

Mark I and Mark II BWRs Containment Venting Systems

Guidance for Order EA-13-109

January 29, 2014



Agenda

- Introductions
- Opening remarks
- Schedules
- NRC presentation
- Industry presentation
- Public questions and comments

- Toll free number: **888-390-5220** and pass code: **81304**



Schedule

- ISG endorsing NEI 13-02 – November 15, 2013
- Public meetings – Dec. 5, 2013, Jan. 15, 2014
- Next public meeting – February 19, 2014
- Overall Integrated plan (OIP) – June 30, 2014



Review Process

- OIP submittals – June 30, 2014
- Pilot Plants OIP submittals-March/April 2014
- NRC staff feedback – April/May 2014
- NRC staff review and interim staff evaluations (ISEs) – December, 2014



NRC Presentation



Japan Lessons Learned

OIP Template

- HCVS Primary and Alternate Controls

Main control room is a readily accessible location (GDC 19)

Supplementary measures for ventilation after first 24 hours acceptable provided measures are shown feasible under severe accident conditions

SFP cooling, is the question related to source terms or environmental affects (e.g. temperature) in adjoining areas?

Communication between locations is important if indication of system functionality is split between locations



OIP Template

- **HVAC Dedicated Equipment**

All actions are from the controls location. Any actions beyond the controls location is considered significant, therefore not allowed in the first 24 hours. This includes stripping of loads at distribution panels or load centers.

Dedicated equipment does not apply to components meeting existing functions such as penetrations, containment isolation valves, boundary valves (except new valves such as a vent valve), piping, etc.



OIP Template

- HCVS Dedicated Equipment

Dedicated equipment applies to power actuation to valve actuator solenoids, instrumentation, valve position indication, and valve motive force by power, compressed air or nitrogen.

If shared by other equipment, must meet 24 hour capability without operator actions beyond operation of switches at the main/alternate control location(s).

Question regarding battery transfer switches on control location(s) when supplemental batteries are relied – how will the operator know when a battery is running out of charge? Indication is greatly preferred over elapsed time.



OIP Template

- 24 hour open/close cycles

Mitigating strategies have ww vent valve opening and closing to control heat removal and pressure in containment.

Previously suggested filtering strategies have the operator cycling the ww vent, then switching from wet well to dry well vent with continued cycling of dw vent valve.

Given the unknown, a bounding approach preferred over individual licensee determination of vent cycles.



OIP Template

- 24 hour open/close cycles

Industry should propose a conservative number of cycles with appropriate justification for Phase 1, with the understanding that a more reasonably reliable number of cycles will be determined as Phase 2 and rulemaking efforts continue, and if needed, number of 24 hour cycles may have to be supplemented later.



OIP Template

- HCVS Alternate Control Operating Mechanism

Other means as described in the previous meeting slides by the industry are acceptable. The intent of providing alternate operating mechanism (to reach-rod with hand wheel) is because of the recognition that the vent valves are in environmental conditions that preclude close approach for operation, such as in the torus room.

Needs additional discussion for situations where there would be vent valve(s) external to the torus room.



OIP Template

- Operating procedures/guidance

Will depend on EPG/SAG revisions which are in a indeterminate state.

Staff is not reviewing or determining acceptability of procedures/guidance at least until completion of Phase 2 and rulemaking work.

Consistent with staff's approach in the ISG.



Industry Presentation



Questions & Discussion

