



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 29, 2009

Vice President, Operations
Entergy Operations, Inc.
River Bend Station
5485 U.S. Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION, UNIT 1 – SUPPLEMENTAL INFORMATION NEEDED FOR ACCEPTANCE OF REQUESTED LICENSING ACTION RE: RISK-INFORMED RELIEF REQUEST BASED ON ASME CODE CASE N-716 (TAC NO. ME1507)

Dear Sir or Madam:

By letter dated June 16, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091740306), Entergy Operations, Inc. (Entergy, the licensee), submitted a relief request for the River Bend Station (RBS), Unit 1. The proposed relief request would implement a Risk-Informed Inservice Inspection (RI-ISI) program based on the American Society of Mechanical Engineers (ASME) Code Case N-716, "Alternative Piping Classification and Examination Requirements, Section XI Division 1." The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this relief request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Pursuant to Sections 50.55a(a)(3)(i) and 50.55a(a)(3)(ii) of Title 10 of the *Code of Federal Regulations* (10 CFR), the applicant shall demonstrate that the proposed alternative would provide an acceptable level of quality and safety, or that compliance with the specified requirements of Section 50.55a would result in hardship or unusual difficulty without a compensating increase in the level of quality or safety.

The NRC staff has reviewed your application and concluded that the information delineated in Question 1 of the enclosure to this letter is necessary to enable the NRC staff to make an independent assessment regarding the acceptability of the proposed relief request in terms of regulatory requirements and the protection of public health and safety and the environment. Question 2 is information that is needed for the review of the relief request.

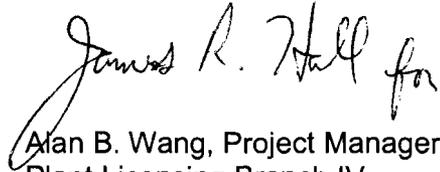
In order to make the application complete, the NRC staff requests that Entergy supplement the application to address the information requested in Question 1 of the enclosure by August 11, 2009. This will enable the NRC staff to begin its detailed technical review. Response to Question 2 would help expedite the review. If the information requested by the NRC staff in Question 1 is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the

application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated timeframe in this letter were discussed with Barry Burmeister of your staff on July 28, 2009.

If you have any questions, please contact me at (301) 415-1445 or by e-mail at Alan.Wang@nrc.gov.

Sincerely,

A handwritten signature in black ink that reads "James R. Hall for". The signature is written in a cursive style and is positioned above the typed name of the signatory.

Alan B. Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-458

Enclosure:
As stated

cc w/encl: Distribution via Listserv

SUPPLEMENTAL INFORMATION NEEDED
RISK-INFORMED INSERVICE INSPECTION RELIEF REQUEST
TO IMPLEMENT ASME CODE CASE N-716
ENTERGY OPERATIONS, INC.
RIVER BEND STATION, UNIT 1
DOCKET NO. 50-458

By letter dated June 16, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091740306), Entergy Operations, Inc. (Entergy, the licensee), submitted a relief request for the River Bend Station (RBS), Unit 1. The proposed relief request would implement a Risk-Informed Inservice Inspection (RI-ISI) program based on the American Society of Mechanical Engineers (ASME) Code Case N-716, "Alternative Piping Classification and Examination Requirements, Section XI Division 1." On July 28, 2009, Entergy met with the U.S. Nuclear Regulatory Commission (NRC) staff to discuss its proposed relief request. As result of this meeting, the NRC staff concluded that the following information is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed relief request in terms of regulatory requirements and the protection of public health and safety and the environment:

1. Table 1 in the relief request provides the results of the RBS probabilistic risk assessment (PRA) self-assessment and identifies the 72 ASME (RA-Sb-2005) supporting requirements (SRs) that could require a sensitivity study or other disposition to more fully support the RI-ISI analysis. In numerous entries, the importance of the gap between the ASME SR and the RBS PRA analysis is deemed not significant based on the gap being a documentation issue which requires no model changes. Entergy should explain how it reached the conclusion that each of these gaps are solely a lack of documentation and not an important (for RI-ISI) difference between the attributes of RBS PRA analysis and the ASME SRs.
2. Page 27 of 68 in the relief request states that, "[t]he RBS Internal Flooding Analysis (IFA) was significantly upgraded to meet the requirements of RG [Regulatory Guide] 1.200 in 2009." The NRC staff interprets this to mean that the flooding SRs are all at least consistent with Capability Category (CC) II SRs. The NRC staff has concluded that additional work may be needed beyond CC II in order for the PRA technical adequacy to be consistent with that determined to be acceptable for PRAs that supported the Electric Power Research Institute (EPRI) topical report TR-112657, "Revised Risk-Informed Inservice Inspection Evaluation Procedure, Rev. B-A," RI-ISI process. Please explain how the following three issues are addressed:
 - a. SR IF-C3 (IFSN-A8) identifies the failure mechanisms that shall be evaluated to determine the susceptibility of each structure, system, and component (SSC) in a flood area to flood-induced failures. CC II identifies failure by submergence and

Enclosure

spray as requiring identification but may not require assessment. CC III requires identification and assessment of all failure modes including submergence, spray, jet impingement, pipe whip, and humidity, condensation, and temperature concerns. RI-ISI methods require that all SSC failures induced by a pipe break be considered. Please demonstrate that all SCCs failures that are induced by a pipe break are adequately assessed in your analysis.

- b. SR IF-D3a (IFEV-A3) CC II permits grouping or subsuming flood-initiated scenarios with existing plant-initiating event groups. A CC III analysis which does not permit grouping is more consistent with previous RI-ISI analyses. If grouping of flood scenarios with other initiating event groups was done, please confirm that the subsumed flooding scenarios were identified during the flooding analysis and extracted during the RI-ISI analysis in order to insure that their contribution to the RI-ISI analysis was properly included.
- c. SRs IF-C6 (IFSN-A14) and IF-C8 (IFSN-A16) permit screening out of flood areas and sources, respectively, based on, in part, the success of human actions to isolate and terminate the flood before equipment is damaged. RI-ISI methods require determination of the flood scenario with and without human intervention which corresponds to CC III (i.e., scenarios are not screened out based on human actions). Therefore, a CC III analysis is more consistent with previous RI-ISI analyses. If CC II is used, high reliability of the human actions relied upon to screen out scenarios should be demonstrated using methods consistent with the SR IF-E5 (IFQU-A5) in the standard. Please re-evaluate the credit given to human actions to provide confidence that scenarios that might exceed the quantitative guideline are identified.

application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated timeframe in this letter were discussed with Barry Burmeister of your staff on July 28, 2009.

If you have any questions, please contact me at (301) 415-1445 or by e-mail at Alan.Wang@nrc.gov.

Sincerely,

/RA by James R. Hall for/

Alan B. Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-458

Enclosure:
As stated

cc w/encl: Distribution via Listserv

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ADAMS Accession No. ML092100279

*concurrence via email

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	DRA/APLA/BC	NRR/LPL4/BC	NRR/LPL4/PM
NAME	AWang*	JBurkhardt	DHarrison*	MMarkley BSingal for	AWang JHall For
DATE	7/29/09	7/29/09	7/29/09	7/29/09	7/29/09