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Fuel Solutions

Resolution of VSC-24 Open Issues

September 5, 2002

Background

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- 06/14/93 - SNC Submitted VSC-24 SAR Revision 1
- 02/01/94 - NRC Issued RAIs on VSC-24 SAR Revision 1
- 10/09/98 - SNC withdrew VSC-24 SAR Revision 1 and requested NRC suspend review of all other VSC-24 SAR submittals
- 10/16/98 - NRC acknowledged SNC withdrawal of the VSC-24 SAR Revision 1 and requested than SNC address associated RAIs in future LARs

Background (Continued)

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- BFS has addressed most of the RAIs from the VSC-24 SAR Revision 1 in previous submittals and committed to address the remaining RAIs via future LARs or changes made under §72.48
- Previous LAR submittals driven by Customer requirements and immediate needs
  - Additional changes not related to the specific submittals were avoided to minimize scope and schedule to meet Customer needs
- Commitment to address RAIs via future LARs made prior to §72.48 rule change
  - With rule change, BFS now intends to make all necessary FSAR changes to address RAIs via §72.48

Summary of Remaining RAIs

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- LAR 01-01, Revision 2, Tab 10 summarizes previous responses to RAIs from VSC-24 SAR Revision 1
  - See following slides for summary of open issues
- LAR 01-01, Revision 2, Tabs 6 through 9 summarize revised responses to previous RAIs
  - All revised RAI responses were submitted to NRC with no further comments resulting from review
  - *Note: Tab 9 provided responses to all associated RAIs, but incorrectly refers to future license amendments in the summary table*

Summary of Remaining RAIs

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RAI Number	RAI Issue	Proposed Resolution
1-4	Discuss the design features of the MSB, VCC, and MTC that facilitate decontamination	Revise FSAR to discuss design features that facilitate decontamination by §72.48
2-1	Discuss design basis criteria for fire and explosive overpressure to the MSB and VCC	No FSAR change required. FSAR Section 2.3.6 already requires site-specific evaluation for fire and explosive pressure
2-2	Discuss design basis criteria for a lightning strike to the MSB and VCC	Revise FSAR via §72.48 to add discussion of design criteria for lightning and requirement for the licensee to perform a site-specific evaluation
2-3	Discuss design basis criteria and justification for the assumptions used for continuous monitoring of the MSB	Revise FSAR via §72.48 to discuss design basis criteria and assumptions for continuous monitoring of the MSB
4-3	Provide a technical basis and experimental justification for extending PNL-6189 long-term cladding temperature limit beyond a burnup of 45,000 MWd/MTU	No additional changes required. Addressed by LAR 01-01, Revision 3
4-4	Provide the cask unloading MSB quench analysis	Revise FSAR via §72.48 to require licensee to perform a site-specific unloading MSB quench analysis

Summary of Remaining RAIs

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RAI Number	RAI Issue	Proposed Resolution
4-5	Provide a technical evaluation of the epoxy enamel coating on exterior of the MSB on the calculated fuel cladding and MSB internal components and any chemical interactions	Originally added epoxy enamel coating in Revision 1 of the VSC-24 SAR, but subsequently deleted in generic design. Evaluation of epoxy enamel coatings are addressed by licensee 72.48's.
5-1	Analyze effect on public dose rates from VCC degradation due to fire, explosion, and tipover accidents	No additional changes required since previously addressed by LAR 01-01 (inconsistency in Tab 10 table noted)
7-1	Discuss provisions for continuous monitoring of the MSB, parameters to be monitored, and relationship to conditions required for safe storage	Revised FSAR via 72.48 to discuss continuous monitoring of the MSB
8-2	Provide a description and discussion of the cask unloading procedure	Revise FSAR to require licensee to provide a site-specific unloading procedure by §72.48
11-1	Reanalyze the full blockage of the air inlet vent accident condition without crediting air outlets as an air inlet flow path	Revise FSAR to include description of adiabatic heatup analysis (see following discussion)

Summary of Remaining RAIs

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RAI Number	RAI Issue	Proposed Resolution
12-1	Address the lack of helium purity in the operating controls and limits (specify helium purity)	Revise FSAR Chapter 8 and Technical Specification bases to specify required helium purity by §72.48
12-6	Specify controls/limits for the minimum-quench water temperature and maximum flow rate for reflooding the cask during unloading	Per RAI 4-4 response, revise FSAR via §72.48 to require licensee to perform a site-specific unloading MSB quench analysis. Controls/Limits are determined by site-specific analysis

Summary of Remaining RAIs

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- RAI 11-1 Discussion
  - –SNC provided NRC with blocked vent accident adiabatic heat-up analysis (Calc. WEP-109.003.9, Rev. 0) in addition to analysis presented in SAR
  - –SER acceptance based on adiabatic heat-up analysis
  - –BFS proposes to revise the FSAR to discuss the adiabatic heat-up analysis upon which NRC acceptance is based
    - –Not a "Change" per definition of §72.48
    - –Revised discussion of the blocked vent adiabatic heat-up analysis will be included in the next FSAR revision

Remaining Actions

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- BFS will provide formal responses to open RAIs from the VSC-24 SAR Revision 1
- BFS will process all §72.48 changes and incorporate into the next revision of the VSC-24 FSAR

Conclusions

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- The proposed actions complete the commitment to address the RAIs on the VSC-24 SAR Revision 1
- BFS does not anticipate the need for future LARs for the VSC-24 System to address the RAIs on the VSC-24 SAR Revision 1