

November 9, 2006

Technical Specification Task Force
11921 Rockville Pike, Suite 100
Rockville, MD 20852

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING TSTF-478,
REVISION 0, "BWR TECHNICAL SPECIFICATION CHANGES THAT
IMPLEMENT THE REVISED RULE FOR COMBUSTIBLE GAS CONTROL"

Dear Members of the TSTF,

By letter dated April 25, 2005, the Boiling Water Reactors Owners Group (BWROG) submitted TSTF-478, Revision 0, "BWR Technical Specification Changes that Implement the Revised Rule for Combustible Gas Control". The Nuclear Regulatory Commission (NRC) staff has been reviewing the submittal and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed Request for Additional Information (RAI). A response to this RAI is requested to be provided within 90 days.

Sincerely,

/RA/

Timothy Kobetz, Chief
Technical Specifications Branch
Division of Inspections & Regional Support
Office of Nuclear Reactor Regulation

Enclosure:
RAI

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Enclosure:
RAI

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ADAMS ACCESSION NUMBER: ML062770089

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DATE	11/6/2006	11/9/2006	11/6/2006

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REQUEST FOR ADDITIONAL INFORMATION (RAI)
REGARDING TSTF-478, REVISION 0, "BWR TECHNICAL SPECIFICATION CHANGES THAT
IMPLEMENT THE REVISED RULE FOR COMBUSTIBLE GAS CONTROL"

Extending the Period of Deinerted Operation from 24 Hours to 72 Hours

1. Provide the following information to better understand the rationale and benefits associated with extending the period of deinerted operation from 24 hours to 72 hours:
 - a. a general description of operational experience with the 24 hour completion time, including:
 - a typical timeline or sequence of events for a plant startup and a plant shutdown, with the times at which inerting/de-inerting is initiated and completed, the times in each operating mode, and the times at which the LCO is entered/exited,
 - typical frequency/occurrences of startups and shutdowns in which inerting/de-inerting: caused a trip, became a critical path activity, or was perceived to have placed the plant in a less-safe state,
 - a description of typical control room staffing during the startup and shutdown periods, whether the control room staffing is supplemented to address inerting and de-inerting, and how the responsibilities for inerting and de-inerting are typically distributed among the control staff, and
 - any known current plant-specific technical specifications that permit a completion time greater than 24 hours, or prior NRC approvals of a completion time greater than 24 hours.
 - b. an anticipated typical timeline or sequence of events for a plant startup and a plant shutdown assuming a 72 hour completion time, with the times at which inerting/de-inerting is initiated and completed, the times in each operating mode, and the times at which the LCO is entered/exited.
 - c. an explanation why inerting/de-inerting would have a lower likelihood of causing a trip, becoming a critical path activity, or placing the plant in a less-safe state if the completion time is extended from 24 hours to 72 hours.
2. Based on a scoping assessment performed by the NRC staff, the Δ LERF for the proposed extension would exceed the $1E-7$ per year value associated with a "very small change" in RG 1.174. Provide an assessment of the approximate level of the risk increase associated with extending the completion time from 24 hours to 72 hours. This assessment should address the factors identified below.
 - a. the likelihood of either an internally-initiated or an externally-initiated core damage event occurring during the additional 96 hour period (i.e., 48 additional hours during startup and 48 additional hours during shutdown),

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- b. the potentially higher core damage frequency associated with transition risk during startup and shutdown, when the containment might be de-inerted, and
- c. the increase in the conditional containment failure probability for a de-inerted containment (essentially 1.0) versus an inerted containment.

Extending the Completion Time for Restoring Systems

1. Provide an assessment of the approximate level of the risk increase associated with extending the completion time for restoring the following systems to 7 days, when all systems/divisions are inoperable:
 - the drywell cooling system fans (for Mark I and II containments),
 - the drywell purge system (for Mark III containments), and
 - the hydrogen igniters (for Mark III containments).A separate assessment for each affected system appears necessary. This assessment should address the factors identified below.
 - a. the likelihood of either an internally-initiated or an externally-initiated core damage event occurring during the additional period (i.e., 7 days) when the system may be inoperable, and
 - b. the increase in the conditional containment failure probability with the affected system inoperable
2. Provide a more detailed description of the severe accident management strategies for controlling hydrogen concentrations and lowering containment pressure as alluded to in "Insert 2" on page 12 of the TSTF, and the associated equipment/systems on which these actions would rely. Address the availability of these equipment/systems given the removal of the recombiner and CAD systems.
3. Provide the technical analyses that support the claim that post-accident natural circulation forces will promote sufficient mixing to avoid the accumulation of combustible gases at concentrations that could challenge containment structure integrity due to either detonations or large deflagrations.