

# WOLF CREEK

NUCLEAR OPERATING CORPORATION

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ET 00-0002

U. S. Nuclear Regulatory Commission  
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Washington, D. C. 20555

Subject: Docket No. 50-482: Request to Use Alternative Requirements for  
Inservice Inspection - Relief Requests CI1R-01 and CI1R-02

Gentlemen:

Pursuant to the provisions of 10 CFR 50.55a(a)(3)(i), Wolf Creek Nuclear Operating Corporation (WCNOC) requests approval for use of an alternative to the requirements of ASME Section XI, 1992 Edition, with the 1992 Addenda, Subsection IWE, for the Inservice Inspection of Class MC and Metallic Shell and Penetration Liners of Class CC Pressure Retaining components and their integral attachments. Details of the proposed alternative and Relief Request CI1R-01 are provided in Attachment I.

In addition, pursuant to the provisions of 10 CFR 50.55a(a)(3)(i), WCNOC requests approval for use of an alternative to the requirements of ASME Section XI, 1992 Edition, with the 1992 Addenda, Subsection IWL for Inservice Inspection of Class CC components. Details of the proposed alternative and Relief Request CI1R-02 are provided in Attachment II.

A significant portion of the inservice inspection of the Wolf Creek Generating Station (WCGS) containment is scheduled to be performed during the WCGS eleventh refueling outage, which is scheduled to begin on September 30, 2000. Therefore, in order to provide sufficient time to incorporate programmatic changes to support the eleventh refueling outage, WCNOC requests that approval of these relief requests be completed by August 1, 2000.

Attachment III identifies commitments contained in this correspondence. If you have any questions concerning this correspondence, please contact me at (316) 364-4034, or Mr. Michael J. Angus at (316) 364-4077.

Very truly yours,



Richard A. Muench

RAM/rlr

Attachments

cc: J. N. Donohew (NRC), w/a  
W. D. Johnson (NRC), w/a  
E. W. Merschoff (NRC), w/a  
Senior Resident Inspector (NRC), w/a

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**RELIEF REQUEST CI1R-01**  
**Revision 0**

**COMPONENT IDENTIFICATION**

Code Class: MC and Metallic Liners of Class CC Components  
Examination Category: N/A  
Item Numbers: N/A  
Description: Alternative Requirements for Inservice Inspection of Class MC and Metallic Shell and Penetration Liners of Class CC Pressure Retaining Components and Their Integral Attachments

**CODE REQUIREMENTS**

ASME Section XI, 1992 Edition with the 1992 Addenda, Subsection IWE

**PROPOSED ALTERNATIVE PROVISIONS**

WCNOC will perform inservice inspection of Class MC and metallic shell and penetration liners of Class CC pressure retaining components and their integral attachments in accordance with Subsection IWE of the 1998 Edition of ASME Section XI, supplemented with the applicable requirements of 10 CFR 50.55a(b) (2) (ix) and the following additional commitments:

1) IWE-2300, 1998 Edition, requires the Owner to define requirements for visual examination of containment surfaces and for qualifying personnel performing visual examinations. The following provisions define the general and detailed visual examinations to be performed as part of the WCNOC Containment ISI Program as well as personnel qualification requirements:

- The general and detailed visual examinations will be performed by certified examination personnel.
- The qualification program for personnel performing the general and detailed visual examinations will meet the applicable requirements of IWA-2300 of the 1992 Addenda.
- WCNOC procedures will include the general and detailed visual examinations in the functional task descriptions for the VT-3 and VT-1 methods, respectively.
- Personnel performing the general and detailed visual examinations will be certified to a minimum Level II VT-3 and VT-1, respectively.
- The acceptance criteria for general and detailed visual examinations for various items in the containment system are discussed in Item 3) below.
- As allowed by 10 CFR 50.55a(b) (2) (ix) (B), the maximum direct examination distance specified in Table IWA-2210-1 in the 1992 Addenda may be extended, and the minimum illumination requirements specified in Table IWA-2210-1 of the 1992 Addenda may be decreased, provided that the conditions or indications for which the visual examination is performed can be detected at the chosen distance and illumination. A performance demonstration will be developed and documented to establish the distances and illumination for which the general visual examination is sufficient to detect evidence of degradation that may affect the containment structural integrity or leak tightness. The performance requirements established from the performance demonstration will be included in the visual examination procedure and used for the general visual examination.

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- The WCNOC visual examination procedure revision will be prepared by Non-destructive Examination (NDE) Level III personnel and the Responsible Engineer and demonstrated to the Authorized Nuclear Inservice Inspector. The detailed visual examination will meet the IWA-2210 requirements in the 1998 Edition (for Table IWA-2210-1, the criteria for the VT-1 row will be met).
  - Personnel performing augmented ultrasonic thickness examinations will be qualified in accordance with the requirements of IWA-2000 in the 1992 Addenda.
- 2) IWE-2500(b) in the 1992 Addenda requires that when paint or coatings are to be removed, the paint or coatings shall be visually examined in accordance with Table IWE-2500-1 prior to removal. The 1998 Edition does not contain this provision. However, in accordance with the 1998 Edition Table IWE-2500-1, Category E-A, Item number E1.11, the containment liner inservice inspection requires a general visual examination which is required to be performed each inspection period (approximately 40 months). Thus, the 1998 Edition requirement to examine the accessible surface areas of the containment liner each Inspection Period is an increase in frequency when compared to the requirements found in the 1992 Edition. This increased frequency of examination is also a requirement of 10 CFR 50.55a(b)(2)(ix)(E). If the liner plate meets the general visual examination acceptance criteria, no further examination is required and the coating would not be removed. If an area does not meet the general visual acceptance criteria, the area will be subjected to a detailed visual examination. An indication recorded during a general visual examination identifies that a potential problem may exist. The detailed visual examination identifies areas that are suspect and must be accepted by engineering evaluation or corrected by a repair/replacement activity. Depending on the nature of the suspect area, removal of the coating may be required to determine if the liner plate is acceptable. Based on this structured protocol and the increased frequency of examination, there is no anticipated benefit from a separate Code requirement to inspect coatings prior to removal.

As an additional control, should a coating be removed between required inservice inspections, the WCNOC nonconformance and corrective action program would identify and resolve any base metal conditions that could challenge the structural integrity of the containment. This protocol provides additional demonstration that there is no anticipated benefit from a separate Code requirement to inspect coatings prior to removal.

- 3) IWE-3510.1 and IWE-3511.1: These paragraphs in the 1998 Edition were revised to require the Owner to define acceptance criteria for general and detailed visual examination of containment surfaces. The following provisions define the acceptance criteria for the general and detailed visual examinations to be performed as part of the WCNOC Containment ISI Program:

The general visual examination acceptance criteria will be included in the WCNOC Section XI visual examination procedure. The general visual examination of containment liner surfaces examines for indications of degradation that may affect the containment structural integrity or leak tightness. Containment liner welds and dissimilar metal welds are examined as part of the containment liner surfaces. Indications of flaking, blistering or peeling coating, excessive corrosion, general deformation, bulges, surface irregularities, or other signs of distress, will be

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recorded. The general visual examination of pressure retaining bolted connections examines for missing or loose bolting materials, corrosion, bolting deformation, or other indications that may affect the integrity of the bolted connection. All indications are recorded. The general visual examination of moisture barriers examines for wear, damage, erosion, tears, surface cracks or other defects that would permit intrusion of moisture into inaccessible areas. All indications are recorded. All recorded indications will be supplemented with a detailed visual examination.

The detailed visual examinations will also be included in the WCNOG Section XI visual examination procedure. The detailed visual examination assesses the initial condition of surfaces requiring augmented examinations, in accordance with IWE-1241, and determines the magnitude and extent of indications of degradation and distress of these containment surfaces. The detailed visual examination also determines the magnitude and extent of indications of degradation and distress of suspect containment surfaces initially detected by the general visual examination. The detailed visual examination criteria of IWE-2310(e) of the 1998 Edition are used. The results of the examination will be recorded for evaluation by the Responsible Engineer for acceptance by engineering evaluation or correction by repair/replacement activity.

- 4) IWE-3511.3: The 1998 Edition only applies the criteria in IWE-3511.3 to Class MC pressure retaining components, not to metallic liners of Class CC components. WCNOG will apply the ultrasonic examination criteria in IWE-3511.3 to both Class MC components and the metallic liners of Class CC components.

**BASIS FOR RELIEF**

In the Federal Register, on August 8, 1996 (61 FR 41303), the NRC amended its regulations to incorporate by reference the ASME Code Section XI, 1992 Edition with the 1992 Addenda of Subsection IWE for expedited examination of containments. Based on the effective date of the rule change of September 9, 1996, licensees have until September 9, 2001, to establish a Containment ISI program and to complete the first period inspection requirements contained in Section XI.

In the Federal Register, on September 22, 1999 (64 FR 51370), the NRC further amended its regulations to incorporate by reference the ASME Code Section XI, 1995 Edition with the 1996 Addenda. However, in 10 CFR 50.55a(b)(2)(vi), the NRC allowed licensees to implement either the previously required 1992 Edition with 1992 Addenda, or the 1995 Edition with 1996 Addenda, as modified and supplemented by the requirements of 10 CFR 50.55a(b)(2)(ix). This 1999 amendment renumbered the previous 10 CFR 50.55a(b)(2)(x) in the 1996 regulation (containing the modifications and supplements to the 1992 Edition with 1992 Addenda of Subsection IWE) to 10 CFR 50.55a(b)(2)(ix).

Several changes have been made by the ASME to the Subsection IWE rules contained in the 1992 Edition with 1992 Addenda and the 1995 Edition with 1996 Addenda. These changes were published in the 1998 Edition of ASME Section XI and addressed implementation difficulties with the earlier Editions and Addenda of Subsection IWE. In a Safety Evaluation Report (SER) dated July 23, 1999, issued to Texas Utilities Electric Company for the Comanche Peak Steam Electric Station, Units 1 and 2, Docket Numbers 50-445 and 50-446, the NRC staff concluded that the 1998 Edition of Subsection IWE, supplemented by the licensee's commitments in responses to the NRC staff's Requests for Additional

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Information, provided an acceptable level of quality and safety for ensuring the pressure boundary integrity of the Comanche Peak containments.

The WCNOG proposed alternative utilizes the ASME 1998 Edition of Subsection IWE of Section XI in its entirety, supplemented with the applicable requirements of 10 CFR 50.55a(b)(2)(ix). The 1998 Edition of Subsection IWE incorporates other exceptions to the 1992 Addenda and provides a more cohesive approach than could be achieved by requesting relief on multiple, individual issues. These requirements were developed in accordance with the ASME Code committee process with input from interested parties, including other utilities, manufacturers, engineering organizations, Authorized Nuclear Inspection Agencies, EPRI and the NRC. The updating of Subsection IWE requirements by this consensus process is intended to ensure the continued safe operation of nuclear power plants and the continued leak-tight structural integrity of metallic containment components. However, in the SER for Comanche Peak, the NRC staff identified four changes between the 1992 Edition with 1992 Addenda and the 1998 Edition of Subsections IWE for which additional licensee commitments were made. Accordingly, the WCNOG proposed alternative utilizes the 1998 Edition of Subsection IWE of Section XI in its entirety, supplemented with: 1) additional commitments to address concerns the NRC staff had with the four changes in the 1998 Edition of Subsection IWE, as identified in the SER for Comanche Peak; and 2) the applicable requirements of 10 CFR 50.55a(b)(2)(ix).

Based on the information presented, WCNOG requests relief from the requirements in the 1992 Edition with the 1992 Addenda of Section XI. This information demonstrates that the proposed alternative provisions provide an acceptable level of quality and safety for the inspection of Subsection IWE components. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives to ASME Section XI requirements provide an acceptable level of quality and safety.

**PERIOD FOR WHICH RELIEF IS REQUESTED**

Relief is requested for the first ten-year inspection interval of the Containment Inservice Inspection Program at Wolf Creek Generating Station.

**RELIEF REQUEST CI1R-02**  
**Revision 0**

**COMPONENT IDENTIFICATION**

Code Class: CC  
Examination Category: N/A  
Item Numbers: N/A  
Description: Alternative Requirements For Inservice  
Inspection of Class CC Components

**CODE REQUIREMENTS**

ASME Section XI, 1992 Edition, with 1992 Addenda, Subsection IWL

**PROPOSED ALTERNATIVE PROVISIONS**

WCNOC will perform inservice inspection of Class CC components in accordance with Subsection IWL of the 1998 Edition of ASME Section XI, supplemented with the applicable requirements of 10 CFR 50.55a(b)(2)(viii) and the following additional commitments:

- 1) IWL-2300, 1998 Edition, requires the Owner to define requirements for qualifying personnel performing visual examinations. The following provisions define the personnel qualification requirements for general and detailed visual examinations to be performed as part of the WCNOC Containment ISI Program:
  - The general and detailed visual examinations will be performed by certified examination personnel.
  - The qualification program for personnel performing the general and detailed visual examinations will meet the applicable requirements of IWA-2300 of the 1992 Addenda. WCNOC procedures will include the general and detailed visual examinations in the functional task descriptions for the VT-3 and VT-1 methods, respectively.
  - Personnel performing the general and detailed visual examinations will be certified to a minimum Level II VT-3 and VT-1, respectively.
  - A performance demonstration will be developed and documented to establish the distances and illumination for which the general visual examination is sufficient to detect evidence of degradation that may affect the containment structural integrity.
  - The performance requirements established from the performance demonstration will be included in the visual examination procedure and used for the general visual examination.
  - The WCNOC visual examination procedure revision will be prepared by NDE Level III personnel and the Responsible Engineer and demonstrated to the Authorized Nuclear Inservice Inspector.
  - The detailed visual examination will meet the IWA-2210 requirements in the 1998 Edition (for Table IWA-2210-1, the criteria for the VT-1 row will be met).
  - The visual examinations will be performed in accordance with the 1998 Edition, Subsections IWL-2310, IWL-2510, IWL-2523.2, and IWL-2524.
  - Indications will be recorded, and subsequently evaluated by the Responsible Engineer in accordance with IWL-2320, IWL-3200, and IWL-3300.

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- 2) The 1998 Edition of Table IWL-2500-1, Category L-A, Item L1.12 specifies the examination method as a general visual examination. This is a publication error in Section XI. The correct examination method should be a detailed visual examination. WCNOC will perform detailed visual examinations of suspect areas addressed in Category L-A, Item L1.12, in Table IWL-2500-1.

**BASIS FOR RELIEF:**

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested on the basis that the proposed alternatives to ASME Section XI requirements provide an acceptable level of quality and safety.

In the Federal Register, dated August 8, 1996 (61 FR 41303), the NRC amended its regulations to incorporate by reference the ASME Code Section XI, 1992 Edition with 1992 Addenda of Subsection IWL for expedited examination of containments. Based on the effective date of the Rule change (September 9, 1996), Licensees have until September 9, 2001, to establish a Containment ISI program and to complete the first period inspection requirements contained in Section XI.

In the Federal Register, dated September 22, 1999 (64 FR 51370), the NRC further amended its regulations to incorporate by reference the ASME Code Section XI, 1995 Edition with the 1996 Addenda. However, in 50.55a(b)(2)(vi) of this regulation, the NRC allowed licensees to implement either the previously required 1992 Edition with 1992 Addenda, or the 1995 Edition with 1996 Addenda, as modified and supplemented by the requirements of 50.55a(b)(2)(viii). This 1999 amendment renumbered the previous 50.55a(b)(2)(ix) in the 1996 regulation (containing the modifications and supplements to the 1992 Edition with 1992 Addenda of Subsection IWL) to 50.55a(b)(2)(viii).

Several changes have been made by the ASME to Subsection IWL contained in the 1992 Edition with 1992 Addenda. These changes were published in several Addenda between the 1992 Addenda and the 1998 Edition of the ASME Code Section XI and address implementation difficulties with the 1992 Addenda. In a Safety Evaluation Report (SER) dated July 23, 1999, issued to Texas Utilities Electric Company for the Comanche Peak Steam Electric Station, Units 1 and 2, Docket Number 50-445 and 50-446, the NRC staff concluded that the 1998 Edition of Subsection IWL, supplemented by the licensee's commitments in responses to the NRC staff's Requests for Additional Information, provided an acceptable level of quality and safety for ensuring the pressure boundary integrity of the Comanche Peak containments.

The WCNOC proposed alternative utilizes the 1998 Edition of Section XI, Subsection IWL in its entirety, supplemented with the applicable requirements of 10 CFR 50.55a(b)(2)(viii). Utilizing the 1998 Edition of Subsection IWL incorporates other exceptions to the 1992 Edition with the 1992 Addenda and provides a more cohesive approach than could be achieved by requesting relief on multiple individual issues. These requirements were developed in accordance with the ASME Code committee process with input from interested parties, including other utilities, manufacturers, engineering organizations, Authorized Nuclear Inspection Agencies, EPRI and the NRC.

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The updating of Subsection IWL requirements by this consensus process is intended to ensure the continued safe operation of nuclear power plants and the continued structural integrity of containment components. However, in the SER for Comanche Peak, the NRC staff identified two changes between the 1992 Edition with 1992 Addenda and the 1998 Edition of Subsections IWL for which additional licensee commitments were made. Accordingly, the WCNOG proposed alternative identified below utilizes the 1998 Edition of Subsection IWL of Section XI in its entirety, supplemented with: 1) additional commitments to address concerns the NRC staff had with the two changes contained in the 1998 Edition of Subsection IWL, as identified in the SER for Comanche Peak; and 2) the applicable requirements of 10 CFR 50.55a(b) (2) (viii).

Based on the information presented, WCNOG requests relief from the requirements in the 1992 Edition with the 1992 Addenda of Section XI. This information demonstrates that the proposed alternative provisions provide an acceptable level of quality and safety for the inspection of Subsection IWL components.

**PERIOD FOR WHICH RELIEF IS REQUESTED**

Relief is requested for the first and second five-year inspection intervals of the Subsection IWL Containment Inservice Inspection Program for Wolf Creek Generating Station.

**LIST OF COMMITMENTS**

The following table identifies those actions committed to by Wolf Creek Nuclear Operating Corporation (WCNOC) in this document. Any other statements in this submittal are provided for information purposes and are not considered to be commitments. Please direct questions regarding these commitments to Mr. Michael J. Angus, Manager Licensing and Corrective Action at Wolf Creek Generating Station, (316) 364-4077.

COMMITMENT	Due Date/Event
Programmatic changes noted in this letter will be made to implement Relief Requests CI1R-01 and CI1R-02 prior to the start of the eleventh refueling outage.	09/30/2000