WOLF CREEK
NUCLEAR OPERATING CORPORATION

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AUG 2 4 2000

ET 00-0032

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

Reference:
1. Letter ET 00-0002, dated February 25, 2000, from R. A. Muench, WCNOC, to USNRC
2. Letter ET 00-0020, dated May 9, 2000, from R. A. Muench, WCNOC, to USNRC
3. Letter dated July 13, 2000, from J. N. Donohew, USNRC, to O. L. Maynard, WCNOC, Request for Additional Information Regarding Relief Requests CL1R-01 and CL1R-02 For The Wolf Creek Generating Station (TAC NO. MA8393)

Subject: Docket No. 50-482: Response to Request for Additional Information Regarding Relief Requests Cl1R-01 and Cl1R-02 (TAC NO. MA8393)

Gentlemen:

In Reference 1, the Wolf Creek Nuclear Operating Corporation (WCNOC) submitted, pursuant to the provisions of 10 CFR 50.55a(a)(3)(i), a request to approve for use 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, and a request to approve for use an alternative to Subsection IWL, for the Inservice Inspection of Class CC components. These requests were modified to include additional information requested by the NRC staff and submitted in Reference 2, which superseded Reference 1. In Reference 3 the NRC staff requested additional information to clarify information provided in Reference 2. The Attachment provides a copy of the NRC staff's Request for Additional Information with WCNOC's responses included.

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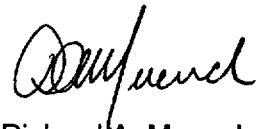
A significant portion of the inservice inspection of the Wolf Creek Generating Station (WCGS) containment is scheduled to be performed during the WCGS eleventh refueling outage, which is scheduled to begin on September 30, 2000. Therefore, in order to provide sufficient time to incorporate programmatic changes to support the eleventh refueling outage, WCNOC requests that approval of these relief requests be completed by September 15, 2000.

There are no licensing commitments contained in this correspondence different from those made in Reference 2. If you have any questions concerning this correspondence, please contact me at (316) 364-4034, or Mr. Tony Harris at (316) 364-4038.

Very truly yours,



Richard A. Muench

RAM/rlr

Attachment

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

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION RELATED TO RELIEF REQUESTS CI1R-01 AND CI1R-02

By letters dated February 25, 2000, and May 9, 2000, Wolf Creek Nuclear Operating Corporation (the licensee) submitted requests for relief CI1R-01, Revision 1 and CI1R-02, Revision 1, for the first 10-year inspection interval of the containment inservice inspection (ISI) program for the Wolf Creek Generating Station (WCGS). The requests contain proposed alternatives to the use of the 1998 Edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section XI in lieu of the 1992 Edition/1992 Addenda for IWE/IWL inspections, as required by the regulations. The Idaho National Engineering and Environmental Laboratory, a contractor for the NRC staff, has reviewed the information provided by the licensee in the two subject requests for relief.

The staff has determined, with input from the contractor, that certain changes in requirements, as found in the 1998 Code Edition do not provide an acceptable level of quality and safety. Therefore, the licensee must augment these requirements in order for the use of the 1998 Edition to be authorized. The following additional information and confirmations are required to complete the evaluation of the subject requests for relief.

1. *The 1998 Code Edition, Articles IWE and IWL, defer to owner-defined general and detailed visual examinations in lieu of accepted visual examination requirements, as currently described in IWA-2000. To establish that the licensee's alternative provides an acceptable level of quality and safety, certain aspects of the licensee's general and detailed visual examination program, addressing both IWE and IWL components, are needed. The licensee is requested to describe the following attributes of its visual examination program:*

   a. *The licensee stated that a performance demonstration will be developed and documented to establish the distances and illumination for which the general and detailed visual examinations are sufficient to detect evidence of degradation that may affect the containment structural integrity or leak tightness. However, it is not clear how this performance demonstration will be conducted. For example, does the licensee intend to develop a separate performance demonstration for both direct and remote examinations? Will the resolution requirements be equivalent for both remote and direct examinations? The Licensee is requested to describe all attributes of the performance demonstration process.*

   WCNOC's Response to RAI Question 1.a.

   The visual examination procedure for Subsection IWL detailed and general visual examinations was qualified and demonstrated to the Authorized Nuclear Inservice Inspector (ANII). The demonstration included both direct visual and remote visual techniques and was performed by the LIII VT examiner and the LIII Civil (LII VT) examiner. The record of procedure demonstration was included in the procedure history file. The following methodology was followed for the demonstration:

   i) The demonstration included both artificial and natural lighting. The detailed visual and general visual examination parameters were verified (using a commercial light meter) as meeting the illumination requirements of Section XI, 1992 Addenda, Table IWA-2210-1 for VT-1 and VT-3.

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ii) The demonstration included artificial lighting in a darkened room. Both industrial halogen flashlights and halogen spotlights were demonstrated to meet the illumination requirements contained in Table IWA-2210-1.

iii) The direct detailed visual examination was demonstrated to meet the character height and distance requirements of Section XI, 1992 Addenda, Table IWA-2210-1 for VT-1. For the direct general visual examination, the demonstration determined the distance that could resolve the character height requirement of Section XI, 1992 Addenda, Table IWA-2210-1 for VT-3.

iv) Remote visual examination was demonstrated using both commercial binoculars and monocular (spotting scope). The remote visual demonstration was conducted both in artificial and natural lighting. The detailed visual was demonstrated to resolve the character height for the VT-1 line of Table IWA-2210-1, and the general visual was demonstrated to resolve the character height for the VT-3 line of Table IWA-2210-1, at distances typical of the actual maximum remote examinations to be performed in the plant.

For subsequent IWL visual examination demonstrations, WCNOC intends to revise the visual examination procedure and conduct the general visual examination demonstration using a general visual reference standard, as described below for the IWE examinations.

The visual examination procedure for Subsection IWE examinations is being revised. However, the following methodology will be followed for the demonstration:

i) The procedure will prescribe the use of a "general visual reference standard" that will assure resolution sufficient to detect defects or deterioration which may be identified during a general visual examination. The reference standard will be placed in representative locations during the examination and used to verify that lighting and resolution (either direct or remote viewing) are adequate for the detection of defects. The use of the reference standard complies with the provisions included in 10 CFR 50.55a(b)(2)(ix)(B). The use of this reference standard was not discussed in our revised relief request (WCNOC letter ET 00-0020, dated May 9, 2000), and supplements item 1)e) of Relief Request CI1R-01 in WCNOC letter ET 00-0020, Attachment 1, page 1 of 18.

ii) Detailed visual examination under Subsection IWE will be demonstrated directly (at a distance not to exceed 24") and remotely using optical equipment demonstrated to achieve a comparable level of acuity as that obtainable from direct visual examination. The detailed visual examination will be demonstrated to resolve the character height for the VT-1 line of Table IWA-2210-1.

iii) The methodology described above will be demonstrated to the ANII. The record of procedure demonstration will be included in the procedure history file.

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b. *The IWE-2500(b) requirement to examine paint or coatings prior to removal has been eliminated from the 1998 Edition. Relief from this requirement has been found acceptable when adequate provisions exist either in the licensee's containment inspection, repair/replacement, nuclear coatings, or ISI programs. In addition, the base metal should be visually examined prior to recoating by qualified inspection personnel. It appears from the licensee's submittal that it utilizes a coatings pre-application inspection; however, it is unclear what this inspection involves. The licensee is requested to describe the inspection performed as well as the qualifications of the individuals performing the inspections.*

WCNOC's Response to RAI Question 1.b.

As noted in Attachment I to WCNOC letter ET 00-0020, during containment ISI examinations, general and detailed visual examinations of coated areas will identify flaws and degradation in the containment base metal, and will result in appropriate corrective actions per Section XI requirements. Should a coating be removed between required inservice inspections, the WCNOC nuclear coatings pre-application inspections, and nonconformance and corrective action programs, would identify and resolve any base metal conditions that could challenge the structural integrity of the containment. The WCNOC procedure for application of coatings in the containment requires that Quality Control (QC) personnel inspect the surface condition prior to application of coatings. The QC personnel performing these inspections also have the VT-1, VT-3, and containment general visual and detailed visual qualifications. Degradation in the containment liner would be observed during this QC inspection and would be identified for resolution prior to application of the coating.

2. *Examination Category E-G, Pressure Retaining Bolting, has been removed from Table IWE-2500-1 in the 1998 Edition. The 1992 Edition requires a visual examination (VT-1) of bolting when a connection is disassembled. The 1998 Edition requires a general visual, performed in place, with no requirement for visual examination when the joint is disassembled. It is not clear what, if any, examinations will be performed on disassembled bolted connections. The licensee is requested to explain what examinations will be performed on disassembled bolting. If VT-1 examinations will not be performed, the licensee is requested to provide an explanation and basis for how this practice provides an acceptable (equivalent) level of quality and safety as that required by the 1992 Edition/Addenda.*

The staff's interim position on code requirements for visual examinations of bolted connections and acceptable alternatives (1992 and 1998 Edition of ASME Section XI, IWE) is attached to this request for additional information.

WCNOC's Response to RAI Question 2.

All accessible bolted connections within the scope of Subsection IWE will be visually examined each inspection period in accordance with the requirements of the 1998 Edition of ASME Section XI, Table IWE-2500-1, Category E-A. This corresponds to an

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examination of all bolted connections three times per inspection interval. In accordance with these 1998 Section XI requirements, WCNOC will perform a general visual examination on the exposed portions of these connections. Bolted connections will not be disassembled solely for the performance of the general visual examination. However, if the general visual examination indicates possible areas of degradation or damage, a detailed visual examination, as required by the 1998 Edition of Section XI, will be performed. Based on the magnitude and extent of degradation, the Responsible Individual will determine if the bolted connection needs to be disassembled for further evaluation.

If a bolted connection within the scope of Subsection IWE is disassembled, a detailed visual examination will be performed once per inspection interval, consistent with the requirements of the 1992 Addenda of Section XI. This detailed visual examination will be performed on all accessible surface areas of the bolts, studs, nuts, bushings, washers, threads in base material, and flange ligaments between the fastener holes. WCNOC will schedule this detailed visual examination for bolted connections routinely disassembled and will assure that this examination is included in the work orders for disassembly of connections that are not routinely disassembled, such as electrical penetrations.

3. *IWL-2410, allows for deferral of concrete visual exams to the next scheduled plant outage for portions of the concrete surface which cannot be examined within the stated time interval. This may be considered acceptable provided credit for the examination is not taken for two intervals simultaneously. The licensee is requested to confirm that this condition will be met.*

WCNOC's Response to RAI Question 3.

IWL-2410 allows for deferral of concrete visual exams to the next scheduled plant outage for portions of the concrete surface which can not be examined within the IWL-2410 stated time frames. WCNOC understands that it is not the intent of Section XI to allow this deferral to be utilized such that the visual examination could be credited to two different ten year intervals. If such a deferral was necessary, the visual examination would only be credited to the interval in effect at the time the deferral was necessary.