Interim Staff Guidance for Reliable Hardened Vents for Mark I and II Containments

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Topics

Interim Staff Guidance

Revised Containment Venting Concept

Integrated Plan to be submitted on February 28, 2013

Interim Staff Guidance

BWROG submitted proposed ISG elements to NRC on May 18, 2012

Additional proposed definition:

- Sustained operation - The use of the RHV for containment heat removal may require multiple and/or intermittent operation (i.e., opening or isolating) over a period of time. As such, the period of operation considered in the design of the RHV should be consistent with implementation of the FLEX coping strategy and may employ installed or portable equipment to sustain vent operation.

Revised Venting Concept

Purpose of discussion:

- Obtain NRC feedback on the plant use of 10 CFR 50.59 for revised venting concept
  - EPG Rev 4 SER states that venting is a "last resort"

Revised Containment Venting Concept

- ***Current*** Emergency Procedure Guidelines venting pressure
  - Between the Pressure Suppression Pressure (~ 35 psig) and the Primary Containment Pressure Limit (~ 60 psig)
- ***Revised**** Emergency Procedure Guidelines venting pressure
  - Venting permitted below 35 psig under certain conditions.

** Implementation in progress

Revised Containment Venting Concept

EPG Venting Override Conditions:

If while executing the following steps primary containment pressure reduction is required to restore and maintain adequate core cooling or reduce the total offsite radiation dose, vent the primary containment, defeating isolation interlocks and exceeding offsite radioactivity release rate limits if necessary.

Revised Containment Venting Concept

Reason for change:

- Provide a lower pressure for portable diesel driven pumps to inject water into reactor
  - SRVs can only lower reactor pressure to 50 psi above containment pressure
  - Therefore, containment pressure limits the amount reactor pressure can be reduced
- Maintain containment pressure below RCIC backpressure trip

Revised Containment Venting Concept

The override provides the limitations to ensure venting at lower pressures will only occur when required (ensuring no venting occurs within design basis space)

Integrated Implementation Plan

Conceptual design description

Consistency with ISG

- Design/operation comparison to ISG

Integrated Implementation Plan

Simplified one-line drawing (conceptual design)

- Starting from primary containment
  - Show in-line vent path valves
  - Show connections to other systems
  - Show at least first valve in all connections
- Show system instrumentation, e.g., valve position indication, radiation monitor
- Show all major building walls (e.g., RX building)

Integrated Implementation Plan

Date by which compliance with Order EA-12-050 is required based on current outage schedules

Major milestones (quarter expected to complete)

- Conceptual design complete
- Equipment ordered
- Detailed design complete
- Equipment delivery
- Procedure validation complete
- Training complete
- Implementation complete

Next Steps

NRC plans for issue of ISG and comment process