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October 5, 2016

MEMORANDUM TO: Andrea Valentin, Executive Director
Advisory Committee on Reactor Safeguards

FROM: Yoira K. Diaz-Sanabria, Branch Chief /RA/
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

SUBJECT: ADVISORY COMMITTEE ON REACTOR SAFEGUARDS REVIEW OF
THE GRAND GULF NUCLEAR STATION, UNIT 1, LICENSE
RENEWAL APPLICATION – TRANSMITTAL OF UPDATED
CONTAINMENT LEAK RATE AGING MANAGEMENT PROGRAM
REVIEW

By letter dated October 28, 2011, Entergy Operations Inc. (or the applicant), submitted a license renewal application (LRA) in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants" for Grand Gulf Nuclear Station, Unit 1 (GGNS). The applicant requested renewal of the operating license (operating license NPF-29) for a period of 20 years beyond the current expiration at midnight on November 1, 2024.

On September 6, 2016 the staff issued the "Safety Evaluation Report Related to the License Renewal of Grand Gulf Nuclear Station, Unit 1" (ADAMS Accession No. ML16250A838). The applicant recently amended a portion of their LRA for GGNS. The staff reviewed this information and updated its position from the Safety Evaluation Report (SER). Enclosure 1 is the staff's updated Containment Leak Rate aging management program review, SER Section 3.0.3.1.14.

If you have any questions regarding this matter, please contact the license renewal project manager, Mr. Emmanuel Sayoc, at 301-415-4084 or by e-mail at Emmanuel.Sayoc@nrc.gov.

Docket No. 50-416

CONTACT: Emmanuel C. Sayoc, NRR/DLR
301-415-4084

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ADAMS Accession No: ML16279A517

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Memo to A. Valentin from Y Diaz-Sanabria dated October, 5 2016

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GRAND GULF NUCLEAR STATION, UNIT 1, LICENSE RENEWAL
APPLICATION – TRANSMITTAL OF FINAL SAFETY EVALUATION REPORT

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Updated Containment Leak Rate Program

3.0.3.1.14 Containment Leak Rate

Summary of Technical Information in the Application. LRA Section B.1.15 describes the existing Containment Leak Rate Program as consistent with GALL Report AMP XI.S4, “10 CFR Part 50, Appendix J.” The LRA states that the program provides for detection of loss of material, cracking, and loss of function in various systems penetrating containment. The LRA states that 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 (LRTs) 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 TS. The LRA further states that an integrated leak rate test (ILRT) is performed during a period of reactor shutdown at the frequency specified in 10 CFR Part 50, Appendix J, Option B. Performance of the ILRT per 10 CFR Part 50, Appendix J, demonstrates the leak-tightness and structural integrity of the containment. Local leak rate tests (LLRT) are performed on isolation valves and containment access penetrations at frequencies that comply with the requirements of 10 CFR Part 50, Appendix J, Option B.

Staff Evaluation. During its audit, the staff reviewed the applicant’s claim of consistency with the GALL Report. The staff compared program elements one through six of the applicant’s program to the corresponding program elements of GALL Report AMP XI.S4. For the “scope of program” and “monitoring and trending” program elements the staff determined the need for additional information, which resulted in the issuance of RAIs as discussed below.

The “scope of program” program element recommends including all containment pressure boundary components. However, the staff noted that the applicant’s TS for 10 CFR Part 50, Appendix J, testing, administered through the Containment Leak Rate program, indicate that the leakage rate program is implemented with approved exemptions. By letter dated August 15, 2012, the staff issued RAI B.1.15-1 requesting the applicant to identify all excluded/exempted components (valves, penetrations, and other components) from the 10 CFR Part 50, Appendix J, testing and state for these components how it plans to manage their aging effects, or justify why an AMP is not necessary.

In its response dated September 13, 2012, the applicant listed components that have been exempted from 10 CFR Part 50, Appendix J, Type C testing but are classified as containment isolation valves per General Design Criterion 55 (i.e., RCPB penetrating containment) or 56 (i.e., primary containment isolation). The applicant explained that the listed valves, although exempted from the requirements for Appendix J, Type C tests, will be managed by several AMPs during the period of extended operation. The applicant will manage the aging effects of the exempted/excluded valves through the following selected AMPs:

- External Surfaces Monitoring program, reviewed in SER Section 3.0.3.1.17 and selected to manage the effects of aging on external surfaces of the components

Enclosure

- Water Chemistry Control - BWR program, reviewed in SER Section 3.0.3.1.41 and selected to manage the effects of aging on internal surfaces of the components
- Compressed Air Monitoring program, reviewed in SER Section 3.0.3.1.11 and selected to manage the effects of aging on internal surfaces exposed to condensation
- Water Chemistry Control - Closed Treated Water Systems program, reviewed in SER Section 3.0.3.1.42 and selected to manage the effects of aging on internal surfaces
- Internal Surfaces In Miscellaneous Piping and Ducting Components program, reviewed in SER Section 3.0.3.1.25 and selected to manage the effects of aging on internal surfaces
- Service Water Integrity program, reviewed in SER Section 3.0.3.1.39 and selected to manage the effects of aging on internal surfaces

In addition, the applicant stated that some of the exempted/excluded components do not require management of aging effects because of their environment, method of construction, or materials used, such as:

- External/Internal surfaces of stainless steel components are exposed to indoor air (e.g., ILRT Drywell and Containment instrument inboard – outboard valves, associated with penetration 110).
- External surfaces of carbon steel components are exposed to temperatures greater than 212°F.

The staff reviewed the applicant's response and found it acceptable because it is consistent with the information in Tables 6.2-44 and 6.2-49 of the UFSAR for Type C testing for containment isolation valves. The staff was concerned that the applicant did not provide any information in its response about the Type B tests required to measure leakage across each pressure-containing or leakage-limiting boundary of primary containment penetrations. The staff discussed this concern in a conference call with the applicant on November 20, 2012. During this conference call, the applicant stated that it would provide a supplemental response to RAI B.1.15-1 which lists the penetrations exempted from Type B tests and how aging management would be accomplished during the period of extended operation. By letter dated December 18, 2012, the applicant supplemented its response. The applicant identified the components that have been exempted from Type B testing and identified the AMPs that would provide aging management for the components during the period of extended operation. The staff reviewed the applicant's supplemental response and found it acceptable based on the following:

- a. The inspection ports integral to the guard pipes in containment penetrations are exempted from Type B tests because, as documented in UFSAR Section 3.6A.2.4.3, a weld located between the inner cover and the guard pipe provide part of the containment boundary.

- b. The blind flanges in the personnel airlocks are exempted from Type B tests because they are an integral part of the personnel airlocks and are tested during the overall personnel airlock local leak rate test.
- c. The double O-ring seals in the process lines associated with containment penetrations 23, 24, 27, 32, and 67 are exempted from Type B tests. UFSAR Table 6.2-49, Note 19, states that these O-rings are associated with restriction orifices and are not required to be Type B tested because the penetration is water sealed.
- d. For the exempted components, the applicant identified additional AMPs that will provide aging management of the components during the period of extended operation.

The staff's concern described in RAI B.1.15-1 is resolved, because the applicant provided a list of the components exempted from Type B and C testing, the justification for the exemptions, and an explanation of how aging management for the exempted components will be accomplished during the period of extended operation. Furthermore, the applicant inspects the external surfaces of all containment penetrations in accordance with AMP B.1.13, "Containment Inservice Inspection – IWE."

The "monitoring or trending" program element recommends monitoring of the entire pressure boundary over time based on the option followed. The applicant in its LRA and its basis document indicated that the Containment Leak Rate program follows Option B for the 10 CFR Part 50, Appendix J, testing and that the program is consistent with GALL Report AMP XI.S4. GALL Report AMP XI.S4 "monitoring and trending" program element states:

Because the LRT program is repeated throughout the operating license period, the entire pressure boundary is monitored over time. The frequency of these tests depends on which option (A or B) is selected. With Option A, testing is performed on a regular fixed time interval as defined in 10 CFR Part 50, Appendix J. 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 [Regulatory Guide] 1.163 and NEI 94-01.

The staff noted that the applicant's TS, referencing the 10 CFR Part 50, Appendix J, Testing Program, state that the performance characteristics of the program are implemented in accordance with Amendment 135 to the Operating License. The staff's SER for Amendment 135, dated April 6, 1998, states, contrary to the applicant's basis and LRA documents, that the applicant does not use NRC RG 1.163, "Performance-Based Containment Leak-Test Program," which establishes the performance criteria per GALL Report AMP XI.S4, for "10 CFR Part 50, Appendix J, Program," for implementation of Option B. To resolve this inconsistency, by letter dated August 15, 2012, the staff issued RAI B.1.15-2 requesting that the applicant identify the exceptions and/or enhancements needed to make the program consistent with the GALL Report and further identify whether the program should be either evaluated as:

- (1) consistent with exceptions,
- (2) consistent with enhancements, or
- (3) consistent with exceptions and enhancements.

In the event that the program is not consistent, consistent with exceptions, or consistent with enhancements with the GALL Report, the staff requested the applicant to expand the summary description of the program sufficiently, so it can be reviewed as a plant-specific program.

In its response dated September 13, 2012, the applicant stated that the Containment Leak Rate Program is in accordance with the provisions of 10 CFR Part 50, Appendix J, Option B. Its procedures delineate the requirements for Types A, B and C leakage rate testing based upon

the criteria in RG 1.163, NEI 94-01, "Industry Guidance for Implementing Performance-Based Options of 10 CFR Part 50, Appendix J," and ANSI 56.8-1994, "Containment System Leakage Testing Requirements." The applicant also stated that the amendment request (Amendment 135) proposed to use the guidance described in an NRC SER rather than RG 1.163, as the method of implementing Appendix J, Option B. The applicant further stated that the NRC SER was for an exemption requested from Appendix J, Option A and granted on April 26, 1995. The approval of Amendment 135 permitted the applicant to implement the containment leak rate testing provisions using Option B in lieu of Option A.

The staff reviewed the applicant's response and noted that the applicant stated that currently its plant procedures are in accordance with the provisions of 10 CFR Part 50, Appendix J, Option B for Types A, B and C leakage rate testing based upon the criteria in RG 1.163, NEI 94-01, and ANSI 56.8. The staff also reviewed the April 6, 1998, letter to Mr. Joseph Hagan of Entergy regarding the issuance of Amendment No. 135 and letter of April 26, 1995, to Mr. Randy Hutchinson, of Entergy, regarding the SER for the 10 CFR Part 50, Appendix J, requested exemption. The staff noted that the applicant addressed its "plant-specific needs" with a plant-specific submittal, which the NRC determined was consistent with the intent of RG 1.163 and, therefore, was acceptable. GALL Report AMP XI.S4, to which the applicant claims consistency, recommends applicants follow RG 1.163, NEI 94-01, Revision 2-A, and the referenced ANSI/ANS-56.8-2002 as the current proper guidelines for acceptable 10 CFR Part 50, Appendix J, testing. Although the applicant's response states that its program is based upon the criteria in RG 1.163, NEI 94-01, and ANSI 56.8, these documents are not in the UFSAR supplement. This level of detail is necessary in the UFSAR to ensure the program is properly implemented during the period of extended operation. The staff discussed this issue with the applicant in a conference call on November 20, 2012. The applicant stated that it would supplement the response to RAI B.1.15-2 to include a revised Section A.1.15 of the UFSAR supplement for the containment leak rate program. By letter dated December 18, 2012, the applicant supplemented its response to RAI B.1.15-2 and revised LRA Sections A.1.15 and B.1.15 to include references to RG 1.163, NEI 94-01, and ANSI 56.8.

The staff finds the applicant's response to RAI B.1.15-2 acceptable because the applicant's Containment Leak Rate Program is consistent with the GALL Report, RG 1.163, NEI 94-01, and

ANSI 56.8R. In addition, the applicant has provided sufficient details of the program in the UFSAR supplement.

Based on its audit, and review of the applicant's responses to RAI B.1.15-1 and RAI B.1.15-2, the staff finds that the program elements for which the applicant claimed consistency with the

GALL Report are consistent with the corresponding program elements of GALL Report AMP XI.S4.

Operating Experience. LRA Section B.1.1.15 summarizes operating experience related to the 10 CFR Part 50, Appendix J, Program. The LRA states that LLRTs during RF10 through RF15 met test acceptance criteria. However, some components failed to meet the administrative limits. Some of these were repaired and retested as acceptable, while others were evaluated and deferred. In each of these cases, the containment leakage was within overall allowed limits. Noteworthy operating experience examples in the LRA include:

- A 2006 test of the containment isolation valves failed (penetration #35). Their LLRT indicated a flow of 3487 sccm leakage. The allowable limit was 3400 sccm. The leakage was found acceptable through additional engineering evaluation.
- A 2008 test of the filter/demineralizer system containment isolation valves (penetration #49). The test indicated a leakage rate approximately 12 times the administrative limit. After flushing the system, the valves were re-tested satisfactorily. For these valves, a new procedure was established ensuring that a system flush will be completed satisfactorily after future resin transfers.
- Successful ILRT performed in 2008 that confirmed the structural integrity of the containment.

The LRA states that operating experience indicates that the program is effective at identifying and managing aging effects on primary containment components. The LRA also states that a program self-assessment in 2009 revealed a decline in performance due to organizational weaknesses. The LRA further states that follow-up actions from the 2009 self-assessment, however, indicate improved data analyses and performance monitoring and that reviews against established program standards provide assurance that the program will remain effective for managing loss of material of components.

The staff also followed-up on the 2009 program self-assessment and reviewed a 2010 assessment, "Cornerstone Rollup, Program: Appendix J," which reaffirmed the decline and attributed it to knowledge gap, lack of experience of the program owner, declines in program personnel, and declines in infrastructure, implementation, and equipment. The staff, however, noted that the applicant has taken steps to assure satisfactory program performance, including:

- internal reviews of program's performance against established standards to assure program effectiveness against loss of material of components
- plant-specific operating experience evaluation including the identification of degradation leading to corrective action(s) when necessary prior to loss of intended function providing evidence that the program is effective for managing aging effects of components
- program owner contributions identifying program success and weakness
- applicable self-assessments, QA audits, peer evaluations, and NRC reviews
- event investigations, trending reports, lessons learned from in-house events, self-assessments, including the 10 CFR Part 50, Appendix B corrective action process

- industry operating experience evaluations and actions to mitigate the consequences where applicable

The staff reviewed operating experience information in the application and during the audit to determine whether the applicable aging effects and industry and plant-specific operating experience were reviewed by the applicant. As discussed in the AMP Audit Report, the staff conducted an independent search of the plant operating experience information to determine whether the applicant had adequately evaluated and incorporated operating experience related to this program. During its review, the staff found no operating experience to indicate that the applicant's program would not be effective in adequately managing aging effects during the period of extended operation.

Based on its audit and review of the application, the staff finds that the applicant has appropriately evaluated plant-specific and industry operating experience and implementation of the program has resulted in the applicant taking corrective actions. In addition, the staff finds that the conditions and operating experience at the plant are bounded by those for which the corresponding GALL Report AMP was evaluated.

UFSAR Supplement. LRA Section A.1.15 provides the UFSAR supplement for the Containment Leak Rate program. The staff reviewed this UFSAR supplement description of the program against the recommended description for this type of program as described in SRP-LR Table 3.0-1 and noted that the applicant's UFSAR needed to be augmented to indicate that the plant procedures for Types A, B and C leakage rate testing will be implemented in accordance with the criteria set in RG 1.163, NEI 94-01, Revision 2-A, and ANSI/ANS-56.8-2002, which are the most current guidelines for acceptable LRTs. The licensing basis for this program for the period of extended operation may not be adequate if the applicant does not incorporate this information in its UFSAR supplement. By letter dated December 18, 2012, the applicant revised its UFSAR supplement to include these documents. As discussed above in response to RAI B.1.15-2, the staff reviewed the supplement and found it acceptable because it includes an acceptable level of detail and incorporates the appropriate documents. The staff's concern is resolved, and the staff finds that the information in the UFSAR supplement is an adequate summary description of the program.

Update to LRA AMP B.1.15:

By letter dated September 23, 2016, the applicant revised LRA Section B.1.15, "Containment Leak Rate," aging management program. The letter summarized events that led to changes to the LRA AMP, Containment Leak Rate program, as follows:

On February 17, 2016, the NRC staff approved (ADAMS Accession No. ML16011A247) a Grand Gulf license amendment request [LAR] (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).

Following the NRC approval of the Grand Gulf LAR (License Amendment 209), and further discussions by the NRC staff with the applicant on this issue, NRC was notified of changes affecting LRA AMP B.1.15, "Containment Leak Rate" program. In its letter dated September 23, 2016, the applicant stated that approval and implementation of the LAR did not alter its conclusion of the program's consistency with that of the GALL Report, Revision 2, AMP XI.S4, as was indicated in the original submittal of the LRA on October 28, 2011. However, by letter dated October 3, 2016, the applicant supplemented its September 23rd letter and submitted a revised LRA AMP B.1.15, which takes exceptions to the GALL Report AMP XI.S4 recommendations for the "monitoring and trending" and "corrective actions" program elements.

The staff considers the stated exceptions to "monitoring and trending" and "corrective actions" program elements as being portions of the GALL Report AMP XI.S4 that the applicant does not intend to implement. The SRP-LR states that an applicant may take one or more exceptions to specific GALL Report AMP elements, and that any exception should be described and justified. The staff reviewed the technical justifications for the exceptions, including associated OE from the NRC-approved LAR, and assessed whether the revised LRA AMP B.1.15 is adequate to manage the effects of aging for SSCs within the scope of the Containment Leak Rate program. The staff's evaluation of these exceptions is as follows:

Exception 1. The revised LRA Section (AMP) B.1.15 states an exception to the "monitoring and trending" program element. In this exception, the applicant stated the revised LRA AMP B.1.15 follows NEI 94-01, Revision 3-A, subject to conditions specified in the safety evaluation (SE) report for Grand Gulf LAR dated May 27, 2015, to establish the local leak rate testing frequency for its Containment Leak Rate program instead of Revision 2-A of the NEI 94-01 referenced in the "monitoring and trending," program element of the GALL Report AMP XI.S4.

The noted difference between NEI 94-01, Revision 2-A and NEI 94-01, Revision 3-A is in the testing frequency of Type C (containment isolation valve [CIV] leakage rates) LLRTs. RG 1.163 and NEI 94-01, Revision 2-A, limit the testing interval for Type C tests to 60 months with a grace period (permissible extension for non-routine emergent conditions) of up to 15 months, while NEI 94-01, Revision 3-A, extends the testing interval for Type C tests to 75 months and reduces the grace period to nine months. For Type B tests, although the maximum testing interval remains unchanged (120 months), the grace period under NEI 94-01, Revision 3-A is also reduced to nine months.

The staff reviewed this exception to LRA AMP B.1.15, "monitoring and trending," program element against the corresponding program element in GALL Report AMP XI.S4 and finds it acceptable because when NEI 94-01, Revision 3-A is implemented there would be no negative impact when adjusting the testing interval for Type B and Type C tests based on their past acceptable local leakage rate performance, other "performance factors," and reduced grace periods as articulated in the SE of the approved LAR.

The staff reviewed the methodology to increase the testing interval of CIVs for leakage rate tests and noted that the February 17, 2016, NRC approved LAR resulting in Amendment 209 to the Facility Operating License considered the limitations and conditions imposed by the May 8,

2012, NRC approval of NEI 94-01, Revision 3-A in the context of 10 CFR Part 54. Specifically, when approving the LAR, the staff noted the “Performance Factors” (i.e., past performance, design and service life, safety impacts if failed, cause determination and programmatic controls) identified in Section 11.3.1 of NEI 94-01, Revision 3-A, that would contribute in adjusting the testing interval were considered. If reviews identified any age-related mechanisms contributing to leakage, “they were noted and recommendations were made concerning their impact on eligibility for the extended test interval of 75 months.”

For the purposes of assessing and monitoring or trending the overall containment leakage potential, the as found minimum pathway leakage rates for the just tested penetrations are summed with the as-left minimum pathway leakage rates for penetrations tested during the previous 1, 2 or 3 refueling outages. For CIVs, the entire population subject to LLRT is evaluated based on three consecutive as-found leak rate tests to identify successful past performance when considering extensions to the testing interval. Furthermore, for each Type C component on a greater than 60-month test interval, the applicant will apply a potential leakage understatement adjustment factor of 1.25 to the actual as-left leak rate, which will increase the as-left leakage total. The staff noted in the SE of the approved LAR, that the applicant monitored the performance of the Type B and Type C tests over a nine year period (2005 through 2014) and concluded based on compiled data the high of “as-found” minimum pathway and the “as-left” maximum pathway to have adequate margins of 12.35% and 47% respectively, compared to the regulatory maximum leakage rate at calculated peak containment internal pressure related to design basis accidents.

The staff also noted, implementation of the approved LAR does not change the periodic inspections of the external surfaces of containment penetrations performed in accordance with AMP B.1.13, “Containment Inservice Inspection – IWE,” or by any of the other proposed LRA AMPs selected by the applicant to manage the effects of aging of the components excluded from 10 CFR Part 50, Appendix J testing, as discussed above. Similarly, implementation of the approved LAR does not affect the scheduling of Type B tests as reflected in the approved LAR, unless affected by the aforementioned “Performance Factors.” Furthermore, the staff noted scheduling for Type C components currently not on an extended testing interval follows the current schedule until their eligibility for an extended testing interval based on leakage rate tests can be determined.

The staff also noted that following a one time extension approved in 2004 (ADAMS Accession No. ML040300152) in the testing interval of Type A test (ILRT) to 15 years, the testing interval for Type A tests currently remains at 10 years, consistent with the guidance in RG 1.163. The staff therefore concludes that implementation of NEI 94-01, Revision 3-A in lieu of the NEI 94-01, Revision 2-A poses no negative impact in the acceptance of the “monitoring and trending” program element.

Exception 2. The revised LRA Section (AMP) B.1.15 states an exception to the “corrective actions” program element. In this exception, the applicant stated corrective actions in the revised LRA AMP B.1.15 are taken in accordance with 10 CFR Part 50 Appendix J and NEI 94-01, Revision 3-A, subject to the conditions specified in the safety evaluation (SE) report for Grand Gulf LAR dated May 27, 2015, when leakage rates do not meet those established in the

plant's Technical Specifications in lieu of Revision 2-A of NEI 94-01, referenced in the "corrective actions," program element of the GALL Report AMP XI.S4.

The staff verified that the NRC approval of the Grand Gulf LAR resulted in changes to Technical Specifications (initially discussed above in the main body of the AMP) affecting Type B and Type C tests. These recent changes to the Technical Specifications constitute a part of the plant's CLB regarding the implementation of 10 CFR Part 50, Appendix J.

The staff noted differences in NEI 94-01, Revision 3-A (now credited for the Containment Leak Rate Program) and NEI 94-01, Rev 2-A (recommended by the GALL Report, Revision 2, AMP XI.S4). Specifically, the staff noted that in addition to record keeping requirements of Section 12.1, "Report Requirements," of NEI 94-01, Rev 2-A, NEI 94-01, Revision 3-A augmented the record keeping to include adverse trends in leakage rate summation of Type B and Type C components and the development of a corrective action plan to restore the leakage rate summation margin to an acceptable level.

The staff reviewed this exception to LRA AMP B.1.15, "corrective actions," program element against the corresponding program element in GALL Report, AMP XI.S4 and finds it acceptable because when NEI 94-01, Rev 3-A is implemented there would be no negative impact in the corrective actions program element considering the added review for adverse trends in leakage rate summation for Type B and Type C tests and existing "cause determination," imposed by the "Performance Factors," discussed in *Exception 1* above, that includes identification of failures during an extended testing interval, and of the corresponding corrective actions to be taken.

The staff noted the NRC approval of the Grand Gulf LAR also addressed relevant OE associated with the "corrective action," program element. Specifically, valves that failed to meet the LLRT administrative limits during two consecutive refueling outages (RF), RF-18 and RF-19 "would be tested on the minimum test interval until two successful tests were recorded ... [and] the licensee created an action to investigate the cause of any failed LLRTs ... and documented corrective actions that will help ensure accurate record maintenance in the future."

The staff also noted that the addition to section 12.1 of NEI 94-01, Revision 3-A of "the margin between the Type B and Type C leakage rate summation and its regulatory limit," constitutes an enhancement to the "administrative controls," program element that supports the implementation of the "corrective actions," program element and further supports its acceptance. The staff therefore concludes for the purpose of corrective actions, implementation of NEI 94-01, Revision 3-A, in lieu of the NEI 94-01, Revision 2-A, poses no negative impact in the acceptance of the "corrective actions" program element.

Based on the above review of the exceptions associated with the "parameters monitored or inspected," and "corrective actions," program elements and their justifications, the staff finds that the LRA AMP B.1.15, with exceptions, is consistent with GALL Report AMP XI.S4, and adequate to manage the applicable aging effects.

Update to LRA A.1.15 UFSAR

The staff reviewed the revised UFSAR supplement description of the program against the recommended description for this type of program as described in SRP-LR Table 3.0.1, "FSAR Supplement for Aging Management of Applicable Systems," and noted that it is consistent with the implementing documents identified in the NRC staff approval of a Grand Gulf license amendment request dated February 17, 2016, and hence acceptable.

Conclusion. On the basis of its audit and review of the applicant's Containment Leak Rate program, the staff concludes that the program elements for which the applicant claimed consistency with the GALL Report are consistent with the corresponding program elements of GALL Report AMP XI.S4. In addition, the staff reviewed the exceptions and their justifications and determines that the AMP, with exceptions, is adequate to manage the applicable aging effects. The staff concludes that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, as required by 10 CFR 54.21(a)(3). The staff also reviewed the UFSAR supplement for this AMP and concludes that it provides an adequate summary description of the program, as required by 10 CFR 54.21(d).