International Experts’ Meeting

on

Severe Accident Management in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant

Organized in connection with the implementation of the IAEA Action Plan on Nuclear Safety

PROGRAMME

17 – 20 March 2014

Vienna, Austria
Chairperson of the Meeting: Mohammad Anwar Habib (Pakistan Nuclear Regulatory Agency)

Programme Committee: Farouk Eltawila, Federal Authority for Nuclear Regulation, UAE
Stuart Lewis, EPRI
Yong Man Song, Korean Atomic Energy Research Institute
Anthony Ulses, IAEA
Jean-Francois Lafontune, IAEA
Lyn Bevington, IAEA

IAEA Secretariat:

Scientific Secretaries: Jean-Francois Lafontune and Anthony Ulses
Meeting Organizer: Martina Neuhold
Administrative Support: Monica Garcia Montes and Jolanta Roch-Braeuer

Meeting Venue: International Atomic Energy Agency
Vienna International Centre (VIC)
C Building, Board Room D, 4th floor
Wagramer Strasse 5
1400 Vienna, Austria
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E-mail: official.mail@iaea.org

Working Language: English

Resolutions: No resolutions may be submitted for consideration on any subject; no votes will be taken.
Monday, 17 March 2014

11:00-16:00  On-site registration, Vienna International Centre, Gate 1

14:00-18:00  Opening Session

Chairperson: Mohammad Anwar Habib, (Pakistan Nuclear Regulatory Agency)
Co-Chairpersons: Valery Bezzubstev, (Rosenergoatom)

(Welcome address) James Lyons, Director, Nuclear Installation Safety Division (IAEA)

(Introductory comments) Mohammad Anwar Habib, Chairperson of the Meeting

(Keynote) Toyoshi Fuketa, Commissioner, Nuclear Regulatory Authority of Japan, Lessons Learned from the Fukushima Dai-ichi Accident and Responses in New Regulatory Requirements

(Keynote) IAEA Activities under the Nuclear Safety Action Plan Gustavo Caruso, Special Coordinator, Nuclear Safety Action Team (IAEA)

15:00-15:30  Coffee Break

15:30-16:00  (Keynote) Roy Harter, Duane Arnold Energy Center (USA), Severe Accident and Beyond Design Bases Event Response – An End-User Perspective

16:00-16:30  (Keynote) Vasily Galkin, World Association of Nuclear Operators – WANO, WANO Post-Fukushima Severe Accident Management Project

16:30-17:00  (Keynote) Olivier Isnard, Institute for Radiological Protection and Nuclear Safety (France), On-site/Off-site interface for an effective emergency management

17:00-17:30  (Keynote) Naohiro Masuda, TEPCO, (Japan) East Japan Earthquake on March 11, 2011 and Emergency Response at Fukushima Daini Nuclear Power Plant

17:30 – 18:00  Panel Discussion

18:00  Adjourn

18:00-20:00  Welcome Reception, 4th Floor, C Building
Hosted by the IAEA
**Tuesday, 18 March 2014**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1: Improvements to Severe Accident Management Guides (SAMGs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-12:30</td>
<td>Session Chair: Stuart Lewis, Electric Power Research Institute (USA)</td>
</tr>
<tr>
<td>09:00-09:20</td>
<td>(Keynote) Deb Mukhopadhyay, Bhabha Atomic Research Centre, (India), <em>Improvement of Severe Accident Management for Indian NPPs</em></td>
</tr>
<tr>
<td>09:20-09:35</td>
<td>Lovell Gilbert (Canada), <em>Enhancements to Severe Accident Management Guidelines To Address Fukushima Daiichi Lessons Learned</em></td>
</tr>
<tr>
<td>09:35-09:50</td>
<td>Hermann Plank (Germany), <em>SAMGs for German NPPs</em></td>
</tr>
<tr>
<td>09:50-10:05</td>
<td>Jaewhan Kim (Republic of Korea), <em>Integrated Coping Strategies for Beyond Design Basis External Events</em></td>
</tr>
<tr>
<td>10:05-10:20</td>
<td>George Vayssier (Netherlands), <em>Severe Accident Management – Lessons Still To Be Learned From Fukushima-Daiichi</em></td>
</tr>
<tr>
<td>10:20-10:35</td>
<td>Andrew White (OECD/NEA), <em>Improving the Management of Severe Accidents – Initiatives being undertaken by the NEA following Fukushima</em></td>
</tr>
<tr>
<td>10:35–10:50</td>
<td>Michael Hugon (EURATOM), <em>Euratom Research Activities On Severe Accident Management</em></td>
</tr>
<tr>
<td>10:50–11:05</td>
<td>Michel Bieth (JRC-Petten), <em>JRC-IET Activities to Support Enhancement of Severe Accident Management Guidelines (SAMGs)</em></td>
</tr>
<tr>
<td>11:10-11:30</td>
<td>Coffee Break</td>
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<tr>
<td>11:30-12:30</td>
<td>Panel Discussion</td>
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<tr>
<td>12:30</td>
<td>Lunch Break</td>
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</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 2: Equipment and Training Needs for Severe Accident Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00-18:00</td>
<td>Session Chair: Yong Man Song, Korean Atomic Energy Research Institute (Republic of Korea)</td>
</tr>
<tr>
<td>14:00-14:30</td>
<td>(Keynote) Bertrand L’Epinois, AREVA, (France), <em>Progress, perspectives and challenges in the field of design characteristics as regards severe accident management</em></td>
</tr>
<tr>
<td>14:30-14:45</td>
<td>Dimtar Popov (Bulgaria), <em>KNPP Achievements Towards Mitigation of Severe Accidents</em></td>
</tr>
</tbody>
</table>
14:45-15:00 Pascal Izydorczyk (France), *Groupe INTRA Development and Application of Equipment and Tools for Intervention After an Accident*

15:00-15:15 Chander Mohan Bhatia (India), *Accident Management Programme for Indian PHWRs*

15:15-15:30 Gábor Petofi (Hungary), *Fukushima Effect on SAM Requirements and Regulatory Oversight in Hungary*

15:30-15:45 Christopher Cole (Canada), *CNSC Severe Accident Management Regulatory Activities*

15:45-16:30 *Coffee Break and Poster Viewing*

16:30-16:45 Edward Fuller (USA), *Severe Accident Analyses to Support Filtering Strategies Rulemaking*

16:45-17:00 Ian Gordon (UK), *Application of Learning from Fukushima Daiichi to Severe Accident Management for a Major Fuel Cycle Facility*

17:00-18:00 *Panel Discussion*

18:00 Adjourn

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**Wednesday, 19 March 2014**

**09:00-12:30 Session 3: Appropriate Regulatory Treatment of Severe Accident Management Measures**

**Session Chair** Mohammad Anwar Habib, (Pakistan Nuclear Regulatory Agency)

**09:00-09:20 (Keynote)** Jennifer Uhle, United States Nuclear Regulatory Commission (USA), *Perspectives on Regulation of Severe Accident Management*

**09:20-09:35** Abdel-Raouf Gadalla (Egypt), *Strengthening National Regulatory Capabilities in Countries Embarking on New Commercial Nuclear Power Programs Post Fukushima Accident*

**09:35-09:50** Jagannathan Arunan (India), *Severe Accident Management – Regulatory Challenges and Fixing of Priorities*

**09:50 - 10:05** Han-Chul Kim (Republic of Korea), *Inspection and Validation Activities on Severe Accident Management in Korea after the Fukushima Accident*

**10:05-10:20** Muhammad Sufyan Khan (Pakistan), *Post Fukushima Lesson: Regulatory Model Development for the Validation of SAMGs*

**10:20- 10:35** Kurt Couckuyt (Belgium), *Updating WENRA Reference Levels for existing reactors in the light of TEPCO Fukushima Daiichi accident lessons learned*
<table>
<thead>
<tr>
<th>Time</th>
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</tr>
</thead>
<tbody>
<tr>
<td>10:35-10:50</td>
<td>Nadezda Kozlova (Russian Federation), <em>Regulator and TSO activity in the area of severe accident management in the light of accident at Fukushima-Daiichi NPP</em></td>
</tr>
<tr>
<td>10:50-11:05</td>
<td>Ali Tehrani (UK), <em>Beyond Design Basis Analysis: Developments in UK’s Approach and Perspective</em></td>
</tr>
<tr>
<td>11:05-11:30</td>
<td>Coffee Break</td>
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<tr>
<td>11:30-12:30</td>
<td>Panel Discussion</td>
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<td>12:30</td>
<td>Lunch Break</td>
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</tbody>
</table>

**14:00-17:30**  
**Session 4: Linkage between On-Site and Off-Site Response; Emergency Response Challenges in Severe Accidents in the Presence of Extreme Natural Events**

**Session Chair**  
Raul Dos Santos (Brazil)

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00-14:20</td>
<td>(Keynote) Masahiko Hamada, Shigematsu Works Co, Ltd, (Japan) <em>Fukushima and JSDF: Difficult communication between off-site and on-site</em></td>
</tr>
<tr>
<td>14:20-14:40</td>
<td>(Keynote) Dave Nodwell, Ontario Ministry of Community Safety and Correctional Services, (Canada), <em>Organizational Interfaces in Offsite Nuclear Responses</em></td>
</tr>
<tr>
<td>14:40-14:55</td>
<td>Miroslav Lipar (IAEA), <em>OSART results in the area of Accident Management</em></td>
</tr>
<tr>
<td>14:55-15:10</td>
<td>Maria Itziar Grolleau, (France), <em>Post-Fukushima Development of Operating Reactor Severe Accident Management and ERO Guidelines</em></td>
</tr>
<tr>
<td>15:10-15:25</td>
<td>Staffan Hennigor (Sweden), <em>Severe Accident Management Guidelines &amp; Emergency Preparedness Planning – Not One Without the Other</em></td>
</tr>
<tr>
<td>15:25-15:40</td>
<td>Yoichi Watanabe, (IFRC), <em>Relief activities conducted by the Japanese Red Cross Society after the Fukushima Daiichi Nuclear Power Plant accident and the challenges for the future</em></td>
</tr>
<tr>
<td>15:40-15:55</td>
<td>Alexander Kolevatykh, (Russian Federation), <em>Activities on Enhancing Preparedness to BDBA and Severe Accident Management</em></td>
</tr>
<tr>
<td>16:00-16:30</td>
<td>Coffee Break and Poster Viewing</td>
</tr>
<tr>
<td>16:30-17:30</td>
<td>Panel Discussion</td>
</tr>
<tr>
<td>17:30</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>
Thursday, 20 March 2014

09:00-12:30  Session 5: On-Site Emergency Response: Challenges in Severe Accidents and Link with SAMGs

Session Chair  Olivier Isnard, Institut de Radioprotection et de Sûreté Nucléaire (France)

09:00-09:20  (Keynote)  David Wilson, Point Lepreau Generating Station (Canada), On-Site emergency response planning and severe accident management

09:20-09:40  (Keynote)  Lindley Perryman, Eskom (South Africa), Koeberg NPP: Severe Accident Management Improvements

09:40-09:55  Fred Dermarkar (Canada), Human and Organizational Performance Considerations in Severe Accident Management

09:55-10:10  Zhiyi Yang, (China), Development of Severe Accident Management Guidelines and its Implementation in China

10:10-10:25  Babar Ghias (Pakistan), KANUPP-Lessons from FUKUSHIMA

10:25-10:40  Vladivoj Reznik (Slovakia), Implementation of the Severe Accident Management in Slovenské elektrárne

10:40-10:55  E. Anderson (USA), ISOE Expert Group; Management of Worker Dose during Severe Accident Conditions

11:00-11:30  Coffee Break

11:30-12:30  Panel Discussion

12:30-14:00  Lunch Break

14:00-15:30  Closing Session

14:00-15:10  Session Summaries

15:10-15:25  Chairperson’s summary  Anwar Habib

15:25-15:30  Closing remarks  Denis Flory, Deputy Director General, Head of the Department of Nuclear Safety and Security (IAEA)

15:30  Adjourn
Poster Sessions

IAEA-CN-233/1  Mohamed Abd El-Monem Ali Mostafa, *Regulatory Framework Reassessments and Considerations For Post-Fukushima Daiichi Accident* (Egypt)

IAEA-CN-233/3  Jozef Baláž, *The Qualification Methodology for the systems dedicated to severe accident mitigation* (Slovakia)

IAEA-CN-233/4  Cantemir Ciurea-Ercau, *Regulatory Actions post – Fukushima* (Romania)

IAEA-CN-233/5  Rafael Martinez Fanegas, *GGAS: An Aid Tool for the Technical Support Center (TSC) in Severe Accident Management* (Spain)

IAEA-CN-233/6  Likai Fang, *Severe accident management under lowpower and shutdown conditions* (China)

IAEA-CN-233/7  Franck Guarnieri, *Engineering Thinking in Emergency Situation: A New Concept for Nuclear Safety* (France)

IAEA-CN-233/9  Ibrahim Khamis, *SAMT: a new IAEA tool on severe accident management* (IAEA)


IAEA-CN-233/12  Pedro Júlio Batista De Oliveira Nishiyama, *LOCA with Station Blackout at LABGENE Reactor* (Brazil)


IAEA-CN-212/14  Robert Prior, *PWR Owners Group SAMG Developments in the U.S and Europe* (UK)

IAEA-CN-212/15  Emmanuel Raimond, *What level of robustness shall be expected for NPPs severe accident management provisions and how to demonstrate it ? Some IRSN views based on recent experience.* (France)

IAEA-CN-212/16  John Scott Robertson, *Canadian Off-Site Emergency Response Planning for Severe Accidents* (Canada)

IAEA-CN-212/17  Antanas Romas, *An Effective Implementation Platform for Severe Accident Management Guidelines* (Sweden)

IAEA-CN-212/18  Yong Mann Song, *Recent Findings for Enhanced SAM Measures against Fukushima Issues in Korean PHWR Plants* (Republic of Korea)

IAEA-CN-212/19  Ole Ammon Staack, *Analysis and application of web-based technologies in the field of nuclear risk- and crisis-communication* (Germany)
IAEA-CN-212/20  Alexander Tritonov, *Simulation and investigation of heat remove at cooling pond of NPP at different fuel rod array* (Belarus)

IAEA-CN-212/21  George Vayssier, *Review of Accident Management at NPPs - A New Utility Oriented Service* (Netherlands)

IAEA-CN-212/22  Yuriy Vorobyov, *Development of SAMGs for Ukrainian PWRs, results of analytical justifications review, main issues and future development needs* (Ukraine)