

# BWR OWNERS' GROUP

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BWROG-13008  
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Project Number 691

Mr. David L. Skeen  
Director, Japan Lessons Learned Project Directorate  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** Boiling Water Reactor Owners' Group Report *Plant Evaluation of Severe Accident Mitigation Strategies, Rev. 1*, January 2013 (TPN: BWROG-TP-13-001)

Dear Mr. Skeen:

The BWR Owners' Group (BWROG)<sup>1</sup> is pleased to provide the Nuclear Regulatory Commission (NRC) the enclosed report<sup>2</sup> entitled *Plant Evaluation of Severe Accident Mitigation Strategies, Rev. 1*. This report documents the results of a plant table-top evaluation of potential strategies to mitigate severe accidents resulting from Fukushima-type events.

On September 25, 2012, the Electric Power Research Institute (EPRI) released a comprehensive technical report<sup>3</sup> that developed strategies for use at BWR Mark I and II plants that would mitigate releases due to severe accidents. The EPRI report concluded that substantial decontamination factors for radioactive releases from severe accidents involving fuel damage can be achieved by a comprehensive strategy that includes installed equipment, operator actions and capabilities that are largely consistent with the diverse and flexible coping strategy (FLEX). The table-top evaluation – a natural evolution beyond the EPRI report – was conducted to determine if the filtering strategies developed in the EPRI report could be implemented at a specific plant.

The fundamental conclusion of the table-top evaluation is that the performance-based framework for filtering strategies developed by EPRI was demonstrated and can be reliably implemented. The best way to prevent releases remains preventing the accident in the first place. In the unlikely event that the fuel damage occurs, the table-top evaluation makes clear that cooling core debris is essential regardless of what strategy is adopted. In addition, the table-top lessons included the need for a severe accident capable vent, enhancements are needed at plants to comply with the EPRI strategies, and that operators are already trained on the use of controlled venting strategies.

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<sup>1</sup> The BWR Owner's Group provides a forum where utility members can achieve higher plant reliability, maintain and improve plant safety, minimize and share costs, and facilitate regulatory interaction.

<sup>2</sup> BWROG (BWR Owners' Group, 2013), *Plant Evaluation of Severe Accident Mitigation Strategies, Rev. 1* (TPN: BWROG-TP-13-001) Wilmington, NC: BWROG

<sup>3</sup> EPRI (Electric Power Research Institute, 2012), *Investigation of Strategies for Mitigating Radiological Releases in Severe Accidents – BWR Mark I and Mark II Studies* (EPRI Product No. 1026539) Palo Alto, CA: EPRI

In assessing the strategies, the table-top reinforced the need for a performance-based approach to vent filtering. The evaluation concluded that performance goals for equipment operation and operator actions must meet the twin objectives of reliable and effective. This would include cooling fuel debris, controlling drywell temperature, and the use of a severe accident capable containment vent on both the wetwell and drywell to control pressure and maximize suppression pool radionuclide filtering. This report is an excellent starting point for NRC, in consultation with the industry and other stakeholders, to develop the performance requirements for equipment and operators.

The BWROG stands ready to participate in meetings and technical exchanges with the NRC staff and other stakeholders to discuss the results of the table-top evaluation and develop the needed performance requirements.

We hope you find this report informative and useful. If you have any questions, please do not hesitate to contact me or Ted Schiffley, BWROG Chairman.

Sincerely,



Oscar Limpias  
Executive Chairman  
BWROG Executive Committee

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Enclosure: Plant Evaluation of Severe Accident Mitigation Strategies Rev. 1  
TPN: BWROG-TP-13-001