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GNRO-2016/00054

October 3, 2016

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

SUBJECT: Additional Clarification of the Grand Gulf Nuclear Station Containment Leak Rate Program Description  
Grand Gulf Nuclear Station, Unit 1  
Docket No. 50-416  
License No. NPF-29

REFERENCES: 1. NRC Correspondence to Entergy (GNRI 2016/00088), "Question to GGNS Regarding LRA B1.1.15," dated September 21, 2016  
2. Entergy Letter to NRC (GNRO-2016/00052), "Clarification of Grand Gulf Nuclear Station Containment Leak rate Program Description," dated September 23, 2016

Dear Sir or Madam:

In Reference 1, the Nuclear Regulatory Commission (NRC) requested a clarification to the Grand Gulf Nuclear Station (GGNS) Containment Leak Rate Program and its implementation of NEI 94-01, Revision 3-A. GGNS provided the requested Information in Reference 2. This letter provides additional clarification to the implementation of NEI 94-01, Revision 3-A, and its consistency with the GALL Report, NUREG 1801. Attachment 1 discusses exceptions taken to NUREG 1801 to support NRC review of the GGNS License Renewal Application (LRA) Safety Evaluation Report (SER).

This letter contains no new commitments.

If you have any questions or require additional information, please contact James Nadeau at (601) 437-2103.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 3rd day of October, 2016.

Sincerely,

A handwritten signature in black ink, appearing to be "VF", written over a horizontal line.

VF/sas

Attachment: 1. Additional Clarification of GGNS Containment Leak Rate Program Description

cc: U.S. Nuclear Regulatory Commission  
ATTN: Mr. Jim Kim, NRR/DORL (w/2)  
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U.S. Nuclear Regulatory Commission  
ATTN: Mr. Kriss M. Kennedy (w/2)  
Regional Administrator, Region IV  
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Mr. B. J. Smith (w/2)  
Director, Division of Radiological Health  
Mississippi State Department of Health  
Division of Radiological Health  
3150 Lawson Street  
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NRC Senior Resident Inspector  
Grand Gulf Nuclear Station  
Port Gibson, MS 39150

Attachment 1 to

GNRO-2016/00054

Additional Clarification of GGNS Containment Leak Rate Program Description

On February 17, 2016, the NRC staff approved (ADAMS Accession No. ML16011A247) a Grand Gulf (GGNS) license amendment request (ADAMS Accession No. ML15147A599) to adopt NEI 94-01, Revision 3-A, subject to specific conditions and with partial implementation of ANSI/ANS 56.8-2002, "Containment System Leakage Testing Requirements," as the implementing document for Type B and Type C leak rate testing (LRT). Based upon the NRC approval and issuance of the Grand Gulf license amendment, changes are warranted to the Grand Gulf Containment Leak Rate Program descriptions in license renewal application (LRA) sections A.1.15 and B.1.15. Based on the approved license amendment request, the GGNS Containment Leak Rate Program was reviewed against the program elements described in NUREG-1801, Section XI.S4. Element 5, "Monitoring and Trending" and Element 7, "Corrective Actions," of the program described in Section XI.S4 reference NEI 94-01. Because NUREG-1801 references NEI 94-01 Revision 2-A and the GGNS Containment Leak Rate Program has adopted Revision 3-A, Entergy has concluded that an exception exists in relation to these two program elements. A change to the LRA is warranted to identify the exception and its associated justification for the Grand Gulf Containment Leak Rate Program. Changes to LRA Sections A.1.15 and B.1.15 follow. Additions are shown with underline and deletions with strikethrough.

#### **A.1.15 Containment Leak Rate Program**

The Containment Leak Rate Program provides for detection of loss of material, cracking, and loss of function in various systems penetrating containment. The program also provides for detection of age-related degradation in material properties of gaskets, O-rings, and packing materials for the primary containment pressure boundary access points.

Containment leakage rate tests (LRT) are performed to assure that leakage through the containment and systems and components penetrating primary containment does not exceed allowable leakage limits specified in the plant technical specifications. Types A, B and C leakage rate testing will be implemented in accordance with the criteria set forth in RG 1.163, NEI 94-01, Revision 3-A, adopting, in part, the testing criteria of ANSI/ANS-56.8-2002. An integrated leak rate test (~~ILRT~~Type A) is performed during a period of reactor shutdown. ~~at the frequency specified in 10 CFR Part 50, Appendix J, Option B, based upon the criteria in Regulatory Guide 1.163, NEI 94-01, and ANSI 56.8-1994.~~ Performance of the integrated leak rate test per 10 CFR Part 50, Appendix J demonstrates the leak-tightness and structural integrity of the containment. Local leak rate tests (~~LLRT~~ Type B and C) are performed on isolation valves and containment access penetrations. ~~at Test frequencies that for Types A, B and C leakage rate testing comply with the requirements of 10 CFR Part 50, Appendix J, Option B, based upon the criteria in NEI 94-01, Revision 3-A.~~

### **B.1.15 Containment Leak Rate Program Description**

The Containment Leak Rate Program is an existing program that provides for detection of loss of material, cracking, and loss of function in various systems penetrating containment. The program also provides for detection of age-related degradation in material properties of gaskets, o-rings, and packing materials for the primary containment pressure boundary access points.

Containment leakage rate tests (LRT) are performed to assure that leakage through the containment and systems and components penetrating primary containment does not exceed allowable leakage limits specified in the plant technical specifications. Types A, B and C leakage rate testing will be implemented in accordance with the criteria set forth in RG 1.163, NEI 94-01, Revision 3-A, adopting, in part, the testing criteria, of ANSI/ANS-56.8-2002. An integrated leak rate test (LLRT Type A) is performed during a period of reactor shutdown, at the frequency specified in 10 CFR Part 50, Appendix J, Option B, based upon the criteria in Regulatory Guide 1.163, NEI 94-01, and ANSI 56.8-1994. Performance of the integrated leak rate test per 10 CFR Part 50, Appendix J demonstrates the leak-tightness and structural integrity of the containment. Local leak rate tests (LLRT Type B and C) are performed on isolation valves and containment access penetrations. at Test frequencies that for Types A, B and C leakage rate testing comply with the requirements of 10 CFR Part 50, Appendix J, Option B, based upon the criteria in NEI 94-01, Revision 3-A.

### **NUREG-1801 Consistency**

The Containment Leak Rate Program is consistent with the program described in NUREG-1801, Section XI.S4, 10 CFR Part 50, Appendix J with the following exceptions.

### **Exceptions to NUREG-1801**

None

The Containment Leak Rate Program has the following exceptions.

Element Affected	Exception
5. Monitoring and Trending	The Containment Leak Rate Program follows Option B of 10 CFR Part 50, Appendix J. <u>NUREG-1801 XI.S4 element 5 states that in the case of Option B, the interval for testing may be adjusted on the basis of acceptable performance in meeting leakage limits in prior tests. Additional details for implementing Option B are provided in NRC RG 1.163 and NEI 94-01. NUREG-1801 XI.S4 indicates the use of Revision 2-A of NEI 94-01. GGNS has adopted NEI 94-01 Revision 3-A subject to the conditions specified in the safety evaluation report for GGNS License Amendment Request dated May 27, 2015 to establish testing intervals for its Containment Leak Rate Program.</u> <sup>1</sup>

Element Affected	Exception
7. <u>Corrective Actions</u>	NUREG-1801 XI.S4 element 7 states "Corrective actions are taken in accordance with 10 CFR Part 50, Appendix J, and NEI 94-01." NUREG-1801 XI.S4 indicates the use of Revision 2-A of NEI 94-01. GGNS has received approval to apply the provisions for corrective actions of NEI 94-01 Revision 3-A subject to the conditions specified in the safety evaluation report for GGNS License Amendment Request dated May 27, 2015. <sup>2</sup>

1. The NRC staff has found the use of NEI 94-01, Revision 3-A subject to the conditions specified in the safety evaluation report for GGNS License Amendment Request dated May 27, 2015 acceptable in applying Option B of 10 CFR Part 50, Appendix J, for establishing testing intervals. See Safety Evaluation by the Office of Nuclear Reactor Regulation related to Amendment No. 209 to Facility Operating License No. NPF-29 (ADAMS Accession No. ML16011A247).
2. The NRC staff has found that the provisions of NEI 94-01, Revision 3-A subject to the conditions specified in the safety evaluation report for GGNS License Amendment Request dated May 27, 2015 are acceptable for corrective actions. See Safety Evaluation by the Office of Nuclear Reactor Regulation related to Amendment No. 209 to Facility Operating License No. NPF-29 (ADAMS Accession No. ML16011A247).

**Table B-3**  
**GGNS Program Consistency with NUREG-1801**

Program Name	Plant Specific	NUREG-1801 Comparison		
		Consistent with NUREG-1801	Programs with Enhancements	Programs with Exceptions to NUREG-1801
115 kV Inaccessible Transmission Cable	X			
Aboveground Metallic Tanks		X		
Bolting Integrity		X	X	
Boraflex Monitoring		X	X	
Buried Piping and Tanks Inspection		X		
BWR CRD Return Line Nozzle		X	X	
BWR Feedwater Nozzle		X		
BWR Penetrations		X	X	
BWR Stress Corrosion Cracking				X
BWR Vessel ID Attachment Welds		X		
BWR Vessel Internals		X	X	
Compressed Air Monitoring		X	X	
Containment Inservice Inspection — IWE		X		
Containment Inservice Inspection — IWL		X		
Containment Leak Rate		X		<u>X</u>
Diesel Fuel Monitoring		X	X	