



Phyllis

From: Clark, Phyllis
Sent: Tuesday, November 15, 2016 4:13 PM
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Subject: RE: WATERFORD STEAM ELECTRIC STATION, UNIT 3, LICENSE RENEWAL APPLICATION – RAI SET 8 (CAC NO. MF7492)
Attachments: Waterford 3 RAI Set 8 Enclosure (Final w BCA).docx

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

Mr. Michael R. Chisum
Site Vice President

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE WATERFORD STEAM ELECTRIC STATION, UNIT 3, LICENSE RENEWAL APPLICATION – SET 8 (CAC NO. MF7492)

Dear Mr. Chisum:

By letter dated March 23, 2016, Entergy Operations, Inc. submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54, to renew the operating license NPF-38 for Waterford Steam Electric Station, Unit 3. The staff of the U.S. Nuclear Regulatory Commission (NRC or the staff) is reviewing the information contained in the license renewal application and has identified areas where additional information is needed to complete the review.

The enclosed requests for additional information were discussed with Mr. Alan Harris and a mutually agreeable date for the response is within 60 days from the date of this letter. If you have any questions, please contact me at 301-415-6447 or by e-mail at Phyllis.Clark@nrc.gov.

Sincerely,

Phyllis Clark

Phyllis Clark, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure:
As stated

cc: Listserv

ADAMS Accession No.: **ML16320A003**

***via email**

OFFICE	PM:RPB1:DLR	BC:RASB:DLR	BC:RPB1:DLR(Acting)	PM:RPB1:DLR
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DATE	11/14/2016	11/15/2016	11/15/2016	11/15/2016

Phyllis Clark

Division of License Renewal
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**WATERFORD STEAM ELECTRIC STATION, UNIT 3
LICENSE RENEWAL APPLICATION
REQUESTS FOR ADDITIONAL INFORMATION – SET 8
(CAC NO. MF7492)**

Request for Additional Information (RAI) 2.3.3.8-1

Background:

The staff notes that license renewal application (LRA), Section 2.1.3.1, states that, “...Waterford 3 [Waterford Steam Electric Station, Unit 3] is in the process of transitioning to the [National Fire Protection Association] NFPA 805 risk-informed, performance-based fire protection program. However, this process has not been completed, this license renewal application is based on the site’s requirements under 10 Code of Federal Regulations (CFR) 50.48 and Appendix R...”

On June 27, 2016, the Nuclear Regulatory Commission (NRC) issued a license amendment for the Waterford 3 to incorporate the NFPA 805 fire protection licensing basis in accordance with 10 CFR 50.48(c). The amendment authorizes the transition of the licensee’s fire protection program to a risk-informed, performance-based program based on the 2001 Edition of NFPA 805.

Issue:

The fire protection program scoping and screening information in Entergy Operations, Inc., March 23, 2016, Waterford 3 LRA was based on 10 CFR 50.48(b) and Appendix R compliance. Subsequently, in June 27, 2016, the NRC issued the NFPA 805 fire protection license amendment in accordance with 10 CFR 50.48(c). Since the NFPA 805 license condition supersedes the current Waterford 3 fire protection license condition, the NFPA 805 transition process will impact the scoping and screening of the fire protection systems and components.

Request:

The staff requests that the licensee provide a supplement to the LRA consistent with the new NFPA 805 licensing basis. The supplement should include a revision that demonstrates that the LRA scoping and screening Section 2.3.3.8, “Fire Protection: Water,” Section 2.3.3.9, “Reactor Coolant Pump Oil Collection,” and Section 2.4, “Scoping and Screening Results: Structures,” (only fire barrier portion) remain consistent with the 10 CFR 50.48(c) and NFPA 805 licensing basis.

RAI 2.3.3.8-2Background:

For Waterford 3, the staff reviewed the LRA, drawings, and Final Safety Analysis Report (FSAR), Section 9.5.1, "Fire Protection System," which describe the fire protection program at Waterford 3, and how it complies with the requirements of 10 CFR 50.48, "Fire protection," and the guidelines of Appendix A to Branch Technical Position (BTP) Auxiliary and Power Conversion Systems Branch (APCSB) 9.5-1.

Issue:

The following boundary drawings show the following fire protection systems/components as not within the scope of license renewal (i.e., not colored in red):

<u>LRA Drawing</u>	<u>Systems/Components</u>	<u>Location</u>
LRA-G161, Sheet 1	Fire hydrants 8A and 8B	B1, C1
LRA-G164, Sheet 3	Fuel oil tank Nos. 1 and 2 components	G2 to G6

Request:

Verify whether the fire protection systems/components listed above are within the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an aging management review (AMR) in accordance with 10 CFR 54.21(a)(1). If they are not within the scope of license renewal and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RAI 2.3.3.12-3Background:

For Waterford 3, the staff reviewed the LRA, drawings, and FSAR, Section 9.5.1, "Fire Protection System," which describe the fire protection program at Waterford 3, and how it complies with the requirements of 10 CFR 50.48, "Fire protection," and the guidelines of Appendix A to BTP APCS 9.5-1.

Issue:

Tables 2.3.3-8 and 3.3.2-8 of the LRA do not include the following fire protection components:

- fire water nozzles
- standpipe risers
- fire suppression system filter housings
- floor drains for fire water

Request:

Verify whether the fire protection components listed above are within the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an AMR in accordance with 10 CFR 54.21(a)(1). If they are not within the scope of license renewal and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RAI 2.3.3.9-1Background:

For Waterford 3, the staff reviewed the LRA, drawings, and FSAR, Section 9.5.1, "Fire Protection System," which describe the fire protection program at Waterford 3, and how it complies with the requirements of 10 CFR 50.48, "Fire protection," and the guidelines of Appendix A to BTP APCS 9.5-1.

Issue:

The following boundary drawing shows the following fire protection systems/components as not within the scope of license renewal (i.e., not colored in blue):

<u>LRA Drawing</u>	<u>Systems/Components</u>	<u>Location</u>
LRA-G161, Sheet 4	Rotary transfer pumps and components	H7, H15

Request:

Verify whether the fire protection systems/components listed above are within the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an AMR in accordance with 10 CFR 54.21(a)(1). If they are not within the scope of license renewal and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

RAI 2.4.4-1**Background:**

For Waterford 3, the staff reviewed the LRA, drawings, and FSAR, Section 9.5.1, "Fire Protection System," which describe the fire protection program at Waterford 3, and how it complies with the requirements of 10 CFR 50.48, "Fire protection," and the guidelines of Appendix A to BTP APCS 9.5-1.

Issue:

Tables 2.4-4 and 3.5.2-4 of the LRA do not include the following fire protection components:

- fire damper housings
- smoke and heat vent housings

Request:

Verify whether the fire protection components listed above are within the scope of license renewal in accordance with 10 CFR 54.4(a) and whether they are subject to an AMR in accordance with 10 CFR 54.21(a)(1). If they are not within the scope of license renewal and are not subject to an AMR, the staff requests that the applicant provide justification for the exclusion.

Follow-up RAI B.1.17-02Background:

By letter dated March 23, 2016, Entergy Operations, Inc. (the applicant) submitted an LRA for Waterford 3. Section 4.7.1 of the LRA lists three cranes designed to CMAA-70 specifications (CMAA-70), the polar crane, the fuel handling building (FHB) crane, and the radwaste cask handling bridge crane (located in the auxiliary building). When listing the cranes the applicant did not provide in the LRA the number and magnitude of lifts associated with the in-scope cranes as recommended in Table 3.0-1, "FSAR Supplement for Aging Management of Applicable Systems," of NUREG 1800, Revision 2 (SRP-LR). By letter dated September 15, 2016, the staff requested through RAI B.1.17-01, that the applicant provide for the in-scope cranes, the number and magnitude of anticipated lifts to be made during the period of extended operation (PEO) or provide alternatives to and identify differences from the SRP-LR acceptance criteria and how these alternatives would be considered acceptable.

Issue:

In its response to RAI B.1.17-01, dated October 13, 2016, the applicant provided the number of lifts for two of the listed CMAA-70 cranes in LRA Section 4.7.1 (FHB crane and polar crane). It is not clear why the radwaste cask handling bridge crane (located in the auxiliary building), although listed in Section 4.7.1 of the LRA and identified as a crane designed to CMAA-70 specifications, has been omitted from the applicant's response to RAI B.1.17-01. The staff also reviewed Section A.2.5.1, "Crane Load Cycle Analysis," of the LRA and noted that although it states the limit of applicable cycles for the Waterford 3 CMAA-70 cranes to be less than 100,000 cycles and with designs meeting the requirements of 10 CFR 54.21(c)(1)(i), it does not identify which of the in-scope cranes satisfy these requirements during the PEO.

Request:

1. Provide the magnitude and number of lifts for the radwaste cask handling bridge crane (located in the auxiliary building).
2. Identify in Section A.2.5.1 of the LRA the Waterford 3 CMAA-70 designed cranes expected to satisfy the requirements of 10 CFR 54.21(c)(1)(i) (i.e., magnitude and number of lifts incorporated in the original design remain valid during the PEO).