed that in the case of the supplemental report a half page contribution on the topics described above should be provided by 30 April 2013. Canada will provide a template to be followed by the members in order to have a similar level of detail in the contributions.

Structure of Regulatory Staff and Regulatory Licensing Processes

21. Mr. Steven Downey gave a presentation on the status of Phase 2 - Design of the survey on the licensing structure of regulatory staff and regulatory licensing process. He noted that the survey constitutes a comprehensive report of each member country regulatory structure, licensing process, personnel skill sets, and training needed to perform the review. He reminded the group that the survey was split into three phases: the first one on the general aspects (report published), the second one on the design, which is ongoing, and the third one on construction.
22. He explained that the main goal of the second phase is to gather information on the level of detail needed for the review and the regulatory authorisation of the reactor design. Phase two includes eleven general topics, 69 technical sub-topics and comprises seven questions per topic. So it is a very complex survey. He informed participants that only 4 members have submitted responses even though the survey was issued in 2011. It was noted that more inputs are needed for a quality report and that more resources are needed than anticipated. He also noted that if the surveys inputs are included the report will be very large and unmanageable.
23. He then proposed to revise the schedule in order to accommodate the time needed to get additional inputs, and the time needed to compile the information and prepare the report. He then suggested dividing the Phase 2 report into smaller volumes, covering two or three topics. He noted that this require less resources from members, require less time to compile the report and improve the usefulness since the users could focus on topics of interest.
24. A discussion followed with the following highlights:
 - a. Some countries noted that they are in a position to provide answers to the Phase 2 - Design survey if the survey is split in smaller volumes.

- b. It was agreed that the first general technical categories to address are civil engineering works and structures and digital I&C.
- c. It was agreed that the deadline for submitting the contributions for the two topics is before the next meeting.

Round table presentation of developments in programmes and policies

- 25. Mr. Ken Lafrenière gave an updated presentation on the status of new reactor applications in Canada. He described all the steps followed for the Darlington new NPP, noting that in August 2012 the Joint Review Panel issued the licence to prepare the site. He finalized noting that the project is currently at the design selection stage with two vendors Candu Energy and Westinghouse preparing costs and construction estimates for the review of the operator, Ontario Power Generation.
- 26. Mr. Mohammed Shuaibi gave a presentation on the status of licensing and new construction in the USA. He noted the 4 combined licences issued for the Vogtle and VC Summer units that are currently under construction. He described the status of the construction of new plants as well as the construction of the Watts Bar Unit 2.
- 27. Mr. Thomas Houdré gave a presentation on the current status of the Flamanville 3 project. He presented the main issues associated to the construction noting the advances in the civil work and electro mechanicals assemblies. He then briefed about the technical issues currently under assessment.
- 28. Mr. Janne Nevalainen made a presentation on the status of new reactor activities in Finland. He noted the changes in the direction general of STUK and the main findings of the IAEA IRRS mission conducted in October 2012. He provided updates on the national requirements in the aftermath of the Fukushima event, and briefed about the new NPP projects.
- 29. Mr. Steve Gibson reported on the regulatory actions for new reactors in UK. He informed participants on the interest to build an ABWR and the start in the short future of the generic design assessment (GDA) process with an expected duration of four years. He also informed participants about the deep underground geological repository.
- 30. Mr. Jaharlal Koley provided a presentation on the status of nuclear power programmes in India. He introduced the Atomic Energy Regulatory Board noting that currently there are 20 units in operation. He then described the new nuclear power projects.
- 31. Ms. Lovisa Wallin Caldwell informed participants about the submittal of application for new nuclear power plant in Sweden. She noted the need to establish regulatory requirements for new plants, and reported on the organization of a workshop on regulatory effectiveness at the end of October 2013.
- 32. Mr. Seon Ho Song gave a presentation about the licensing process and status of Shin Kori units 3 and 4. He provided an overview of the number of units in operation and under

construction and explained the new regulatory framework. He observed that the operating license application was received in June 2011 and is currently under review.

Report from International Organisations

33. Mr Geoffrey Jones reported on the review of the IAEA's safety standards incorporating lessons learned from the Fukushima-Daiichi accident. The review had concluded that the overarching safety requirements in the safety standards were adequate, but that there was a need to strengthen the guidance given for some requirements, such as, site evaluation, safety assessment, emergency responses and requirements of the governmental, legal and regulatory framework.

WGRNR programme of work and interaction with MDEP

34. The Chair initiated the discussion on the interaction of the group with the MDEP noting that he attended the last meeting of the MDEP STC and presented the main activities of the group. It was noted that considering the changes in the MDEP membership, with most of the MDEP countries participating in the group's activities, there is a need to better interact and coordinate the activities in order to avoid any potential overlap.
35. The Chair requested MDEP Secretariat to provide an updated presentation on the current and planned activities of MDEP.
36. Mr. Julien Husse reported on the structure of the Multinational Design Evaluation Programme as well as the accomplishments and plans of each of the three design specific working groups on EPR, AP1000 and APR1400. He also described the deliverables and plans of the issue specific working groups on digital I&C, Codes and Standards and Vendor Inspection Cooperation.
37. Following the MDEP presentation, members discussed the interaction with MDEP. The Chair noted that he will contact the Chair of the MDEP STC in order to establish a protocol for cooperation between MDEP and the group. A discussion ensued on the interaction and the potential future activities of the group with the following highlights:
- a. In general members agreed that currently there is no overlap between the group activities and MDEP. Since the latter is focused on the design reviews and the group is focused on regulatory practices for licensing, siting and construction.
 - b. It was noted that MDEP will address the commissioning aspects of the EPR but from the design point of view and not from the regulatory oversight and approaches for commissioning.
 - c. Considering that the current mandate of the group addresses commissioning, the WGRNR agreed to put together a proposal for an activity on the regulatory control during commissioning of new reactors and submit it to the CNRA for approval at its December 2013 meeting. The proposal will consider the main results and conclusions of the MDEP EPR commissioning workshop on June 2013 in China.

- d. The group then discussed the regulatory control during construction, noting the importance of continued collection of construction findings through the ConEx programme.
- e. It was also considered important to address issues such as how the regulatory is organised to oversight construction, to target their inspection activities, benchmarking their regulatory approaches, how to make use of third party inspection, assessing the licensee capabilities to assure control of the project, etc.
- f. Considering that the Phase 3 of the current regulatory licensing processes survey addresses construction, the WGRNR members agreed to put more emphasis on this phase in order to specifically address construction inspection. The phase 3 activity will be reviewed in order to adequate the scope, objective and working methods. The proposed changes will be submitted to the CNRA for approval at its June 2013 meeting. Members considered important to coordinate this activity with the CNRA/WGIP and to build from the work performed at the IAEA.
- g. Members discussed a potential activity on Small Modular Reactors (SMR). For some countries this is not an issue of high priority, while for some others like USA there is a strong interest since real pre-application activities are underway. Members agreed not to start any activity on this aspect but to include an item in the agenda of the next meeting for discussing the regulatory approaches in member countries regarding the licensing of SMR.

Next meeting

- 38. The group agreed that the 11th WGRNR meeting will take place on 07-09 October 2013 in Paris, France. Members agreed to convene a one day meeting of the ConEx group on 07 October 2013.
- 39. The Chairperson, Mr. Steve Gibson thanked members for their active participation during the meeting and then closed the meeting.

Appendix 1: List of Participants

BELGIUM

Robin KLEIN MEULEKAMP
FANC
Ravenstein 36
B-1000 Brussels

Tel: +32 2 289 21 13
Eml: robin.kleinmeulekamp@fanc.fgov.be

CANADA

Ken LAFRENIERE
Executive Advisor
Directorate of Power Reactor Regulation
P.O. Box 1046 Station B
Ottawa, Ontario, K1P 5S9

Tel: +1 613 947 8433
Eml: ken.lafreniere@cnscccsn.gc.ca

Philip WEBSTER
Counsellor Nuclear Safety
CNSC
1030 Vienna
Austria

Tel: +43 1 531 38 3248
Eml: philip.webster@international.gc.ca

FINLAND

Janne NEVALAINEN
Radiation and Nuclear Safety Authority (STUK)
Nuclear Reactor Regulation
P.O. Box 14
FI-00881 Helsinki

Tel: +358 9 759 88 682
Eml: janne.nevalainen@stuk.fi

FRANCE

Thomas HOUDRÉ
Director
Nuclear Power Plant Department
Autorité de Sûreté Nucléaire (ASN)
6 Place du Colonel Bourgoïn
75572 Paris Cedex 12

Tel: +33 1 4616 4261
Eml: thomas.houdre@asn.fr

GERMANY

Justus OLDENBURG
GRS
Schwertnergasse 1,
D-50667 Köln

Tel: +49
Fax:
Eml: justus.oldenburg@grs.de

HUNGARY

Mihály LEHOTA
Department of Strategic Affairs
Hungarian Atomic Energy Authority
Fenyves Adolf utca 4
P.O.B. 676
H-1036 Budapest

Tel: +36 1 436 4807
Eml: lehota@haea.gov.hu

INDIA

Jaharlal KOLEY
Atomic Energy Regulatory Board
Niyamak Bhavan
Anushaktinagar
Mumbai 400 094

Tel: +91 97 5707 5054
Fax:
Eml: jkoley@aerb.gov.in

KOREA (REPUBLIC OF)

Seon Ho SONG
APR1400 Regulation Project Manager
Korea Institute of Nuclear Safety
62 Gwahak-ro, Yuseong-gu,
Daejeon, 305-338,

Tel: +82 42 868 0222
Eml: shsong@kins.re.kr

POLAND

Marcin ZAGRAJEK
Director
Department of Nuclear Safety
National Atomic Energy Agency (PAA)
ul. Krucza 36
00-522 Warsaw

Tel: +48 22 695 9804
Eml: marcin.zagrajek@paa.gov.pl

RUSSIAN FEDERATION

Mikhail LANKIN
Head of NPP Safety Department
Scientific and Engineering Centre for Nuclear and
Radiation Safety SEC NRS
2/8, Build. 5, Malaya Krasnoselskaya ul.,
107140, Moscow

Tel: +7 499 7530536
Eml: lankin@secnrs.ru

SPAIN

Jose M. BALMISA
Consejo de Seguridad Nuclear
C/Justo Dorado, 11
28040 Madrid

Tel: +34 91 3460 657 (or 102)
Fax: +34 91 3460 588
Eml: jmbg@csn.es

SWEDEN

Lovisa WALLIN CALDWELL
Swedish Radiation Safety Authority
SE-171 16 Stockholm
Solna strandväg 96

Tel: +46 8 799 44 74
Eml: lovisa.wallin.caldwell@ssm.se

UNITED KINGDOM

Steve GIBSON
Office for Nuclear regulation
St. Peter's House
Balliol Road
Bootle, Merseyside L20 3LZ

Tel: +44 0151 951 4954
Fax:
Eml: Steve.Gibson@hse.gsi.gov.uk

Craig REIERSEN
Office for Nuclear regulation
St. Peter's House
Balliol Road
Bootle, Merseyside L20 3LZ

Tel: +44 0151 951 3650
Fax:
Eml: Craig.Reiersen@hse.gsi.gov.uk

UNITED STATES OF AMERICA

Steven DOWNEY
Office of New Reactors
US Nuclear Regulatory Commission
11545 Rockville Pike,
Rockville, MD 20555

Tel: +1 301 415 8512
Eml: steven.downey@nrc.gov

Mohammed SHUAIBI
Deputy Director
Office of New Reactors
Division of Engineering
US Nuclear Regulatory Commission
11545 Rockville Pike,
Rockville, MD 20555

Tel:+1 301 415 7192
Eml: mohammed.shuaibi@nrc.gov

International Organisations

International Atomic Energy Agency, Vienna

Geoffrey JONES
Senior Safety Officer
International Atomic Energy Agency
Department of Nuclear Safety and Security
Division of Nuclear Installation Safety
Wagramer Strasse 5

Tel: +43 1 2600 26522
Eml: g.jones@iaea.org

OECD Nuclear Energy Agency, Issy-les-Moulineaux

Mr. Alejandro HUERTA
OECD-NEA Nuclear Safety Division
Le Seine St-Germain
12 bd des Iles
F-92130 Issy-Les-Moulineaux

Tel: +33 1 45 24 10 57
Eml: alejandro.huerta@oecd.org