



Entergy Operations, Inc.  
17265 River Road Hwy 18  
Killona, LA 70057  
Tel 504 739 6660  
Fax 504 739 6678

**Michael R. Chisum**  
Vice President - Operations  
Waterford 3

W3F1-2015-0039

May 27, 2015

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

SUBJECT: Clarification to Pressurizer Heater Function Final Safety Analysis Report  
Submittal Letter  
Waterford Steam Electric Station, Unit 3  
Docket No. 50-382  
License No. NPF-38

- REFERENCES:
1. W3F1-2013-0043, Request for Review of Change to Updated Final Safety Analysis Report Clarifying Pressurizer Heaters Function for Natural Circulation at the Onset of a Loss of Offsite Power, dated November 11, 2013 [NRC ADAMS Accession Number ML13316C052]
  2. W3F1-2014-0073, Waterford Steam Electric Station, Unit 3 Response to Request for Additional Information Regarding a Change to the Updated Final Safety Analysis Report Clarifying Pressurizer Heaters Function for Natural Circulation, January 21, 2015 [NRC ADAMS Accession Number ML15021A587]
  3. Waterford Steam Electric Station, Unit 3 – Regulatory Audit Report in Support of License Amendment Request to Change the Updated Final Safety Analysis Report Clarifying Pressurizer Heaters Function for Natural Circulation at the Onset of a Loss of Offsite Power [NRC ADAMS Accession Number ML15071A337]
  4. W3F1-2015-0026, Response to NRC Natural Circulation Cooldown Analysis Audit Request for Additional Information, April 1, 2015 [NRC ADAMS Accession Number ML15091A513].

Dear Sir or Madam:

On February 11, and 12, 2015, the Nuclear Regulatory Commission (NRC) performed an audit of the Waterford Steam Electric Station, Unit 3 (Waterford 3) natural circulation cooldown analysis documentation [Reference 3] in support of the ongoing NRC review of the November 11, 2013, license amendment request to clarify how the pressurizer heater function is met for natural circulation at the onset of a loss of offsite power concurrent with the specific single point vulnerability [Reference 1].

On April 1, 2015, Waterford 3 submitted to the NRC natural circulation audit Request for Additional Information (RAI) response [Reference 4]. This response prompted an NRC question on whether Attachment 5 of letter W3F1-2014-0073 [Reference 2], draft markup to Final Safety Analysis Report (FSAR) Section 5.4.10.2, was needed. This letter is clarifying the information contained in FSAR Section 5.4.10.2.

Letter W3F1-2014-0073 proposed deleting the following information in FSAR Section 5.4.10.2:

In order to determine the pressurizer heater capacity required to maintain natural circulation in the hot standby condition after a loss of offsite power, it was conservatively assumed that the ambient heat loss rate through the pressurizer was 400,000 BTU/hr. The measured heat loss from startup testing was only 356,000 BTU/hr. With an assumed 400,000 BTU/hr heat loss and a safety valve leakage of up to 0.5 gpm, single phase natural circulation can be maintained at hot standby conditions with a 50°F subcooled margin indefinitely by energizing 150kW of heater capacity thirty minutes after the loss of offsite power. Loss of subcooling, however, does not imply loss of natural circulation.

The information in FSAR Section 5.4.10.2 describes the ambient heat loss through the pressurizer which was provided in the original Waterford 3 startup report. This information was used to validate that the Technical Specification 3.4.3.1 Limiting Condition for Operation (LCO) pressurizer heater nominal capacity requirement of 150kw was acceptable. The information in FSAR Section 5.4.10.2 is still relevant to the Waterford 3 design and should be retained. Therefore, Attachment 5 of letter W3F1-2014-0073 [Reference 2], draft markup to FSAR Section 5.4.10.2, will not be utilized.

This amendment response contains no new commitments.

If you have any questions or require additional information, please contact John Jarrell, Regulatory Assurance Manager, at 504-739-6685.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 27, 2015.

Sincerely,

A handwritten signature in black ink, appearing to read "MRC/JPJ/wjs". The signature is fluid and cursive, with a distinct dot above the final letter.

MRC/JPJ/wjs

cc: Mr. Marc L. Dapas  
Regional Administrator  
U. S. NRC, Region IV  
RidsRgn4MailCenter@nrc.gov

NRC Senior Resident Inspector for Waterford 3  
Frances.Ramirez@nrc.gov (SRI)  
Chris.Speer@nrc.gov (RI)

NRC Program Manager for Waterford 3  
Michael.Orenak@nrc.gov

Louisiana Department of Environmental Quality  
Office of Environmental Compliance  
Surveillance Division  
Ji.Wiley@LA.gov