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December 28, 2006
JAFP-06-0181

Pete Dietrich
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U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
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- REFERENCES:
1. Letter, Entergy to USNRC, "James A. FitzPatrick Nuclear Power Plant, Docket No. 50-333, License No. DPR-59, License Renewal Application," JAFP-06-0109, dated July 31, 2006
 2. Letter, USNRC to JAFNPP, "Requests for Additional Information Regarding the Review of the License Renewal Application for James A. FitzPatrick Nuclear Power Plant (TAC No. MD2667)," dated November 29, 2006

SUBJECT: **Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333, License No. DPR-59
License Renewal Application, Amendment 3**

Dear Sir or Madam:

On July 31, 2006, Entergy Nuclear Operations, Inc. submitted the License Renewal Application for the James A. FitzPatrick Nuclear Power Plant (JAFNPP) as indicated by Reference 1. Attachment 1 provides responses to the requests for additional information as detailed by the NRC in Reference 2 that were the result of the scoping and screening review at JAFNPP for structures, specifically, LRA section 2.4.

Should you have any questions concerning this submittal, please contact Mr. Jim Costedio at (315) 349-6358.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 28th day of December, 2006.

Sincerely,


PETE DIETRICH
SITE VICE PRESIDENT

S. BOND
ACTING
FOR P. DIETRICH

PD/djc

Attachment

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Attachment 1

James A. FitzPatrick Nuclear Power Plant

License Renewal Application Supplement

Amendment 3

Scoping and Screening Structures

RAI Responses

RAI 2.4.1-1	RAI 2.4.2-2
RAI 2.4.1-2	RAI 2.4.2-3
RAI 2.4.1-3	RAI 2.4.3-1
RAI 2.4.1-4	RAI 2.4.3-2
RAI 2.4.1-5	RAI 2.4.3-3
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RAI 2.4.2-1	RAI 2.4.4-1
	RAI 2.4.4-2

Request for Additional Information
James A. Fitzpatrick License Renewal Application (LRA)
Section 2.4 Scoping and Screening Results: Structures

RAI 2.4.1-1

Section 2.4-1, Reactor Building and Primary Containment of the LRA, under Inner Refueling Bellows and Bulkhead Assembly does not clearly state the makeup of the bulkhead assembly. The staff requests the applicant to provide a list of bulkhead assembly components that are within the scope of license renewal and a drawing that depicts the bulkhead assembly.

RAI 2.4.1-1 Response

Bulkhead assembly components are not within the scope of license renewal. They are not safety-related and are not required to demonstrate compliance with regulations identified in 10 CFR 54.4(a)(3). The Table 3.5.2-1, page 3.5-58 line items "inner refueling bellows" and the corresponding line item in Table 2.4-1, page 2.4-20, were inadvertently included in the LRA and are hereby deleted from the LRA. The referenced NUREG-1801 line item (C-20) involves bellows for vent pipe downcomers that are part of the primary containment pressure boundary. The inner refueling bellows is not a containment pressure boundary component. Failure of these bellows or the assembly will not prevent satisfactory accomplishment of a safety function. Leakage, if any, through the bellows is directed to a drain system that is located in the lower drywell.

RAI 2.4.1-2

Table 2.4-1, Reactor Building of the LRA, does not include drywell head closure bolts and double-gasketed drywell head. These components have the intended function of the drywell pressure boundary. The staff requests the applicant to provide justification for not including them in the scope of license renewal.

RAI 2.4.1-2 Response

Drywell head closure bolts are included in item ASME Class 1, 2, 3, and MC supports bolting in Table 2.4-4. The gasket associated with the drywell head is in the scope of license renewal, but is replaced every time the head is removed. Therefore, the drywell head gasket is replaced on a specified frequency and is not subject to aging management review.

RAI 2.4.1-3

Table 2.4-1, Reactor Building of the LRA, does not incorporate refueling cavity seal components within the scope of license renewal. The proposed license renewal interim staff guidance LR-ISG-2006-01, "Plant Specific Aging Management Program for inaccessible Areas of Boiling Water Reactor Mark 1 Steel Containment Drywell Shell," which was published in the Federal Register on May 9, 2006 stated that the most likely cause of corrosion of the drywell shell in the sand-pocket areas (near the bottom of the drywell), and in the spherical portion of the drywell at higher elevations, was the water in the gap between the drywell and the concrete shield, and the source of the water was noted as leakage through the seal between the drywell and the refueling cavity and leakage through cracked stainless steel liner of the refueling cavity wall. Therefore, the staff requests the applicant include all the refueling cavity seal components within the scope of license renewal and provide a drawing that depicts the refueling cavity seal components.

RAI 2.4.1-3 Response

Proposed license renewal interim staff guidance LR-ISG-2006-01, "Plant Specific Aging Management Program for Inaccessible Areas of Boiling Water Reactor Mark 1 Steel Containment Drywell Shell," states, if moisture has been detected or suspected in the inaccessible area on the exterior of the drywell shell, include in the scope of license renewal any components that are identified as a source of moisture, such as the refueling seal, and perform an aging management review. There has been no observed leakage causing moisture in the vicinity of the sand cushion at JAFNPP and no moisture has been detected or is suspected on the inaccessible areas of the drywell shell. Therefore, consistent with the ISG, the refueling seal is not subject to aging management review.

The attached drawings depict the JAFNPP refueling cavity seal components.

RAI 2.4.1-4

Table 2.4-1, Reactor Building of the LRA, does not include the metal drywell sump screens that provide functional support for safety-related equipment. The staff requests the applicant to provide justification for not including them in the scope of license renewal.

RAI 2.4.1-4 Response

JAF drywell sumps do not have screens.

RAI 2.4.1-5

Table 2.4-1, Primary Containment of the LRA, does not include the reinforced concrete shield plugs that provide shielding over the top of the drywell. Exclusion of the reinforced concrete shield plugs from the scope of license renewal may lead to long-term unmanaged degradation of the plugs (e.g., full sectional concrete cracking, rebar corrosion, loss of bond, partial spalling or cracking of concrete due to handling, loss of load carrying capacity of plug attachments, etc.) with a seismic II/I implication, potentially affecting the structural integrity of the drywell head. The staff requests the applicant to provide justification for not including them in the scope of license renewal.

RAI 2.4.1-5 Response

The reinforced shield plugs that provide shielding over the top of the drywell are included in LRA Table 2.4-4, "Bulk Commodities" under line item "Manways, hatches and hatch covers".

RAI 2.4.1-6

Table 2.4-1, Primary Containment of the LRA, does not incorporate spent fuel racks' neutron absorbing material within the scope of license renewal. Long-term unmanaged degradation of the component may excessively reduce the margin of nuclear subcriticality in the fuel pool. The staff requests the applicant to provide justification for not including them in the scope of license renewal.

RAI 2.4.1-6 Response

Spent fuel racks neutron absorbing material is in the scope of license renewal, it is discussed in Section 2.3.3.9 and listed in Table 2.3.3-9. Results of the aging management review are provided in Table 3.3.2-9."

RAI 2.4.2-1

Section 2.4-2, Water Control Structures of the LRA, under Discharge Tunnel states that "failure of this Class II structure could impact the proper operation of the emergency service water system." The staff needs additional information regarding the potential consequences of the Screenwell-Pumphouse (Class II structure) failure. Specifically, the licensee is requested to confirm that appropriate measures have been taken to preclude the failure of this structure which might have adverse effects on the proper operation of the emergency service water system.

RAI 2.4.2-1 Response

In the aging management review, Entergy identified appropriate measures for managing the effects of aging to preclude the failure of this structure which might have adverse effects on the proper operation of the emergency service water system. Service water discharge flow is routed to the lake via the discharge tunnel. Failure of the discharge tunnel could add some restriction to the normal flow path of the service water discharge to the lake. Aging management of the Screenwell-Pumphouse and the Discharge Tunnel is included in the Structures Monitoring Program as specified in Table 3.5.2-2.

RAI 2.4.2-2

Table 2.4-2, Water Control Structures of the LRA, do not include anchors, and post-tensioned tendons for the intake structure that anchor the main structure to the natural bedrock below the lake bottom. The staff requests the applicant to provide justification for not including them in the scope of license renewal and also provide a summary of operating experience regarding settlement of the intake structure.

RAI 2.4.2-2 Response

The anchorage system for the intake structure is provided by post-tensioned rock bolts which are in the scope of license renewal. This component is included under anchorages/embedments in Section 2.4.4. Operating experience review did not identify any settlement of the intake structure or degradation of the rock anchor system (Ref. JAF-RPT-05-LRD05).

RAI 2.4.2-3

Table 2.4-2, Water Control Structures of the LRA, lists "Beams, columns, floor slabs and walls" as a component and "Exterior walls" as another component. The staff requests the applicant to provide clarifications for the two different components by listing all structural members under each component.

RAI 2.4.2-3 Response

"Beams, columns, floor slabs and walls" is defined as: substructure or superstructure concrete that is part of the primary structural support function of a building or structure, such as structural columns, support girders, and beams.

"Exterior walls" is defined as: walls that form the perimeter base of a structure with their primary surface or both surfaces exposed to an outdoor or soil environment (i.e., exposed to weather).

RAI 2.4.3-1

Section 12.3.9, Main Stack of the UFSAR, states that “The stack is not specifically designed to resist a tornado.” The staff needs additional information regarding the potential interaction between some seismic Class II SSCs and the tornado-induced failure of the main stack. Specifically, the licensee is requested to confirm that appropriate measures have been taken to preclude potential interactions between the main stack and some other nearby seismic Class I and Class II SSCs, whose failure might have adverse effects on seismic Class I SSCs.

RAI 2.4.3-1 Response

Review of the main stack and possible interaction with structural commodities confirms that should a tornado-induced failure of the main stack occur, it will not interact with nearby seismic Class II SSCs whose failure might result in loss of intended function of seismic Class I SSCs. As stated in Section 2.4.3, Turbine building complex and Yard structures of the LRA under “Main Stack”, main stack is a seismic Class I reinforced concrete structure. It is located sufficiently far from other seismic Class I structures to preclude interaction.” This includes interaction with seismic Class I SSCs caused by interaction with nearby seismic Class II SSCs whose failure might have adverse effects on seismic Class I SSCs.

RAI 2.4.3-2

Section 2.4-3, Turbine Building Complex and Yard Structures, of the LRA under Turbine Building (TB), including Feedwater Heater Bay (HBAY) states that “The main steam lines to the turbine generator from the reactor are housed in a reinforced concrete tunnel that enters the turbine building after passing under the adjacent administration building.” The staff needs additional information regarding the potential interaction between the administration building and the failure of main steam lines. Specifically, the licensee is requested to confirm that appropriate measures have been taken to preclude the failure of the main steam lines that might have adverse effects on the administration building.

RAI 2.4.3-2 Response

Main steam lines are discussed in section 2.3.4.2 and listed in Table 3.3.2-14-16. Appropriate measures (aging management programs) are in place to manage the effects of aging, and preclude failure of the main steam lines and its potential effect on the administration building.

RAI 2.4.3-3

Table 2.4-3, Turbine Building Complex and Yard Structures of the LRA, lists "Exterior walls" as a component. The staff is unable to determine whether this component include main stack, main steam line tunnel, and electric bay tunnel. If not, the staff requests the applicant to include these components in the scope of license renewal.

RAI 2.4.3-3 Response

Exterior walls are defined as: walls that form the perimeter base of a structure with their primary surface or both surfaces exposed to an outdoor or soil environment (i.e., exposed to weather). This would include the exterior walls of those structures listed.

RAI 2.4.3-4

Table 2.4-3, Turbine Building Complex, and Yard Structures of the LRA, does not include sumps that provide functional support for safety and nonsafety-related equipment. The staff requests the applicant to provide justification for not including them in the scope of license renewal.

RAI 2.4.3-4 Response

The in-scope unlined sumps in the east cable tunnel are a part of the concrete floor structure. There are no other sumps in the turbine building complex and yard structures that provide functional support for safety and nonsafety-related equipment. Turbine building equipment drain tanks within the scope of license renewal are addressed in LRA Section 2.3.3.12, Radwaste and Plant Drains.

RAI 2.4.4-1

Table 2.4-4, Bulk Commodities of the LRA, provides a list of bulk commodities for the Fitzpatrick Nuclear Power Plant. The location of each component is unclear to the staff. The staff requests the applicant to describe all commodities on the list as well as to provide a comprehensive listing of components, component supports and locations for each commodity.

RAI 2.4.4-1 Response

As stated in Section 2.4.4, the bulk commodities common to JAF in-scope structures are listed in Table 2.4-4. Commodities unique to a specific structure are included in the review for that structure (Sections 2.4.1 through 2.4.3). The commodities listed in Table 2.4-4 are in scope and subject to aging management review regardless of which in-scope structure they are within. Components classified as bulk

commodities typically have no unique component identification numbers. Therefore, a comprehensive listing of components and locations is not feasible.

RAI 2.4.4-2

Table 2.4-4, Bulk Commodities of the LRA, lists "insulation" with the intended functions. It is unclear to the staff why "Support for Criterion (a)(1) equipment" is not part of the intended functions when Table 2.0-1 defines the intended function of insulation as "provide insulating characteristics to reduce heat transfer," which is meant to apply to safety-related and non-safety related components. The staff requests the applicant to provide additional information on insulation and a list of in-scope components that have insulation included with their intended functions.

RAI 2.4.4-2 Response

LRA Table 2.4-4 lists two functions for insulation. The first, "Insulation," is described in Table 2.0-1 as "Provide insulating characteristics to reduce heat transfer." This function does apply to safety-related and non-safety related components. The second function, "Support for Criterion (a)(2) equipment," is described in Table 2.0-1 as "Provide structural or functional support to non-safety related equipment whose failure could impact safety-related equipment." This means the non-safety related insulation must maintain integrity such that falling insulation does not damage safety-related equipment. Therefore, "Support for Criterion (a)(1) equipment" need not be listed as a separate intended function for insulation.

Examples of in-scope components that have insulation addressed by this line item in LRA Table 2.4-4 are the recirculation system piping, valves, and pump casings, and main steam safety/relief valves. Insulation was evaluated as a commodity since it was not practical to develop a list of individual components insulated. Therefore, a list of insulated components is not available.

Attachment 1

James A. FitzPatrick Nuclear Power Plant
License Renewal Application Supplement

Amendment 3

Scoping and Screening Structures

Drawings for RAI Response 2.4.1-3

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