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

August 14, 2012

Mr. Rafael Flores
Senior Vice President and
Chief Nuclear Officer
Attention: Regulatory Affairs
Luminant Generation Company LLC
P.O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNIT 1 – RELIEF REQUEST NO. A-1 FOR AN ALTERNATE RISK-INFORMED INSERVICE INSPECTION PROGRAM FOR THE THIRD 10-YEAR INSERVICE INSPECTION INTERVAL (TAC NO. ME6827)

Dear Mr. Flores:

By letter dated August 2, 2011, as supplemented by letters dated February 21, March 8, and June 6, 2012, Luminant Generation Company LLC (the licensee) submitted relief request (RR) A-1 for the U.S. Nuclear Regulatory Commission (NRC) review and approval. The licensee requested relief from certain requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, specifically related to the inservice inspection (ISI) of Class 1 and Class 2 piping welds at Comanche Peak Nuclear Power Plant (CPNPP), Unit 1. The licensee requested the relief pursuant to paragraph 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR).

As an alternative, the licensee proposed to extend the NRC-authorized original risk-informed inservice inspection (RI-ISI) program that was developed, in accordance with the NRC-approved Electric Power Research Institute (EPRI) Topical Report (TR)-112657, Revision B-A, for the second 10-year ISI interval and updated periodically, for implementation in the third 10-year ISI interval.

The NRC staff has completed its review of the request and concludes that the proposed RI-ISI program is an acceptable alternative to the requirements of the ASME Code, Section XI, for the ISI of Class 1 and 2 piping welds. The enclosed safety evaluation documents the technical basis of the authorization. Therefore, pursuant to 10 CFR) 50.55a(a)(3)(i), the NRC staff authorizes the use of RR A-1 at CPNPP, Unit 1, for the third 10-year ISI interval, which began on August 13, 2010, and ends on August 12, 2020.

All other ASME Code, Section XI, requirements for which relief has not been specifically requested remain applicable, including a third-party review by the Authorized Nuclear Inservice Inspector.

If you have any questions, please contact Balwant K. Singal at 301-415-3016 or by e-mail at Balwant.Singal@nrc.gov.

Sincerely,

CFlyon for

Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-445

Enclosure:
As stated

cc w/encl: Distribution via Listserv

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST FOR RELIEF NO. A-1

THIRD 10-YEAR INSERVICE INSPECTION INTERVAL PROGRAM

LUMINANT GENERATION COMPANY LLC

COMANCHE PEAK NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-445

1.0 INTRODUCTION

By letter dated August 2, 2011 (Reference 1), as supplemented by letters dated February 21, March 8, and June 6, 2012 (References 2, 3, and 4, respectively), Luminant Generation Company LLC (the licensee) submitted relief request (RR) A-1 for the U.S. Nuclear Regulatory Commission (NRC) review and approval. The licensee requested relief from certain requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, specifically related to the inservice inspection (ISI) of Class 1 and Class 2 piping welds at Comanche Peak Nuclear Power Plant (CPNPP), Unit 1. As an alternative, the licensee proposed to extend the NRC-approved original September 28, 2001, risk-informed inservice inspection (RI-ISI program, Reference 5), that was developed for the second 10-year ISI interval and updated periodically, for implementation in the third 10-year ISI interval.

Specifically, pursuant to paragraph 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR), the licensee proposed the RI-ISI program in lieu of the ASME Code, Section XI, required examination for Class 1 and Class 2 piping welds. The proposed alternative (RI-ISI program) maintains the fundamental requirements of the ASME Code, Section XI, with a significant reduction in the number of examination locations.

2.0 REGULATORY EVALUATION

In this relief request, the licensee requests authorization of an alternative to the requirements of Table IWB-2500-1 and Table IWC-2500-1 of Section XI of the ASME Code pursuant to 10 CFR 50.55a(a)(3)(i).

The regulations in 10 CFR 50.55a(g)(4) specify that throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports), which are classified as ASME Code Classes 1, 2, and 3 must meet the requirements, except design and

access provisions and pre-service examination requirements, set forth in Section XI of editions and addenda of the ASME Code, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the initial 120-month inspection interval and successive intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code, incorporated by reference in 10 CFR 50.55a(b), 12 months before the start of the 120-month inspection interval, subject to the limitations and modifications listed therein.

The regulations in 10 CFR 50.55a(a)(3) state that alternatives to the requirements of paragraph (g) of 10 CFR 50.55a or portions thereof, may be used when authorized by the Director, Office of Nuclear Reactor Regulation, if the licensee demonstrates (i) the proposed alternatives would provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

3.0 TECHNICAL EVALUATION

3.1 ASME Code Components Affected

ASME Code Class:	Class 1 and 2
Examination Category:	B-F and B-J in Table IWB-2500-1 C-F-I and C-F-2 in Table IWC-2500-1
Component:	Pipe and Nozzle Component Welds
Systems:	Reactor Coolant System (RCS) Chemical and Volume Control System (CVCS) Safety Injection System (SIS) Residual Heat Removal System (RHRS) Containment Spray System (CSS) Feedwater System (FWS) Main Steam System (MSS) Auxiliary Feedwater (AFW)

3.2 Applicable Code Edition and Addenda

The CPNPP, Unit 1, Code of record for the third 10-year ISI interval is based on the 1998 Edition through 2000 Addenda of the ASME Code, Section XI.

3.3 Applicable Code Requirement

The ASME Code, Section XI, Class 1, Examination Category B-F pressure retaining dissimilar metal vessel welds and B-J pressure retaining welds in piping, shown in Table IWB-2500-1, shall receive ISI examinations (i.e., volumetric or surface examination, or both) during successive 120-month (10-year) intervals. For Examination Category B-F piping welds, 100 percent of all welds and for Examination Category B-J piping welds, 25 percent of all welds greater than 1-inch nominal pipe size are selected for volumetric or surface examination, or both, on the basis of existing stress analyses.

The ASME Code, Section XI, Class 2, Examination Category C-F-1 pressure retaining welds in austenitic stainless steel or high alloy steel piping and C-F-2 pressure retaining welds in carbon or low alloy steel piping, shown in Table IWC-2500-1, shall receive ISI examinations (i.e., volumetric or surface examination, or both) during successive 120-month (10-year) intervals. For Examination Category C-F-1 and C-F-2 piping welds, 7.5 percent of non-exempt welds are selected for volumetric or surface examination, or both.

3.4 Licensee's Reason for Relief Request

The licensee stated that the current RI-ISI program at CPNPP, Unit 1, is in accordance with the original RI process authorized by the NRC by letter dated September 28, 2001 (Reference 5), for the second 10-year ISI interval. The licensee has requested continued use of RI process as an alternative for the selection of Class 1 and Class 2 Piping welds for examination during the third 10-year ISI interval.

3.5 Licensee's Proposed Alternative

The licensee proposes to implement the RI process as an alternative to certain requirements of the ASME Code, Section XI, for examination of selected ASME Code Class 1 and 2 piping components. Specifically, the licensee proposes to update the original RI-ISI program authorized by the NRC for the second 10-year ISI interval and apply the updated program to the third 10-year ISI interval. The licensee stated that the updated RI-ISI program summarized in Attachment 2 of its letter dated June 6, 2012, in the table titled "CPNPP Unit 1 - Inspection Location Selection Comparison between Original Approved and Updated RI-ISI Programs by Risk Category," is the subject of the proposed alternative.

3.6 Licensee's Basis for Proposed Alternative

In its original submittal for the RI-ISI program dated February 15, 2001 (Reference 6), the licensee stated that the CPNPP, Unit 1, RI-ISI program meets the intent and principles of NRC Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," July 1998 (Reference 7), and RG 1.178, "An Approach for Plant-Specific Risk-Informed Decisionmaking Inservice Inspection of Piping," September 1998 (Reference 8), and is consistent with the defense-in-depth philosophy. The CPNPP, Unit 1, RI-ISI program is a living program that was developed in accordance with the methodology provided in EPRI TR-112657, Revision B-A, "Revised Risk-Informed Inservice Inspection Evaluation Procedure (PWRMRP-05)," December 1999 (Reference 9), and approved by the NRC by letter dated September 28, 2001 (Reference 5) for the second 10-year ISI interval.

As stated in its letter dated August 2, 2011 (Reference 1), the licensee committed in the original RI-ISI to review and update the risk ranking of piping segments on an ASME Code, Section XI, inspection period basis, as a minimum. The revisions to the original RI-SI program were described in section titled "Proposed Alternative and Basis for Use." The licensee stated that the RI-ISI program was initially implemented during the first period of the second 10-year interval, which ended in July 2003. An evaluation, update, and revisions to the original RI-ISI program have been performed during subsequent periods (i.e., May 2005, June 2007, and

June 2009) of the second 10-year ISI interval in accordance with the Nuclear Energy Institute (NEI) 04-05, "Living Program Guidance to Maintain Risk-Informed Inservice Inspection Programs For Nuclear Plant Piping Systems," April 2004 (Reference 10).

The licensee stated that the original RI-ISI program was based on the 1986 Edition with no addenda of the ASME Code, Section XI, during the first period of the second 10-year ISI interval. Beginning with the second period of the second 10-year ISI interval, the RI-ISI program is in accordance with the 1998 Edition through 2000 Addenda of the ASME Code, Section XI. One of the changes in the 1998 Edition through 2000 Addenda of the ASME Code, Section XI, is the exemp size for ASME Code Class 2 auxiliary feedwater piping (i.e., decreased from 4-inch nominal pipe size (NPS) to 1 ½ inches NPS). As a result, the 4-inch NPS ASME Code Class 2 auxiliary feedwater lines from the outboard isolation valves to where they connect to the four main feedwater lines were added to the revised RI-ISI Program.

The licensee stated that in Period 2, replacement of the steam generators (SGs) and some motor-operated valves (MOVs) resulted in numerous welds being deleted, added, or re-designated.

In its application dated August 2, 2011, the licensee also stated that a new risk impact analysis was performed, and the revised RI-ISI program continues to represent a risk reduction when compared to the last deterministic ASME Code, Section XI, inspection program. The revised program represents a reduction of 8.3×10^{-09} for core damage frequency (CDF) and 1.06×10^{-09} for large early release frequency (LERF). The licensee stated that the RI process continues to provide an adequate level of quality and safety.

3.7 Duration of Relief

The licensee requested approval of the proposed RI-ISI program for the third 10-year ISI interval. The third 10-year ISI interval of CPNPP, Unit 1, commenced on August 13, 2010, and will end on August 12, 2020.

3.8 NRC Staff Evaluation

The NRC staff evaluated the information provided by the licensee in References 1 through 4. The licensee requested continued use of the RI-ISI program as an alternative to certain inspection requirements of the ASME Code Section XI, in the third 10-year ISI interval of CPNPP, Unit 1.

All RI applications are assessed against RG 1.174, Revision 2, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," May 2011 (Reference 11). RG 1.174 states that a probabilistic risk assessment (PRA) used in RI licensing action should be performed in a manner that is consistent with accepted practices. The NRC staff utilizes RG 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," March 2009 (Reference 12), to determine whether the technical adequacy of the PRA used to support a submittal is consistent with accepted practices. The staff also assesses the licensee's proposed RI-ISI program against the guidance in RG 1.178, Revision 1, "An Approach for Plant-Specific Risk-Informed Decision Making for Inservice Inspection of

Piping," September 2003 (Reference 13), and Chapter 3.9.8 of NUREG-800, "Standard Review Plan For the Review of Risk-Informed Inservice Inspection of Piping," September 2003 (Reference 14). The methodology described by the NRC safety evaluation performed in support of the EPRI TR-112657, Revision B-A (Reference 9), is also used as guidance.

As stated in RG 1.174, Revision 2, for the implementation RI decision making, a proposed RI-ISI program shall meet a set of five key principles. These principles are:

1. The proposed change meets the current regulations unless it is explicitly related to a requested exemption (i.e., a specific exemption under 10 CFR 50.12, "Specific Exemptions").

2. The proposed change is consistent with a defense-in-depth philosophy.

3. The proposed change maintains sufficient safety margins.

4. When proposed changes result in an increase in CDF or risk, the increases should be small and consistent with the intent of the Commission's Safety Goal Policy Statement.

5. The impact of the proposed change should be monitored using performance measurement strategies.

Principle 1: The proposed change meets the current regulations unless it is explicitly related to a requested exemption (i.e., a specific exemption under 10 CFR 50.12, "Specific Exemptions")

The NRC staff assessed the proposed RI-ISI program based on review of the adequacy of the licensee's fulfillment of the above key principles. The staff has determined that the licensee met the requirements of the first principle because an alternative ISI program based on RI process may be authorized pursuant to 10 CFR 50.55a(3)(i) and, therefore, an exemption request is not required.

Principles 2 and 3: The proposed change is consistent with a defense-in-depth philosophy and the proposed change maintains sufficient safety margins

The NRC staff notes that the licensee's assurance that the second and third principles are met is based on the application of the approved methodology and not on the particular inspection locations selected. The licensee stated that the proposed RI-ISI program for the examination of ASME Code Class 1 and 2 piping welds in the third 10-year ISI interval of the CPNPP, Unit 1, is in accordance with the original RI-ISI program authorized by the NRC in a letter dated September 28, 2001 (Reference 5) for the second 10-year ISI interval. The original RI-ISI program was developed in accordance with the NRC-approved EPRI TR-112657, Revision B-A, methodology (Reference 9). The RI-ISI program of CPNPP, Unit 1, and the risk ranking of piping segments has been continuously reviewed and adjusted on an ASME Code, Section XI, inspection period basis, as a minimum.

The licensee stated that no changes to the evaluation methodology, as currently implemented under EPRI TR-112657, Revision B-A, are required as part of this interval update, that the

methodology of the calculation of the risk impact assessment for the third 10-year ISI interval has not been changed, and the calculation remains part of the living program. The NRC staff has determined that because the methodology used to develop the RI-ISI program for the third 10-year interval is unchanged from the methodology approved by the NRC for development of the RI-ISI program used in the second 10-year ISI interval, the second and third principles are met.

Principle 4: When proposed changes result in an increase in CDF or risk, the increases should be small and consistent with the intent of the Commission's Safety Goal Policy Statement

The NRC staff issued a request for additional information (RAI) on January 25 and 27, 2012 (Reference 15), requesting that the licensee discuss technical reason(s) for any changes in risk rank and consequence rank of the added or deleted welds (i.e., as shown in the table titled "CPNPP Unit 1 - Inspection Location Selection Comparison Between Original Approved and Updated RI-ISI Programs by Risk Category," resulting from PRA Revisions 3B, 3C, and 3D and as described in items 2, 3, and 4 of the licensee's letter dated August 2, 2011. In its letter dated March 8, 2012 (Reference 3), the licensee stated that the welds were added based on their consequence rank and risk rank in accordance with the approved process utilized in the original submittal dated February 15, 2001. Since the added welds were not in the original submittal, there was no change in risk rank or consequence rank other than their inclusion in the RI-ISI program. The licensee further stated that the technical basis for the risk rank is the combination of consequence rank and degradation mechanism rank, as derived in accordance with the risk matrix described in EPRI TR-112657, Revision B-A. The change in risk rank in each case was attributed to the change in associated consequence rank. The changes in consequence rank resulted from re-quantification of consequences associated with each revised PRA model. Since the NRC-approved RI methodology (the original RI-ISI program for developing the proposed RI-ISI program) for the third 10-year interval was used with no changes, the NRC staff concludes that the licensee's response is acceptable

The NRC staff notes that the fourth principle requires an evaluation of the change in risk or CDF between the proposed RI-ISI program alternative and the program the licensee would otherwise be required to implement (e.g., ASME Code, Section XI). The change in risk estimate is dependent on the location of inspections in the proposed ISI program compared to the location of inspections that would be inspected using the ASME Code, Section XI, requirement and the technical adequacy of PRA. The licensee stated that a new risk impact analysis for the purpose of proposed RI-ISI program at CPNPP, Unit 1, was performed.

The NRC staff has previously determined that it is not necessary to develop a new deterministic ASME Code, Section XI, program for each new 10-year interval; instead, it is acceptable to compare the new proposed RI-ISI program with the last deterministic ASME program. The licensee stated that a new risk impact analysis was performed, and the revised program continues to represent a risk reduction when compared to the last deterministic ASME Code, Section XI, inspection program. As clarified by the licensee in its letter dated March 8, 2012, the original program represented a reduction of 9.27×10^{-09} per reactor year in CDF and 3.74×10^{-09} per reactor year in LERF, while the revised program represents a reduction of 8.3×10^{-09} per reactor year in CDF and 1.06×10^{-09} per reactor year in LERF.

The fourth principle also requires demonstration of the technical adequacy of the PRA. As discussed in RG 1.178 and RG 1.200, an acceptable change in risk evaluation (and risk-ranking evaluation used to identify the most risk significant locations) requires the use of a PRA of appropriate technical quality that models the as-built and as-operated plant. In 2002, an independent PRA peer review was conducted under the auspices of the Westinghouse Owners Group (WOG), which followed the industry PRA peer review process. The licensee stated that all level A and B facts and observations (F&Os) from this review were addressed and closed out. In 2004, a self-assessment was performed for the Systems Analysis element of the PRA model as well as an assessment of model maintenance, update process, loss of offsite power calculation, and convolution data. In 2009, a gap analysis was performed against the ASME Standard, ASME RA-Sb-2005 and RG 1.200, Revision 1. This gap analysis identified supporting requirements that did not meet capability category II. The licensee provided a disposition for those supporting requirements pertinent for this application by utilizing guidance provided by EPRI TR-1018427, "Nondestructive Examination: Risk Assessment Technical Adequacy Guidance for Risk-Informed Inservice Inspection Programs" December 2008 (Reference 16).

In response to the NRC staff's RAI, in its letter dated February 21, 2012 (Reference 2), the licensee stated that the earlier version of EPRI TR-1021467, "Nondestructive Evaluation: Probabilistic Risk Assessment Technical Adequacy Guidance for Risk-Informed In-Service Inspection Programs," (Reference 17), was used in preparation of the submittal to address supporting requirements. The later version of EPRI TR-1021467 includes the NRC modifications as outlined in the NRC Safety Evaluation Report dated January 18, 2012 (Reference 18). The licensee reviewed the changes made through the Safety Evaluation and provided verification that there are no additional outstanding supporting requirements for this application.

The licensee provided its evaluation of all identified gaps indicating that they are not significant to the RI-ISI application. Both supporting requirements, DA-C11 and LE-F1b, as addressed for the licensee's PRA, are judged to have a conservative impact for this application. In response to the NRC staff RAI, in its letter dated February 21, 2012, the licensee clarified that DA-C15 is met while DA-C14 and SY-A22 are not met. The self-assessment identified that recovery of failures other than offsite power is not generally accepted or supported by data; and the licensee has not collected and analyzed plant-specific data associated with the recovery of hardware faults. The licensee performed a sensitivity study in which all hardware recoveries were not allowed. Based on the revised data without recovery, there was no increase to the segment consequence risk categories.

The NRC staff concludes that the licensee has assessed the technical adequacy of its PRA using the appropriate version of RG 1.200 and the quality of the PRA is sufficient to support the proposed RI-ISI program. Further, the staff concludes that the revised program continues to satisfy the acceptance guidelines of RG 1.174 and EPRI TR-112657, Revision B-A, when compared to the last deterministic ASME Code, Section XI, inspection program and the PRA quality is sufficient to support the proposed RI-ISI program. Thus, the NRC staff concludes that the licensee's analysis provides assurance that the fourth key principle is met.

Principle 5: The impact of the proposed change should be monitored using performance measurement strategies

The fifth principle of RI decision making requires that the impact of the proposed change be monitored by using performance measurement strategies. As described by the licensee in its application, the RI-ISI program is a living program that requires periodic updating and that, as a minimum, will include reviews of risk ranking of piping segments on an ASME Code, Section XI, inspection period basis. Thus, the NRC staff concludes that the fifth key principle is met.

In its RAI, the NRC staff requested that the licensee discuss any augmented inspection programs that were subsumed in the proposed third 10-year interval RI-ISI program of CPNPP, Unit 1, and discuss the reason(s) for any changes. By letter dated March 8, 2012, the licensee responded that no augmented programs were subsumed in the proposed third 10-year interval RI-ISI program.

The NRC staff also requested the licensee describe how the proposed CPNPP, Unit 1, RI-ISI program alternative for the third 10-year ISI interval will address the requirements of 10 CFR 50.55a(g)(6)(ii)(F), "Examination requirements for class 1 piping and nozzle dissimilar-metal butt welds," and the implementation of ASME Code Case N-770-1, "Alternative Examination Requirements and Acceptance Standards for Class 1 PWR Piping and Vessel Nozzle Butt Welds Fabricated With UNS N06082 or UNS W86182 Weld Filler Material With or Without Application of Listed Mitigation Activities." By letter dated March 8, 2012, the licensee stated that ASME Code Case N-770-1 will be implemented in accordance with the requirements of 10 CFR 50.55a(g)(6)(ii)(F) as a separate program. The proposed RI-ISI program alternative will have no impact on the implementation of requirements for ASME Code Case N-770-1. The ASME Code Case N-770-1 butt welds are included in the RI-ISI weld count, with some of the welds counted in the RI-ISI program as elements selected to be examined during the third 10-year ISI interval for certain risk categories and rankings. The staff concluded that the licensee response was not acceptable because the nickel-based Alloy 82/182 dissimilar metal welds under the scope of ASME Code Case N-770-1 should not have been included in the RI-ISI program of CPNPP, Unit 1, for the third 10-year ISI interval. The licensee was requested to clarify and revise the proposed RI-ISI program to comply with the requirements of ASME Code Case N-770-1 during a phone call on May 14, 2012. By letter dated June 6, 2012 (Reference 4), the licensee revised its response as follows:

> In accordance with 10 CFR 50.55a(g)(6)(ii)(F), welds subject to [primary water stress corrosion cracking (PWSCC)] are selected for examination per [ASME] Code Case N-770-1 and examined under that program. Welds for which no other degradation mechanism has been postulated will be examined solely under the [ASME] Code Case N-770-1 Program and will be removed from consideration during the RI-ISI element selection process. Welds for which a degradation mechanism in addition to PWSCC has been identified during the RI-ISI process may be additionally selected and examined in accordance with the RI-ISI process such that the secondary degradation mechanism is also monitored....
>
> Inspection of the [ASME] Code Category B-F welds that are susceptible to PWSCC and no other postulated degradation mechanism will be removed from

> the inspections credited under the RI-ISI Program. Removal of these inspections has no impact on the total CDF or LERF since they result in an impact of 4.00E-12 and 4.00E-13 [per reactor year], respectively, which does not show up in the reduction of 8.3E-09 [per reactor year] in regards to CDF and 1.06E-09 [per reactor year] in regards to LERF.
>
> Presently, there are eight piping butt welds in the Alloy 600 Program that follow the examination requirements of [ASME] Code Case N-770-1. Six other welds, associated with the Pressurizer nozzles, have been mitigated with [structural weld overlay (SWOL)], have all been re-examined, with no indications identified after each examination, and are identified in the RI-ISI Program.
>
> The Inspection Location Selection Comparison Table has also been changed to reflect the [ASME] Code Case N-770-1 welds and some other editorial changes to weld counts and is included as Attachment 2 [of the letter dated June 6, 2012]. These changes reduce the weld selection for the third [10-year] interval from 133 to 125 to reflect the non-selection of the [ASME] Code Case N-770-1 welds.

The NRC staff determined that the revised RI-ISI program was in compliance with the requirements of ASME Code Case N-770-1, as mandated by 10 CFR 50.55a(g)(6)(ii)(F) with conditions, and was acceptable.

In summary, based on the above evaluation, the NRC staff concludes that the licensee's proposed RI-ISI program alternative for the third 10-year ISI interval meets the five key principles contained in RG 1.174, Revision 2, for RI decision making and, therefore, provides an acceptable level of quality and safety.

4.0 CONCLUSION

As discussed above, the NRC staff concludes that the proposed alternative provides an acceptable level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g), and is in compliance with the ASME Code's requirements. Therefore, pursuant to 10 CFR) 50.55a(a)(3)(i), the NRC staff authorizes the use of RR A-1 at CPNPP, Unit 1, for the third 10-year ISI interval, which began on August 13, 2010, and ends on August 12, 2020.

All other ASME Code, Section XI, requirements for which relief has not been specifically requested remain applicable, including a third-party review by the Authorized Nuclear Inservice Inspector.

5.0 REFERENCES

1. Madden, F. W., Luminant Generation Company LLC, letter to U.S. Nuclear Regulatory Commission, "Relief Request A-1 for Unit 1 Inservice Inspection for Application of an Alternative to the ASME Boiler and Pressure Vessel Code Section XI Examination Requirements for Class 1 and 2 Piping Welds (Third Interval Start Date: August 13, 2010)," dated August 2, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11220A261).

2. Madden, F. W., Luminant Generation Company LLC, letter to U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information for Relief Request A-1 (TAC No. ME6827)," dated February 21, 2012 (ADAMS Accession No. ML12060A348).

3. Madden, F. W., Luminant Generation Company LLC, letter to U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information for Relief Request A-1 (TAC No. ME6827)," dated March 8, 2012 (ADAMS Accession No. ML12082A017).

4. Madden, F. W., Luminant Generation Company LLC, letter to U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information for Relief Request A-1 (TAC No. ME6827)," dated June 6, 2012 (ADAMS Accession No. ML12172A263).

5. Gramm, R. A., U.S. Nuclear Regulatory Commission, letter to TXU Electric, "Comanche Peak Steam Electric Station (CPSES), Units 1 and 2 - Approval of Relief Request for Application of Risk-Informed Inservice Inspection Program for American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Class 1 and 2 Piping (TAC Nos. MB1201 and MB1202)," dated September 28, 2001 (ADAMS Accession No. ML012710112).

6. Walker, R. D., TXU Electric, letter to U.S. Nuclear Regulatory Commission, "Relief Request for Application of an Alternative to the ASME Boiler and Pressure Vessel Code Section XI Examination Requirements for Class 1 and 2 Piping Welds," dated February 15, 2001 (ADAMS Accession No. ML010520269).

7. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," July 1998 (ADAMS Accession No. ML003740133).

8. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.178, "An Approach for Plant-Specific Risk-Informed Decisionmaking Inservice Inspection of Piping," September 1998 (ADAMS Accession No. ML003740181).

9. Electric Power Research Institute, Topical Report EPRI TR-112657, Revision. B-A, "Revised Risk-Informed Inservice Inspection Evaluation Procedure (PWRMRP-05)," December 1999 (ADAMS Accession No. ML013470102).

10. Nuclear Energy Institute (NEI) Document NEI 04-05, "Living Program Guidance to Maintain Risk-Informed Inservice Inspection Programs for Nuclear Plant Piping Systems," April 2004 (ADAMS Accession No. ML041480432).

11. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.174, Revision 2, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," May 2011 (ADAMS Accession No. ML100910006).

12. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," March 2009 (ADAMS Accession No. ML090410014).

13. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.178, Revision 1, "An approach for Plant-Specific Risk-Informed Decision Making for Inservice Inspection of Piping," September 2003 (ADAMS Accession No. ML032510128).

14. U.S. Nuclear Regulatory Commission, Chapter 3.9.8 of NUREG-800, "Standard Review plan For the Review of Risk-Informed Inservice Inspection of Piping," September 2003 (ADAMS Accession No. ML032510135).

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Date: August 14, 2012

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Sincerely,

/RA by FLyon for/

Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-445

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