Joint Meeting of the
35th Radiation Safety Standards Committee / 36th Waste Safety Standards Committee

20-21 November 2013

Agenda Item RW7.5

DPP DS483 Safety Guide: Severe Accident Management Programme for Nuclear Power Plants

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Division of Nuclear Installation Safety
OUTLINE

• Background
• Objective of Revision
• Comments from Committees
• Fukushima Implications
Background

• NS-G-2.15 is one of the safety guides selected for the pilot exercise to assess the impact of changes to Safety Requirements in the light of the lessons learned from the Fukushima Daiichi accident

• Pilot Exercise Conclusions presented at the 35th NUSSC Meeting
  - NS-G-2.15 (2010) was linked to NS-R-1 (2000) and needs a thorough revision for being consistent with GAR Part 4, SSR-2/1 and SSR-2/2.
  - It needs to revise based upon Fukushima lessons learned including accident management for spent fuel storage.

• DPP developed accordingly and submitted to relevant committee, NUSSC, NSGC, RASSC-WASSC and commission, CSS.
SSG for Safety Standards for Nuclear Installations (Revision Process)
Background

• Developed 2004-2009
  - Published in 2009
  - Provide recommendations and guidance for relating to an accident management program complying with the requirements in GSR Part 4, SSR-2/1 and 2/2

• Used for 5 years as basis for:
  - Preparation of SAMG in MSs
  - IAEA SAET for AM for MSs
  - IAEA OSART and RAMP services to MSs as guidance and practical tools
Objectives of Revision

• **To take into account:**
  - Lessons Learned identified from Fukushima Daiichi accident
  - Revision of Safety Requirements (DS462: GSR Part 4, SSR-2/1and 2/2)
  - Feedback from MSs applying safety guide for past 5 years

• **To ensure:**
  - Consistency with relevant Safety Requirements (DS462: GSR Part 4, SSR-2/1and 2/2)
  - Reflecting lessons from Fukushima Daiichi accident and current knowledge and best practices
Activities Undertaken in 2012-2013

- Review in light of response to Fukushima Daiichi accident
- Two (2) Consultancy Meetings
- One (1) Technical Meeting on STE for severe accident
- International cooperation (i.e. OECD-NEA WGAMA)
## Comments from Committees

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- **44 Comments received from 5 MSs and 2 IOs**
  - 12 General and 32 specific
    - Many comments are duplicated
    - Mainly clarification and editorial wording
    - 34 accepted, 5 rejected, 5 modification
- Comments are helpful to improve quality of the DPP and will be considered to revise DS483 (NS-G-2.15)
1. INTRODUCTION
2. CONCEPT OF AMP
   Requirements
   Concept of Accident Management
   Main Principles
   Equipment Upgrades
   Forms of AMG
   Roles and Responsibilities
3. ATTRIBUTES OF AMP
   General remarks: preventive and mitigatory domains
   Identification of plant vulnerabilities
   Identification of plant capabilities
   Development of AM strategies
   Development of procedures and guidelines
   Hardware provisions for AM
   Role of instrumentation and control
   Responsibility, lines of authorisation
   Verification and validation
   Education and training
   Processing new information (periodic review)
   Supportive analysis
   Quality assurance
Annex 1: Example for accident sequence categorization scheme
Annex 2: Qualification and training of SA code users (new)
Example: Lessons Learned

- Enhancing radiation protection function
  - Interface between TSC and RC
  - Procedures for venting
  - Adequate radiation protection personnel that might be necessary for accident management functions

- Enhancing spent fuel pool makeup capability and instrumentation for the spent fuel pool
  - Control of re-criticality and removal of heat from spent fuel
  - Essential instrumentation needed for monitoring spent fuel pool
Fukushima Implications

• Taking into consideration revisions to DS462 (GSR Part 4, SSR-2/1, SSR-2/2) and DS482 (NS-G-1.10)

• Other issues
  • Feedback from IEM-7 on Severe Accident Management in the light of the accident at the Fukushima Daiichi NPP on March 2014
  • Interface with preparation of IAEA Comprehensive Report for Fukushima Daiichi accident
Next Step

• **Requested Action:** Committees approval to send DPP for DS483 to the CSS on April 2014

• **Timescale**

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<th>TASK</th>
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<tr>
<td>Approval of DPP by the Coordination Committee and the relevant review Committees</td>
<td>Q-4 2013</td>
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<td>Approval of DPP by the CSS</td>
<td>Q-1 2014</td>
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<td>Preparing the draft</td>
<td>Q-2 2014</td>
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<tr>
<td>Approval of draft by the Coordination Committee and the relevant review Committees</td>
<td>Q-4 2014</td>
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<td>Soliciting comments by Member States</td>
<td>Q-2 2015</td>
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<td>Approval of the revised safety guide by the Coordination Committee, the relevant review Committees, and endorsement by the CSS</td>
<td>Q-4 2016</td>
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Thanks for your attention

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