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SUBJECT: Forwards revs to requests for relief from certain
requirements of ASME B&PV Code, Section XI, Subsections IWE &
IWL for RO 19, as discussed during 990619 conference call.

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CP&L**Carolina Power & Light Company**

Robinson Nuclear Plant
3581 West Entrance Road
Hartsville SC 29550
Robinson File No: 13510
Serial: RNP-RA/99-0125

JUN 25 1999

United States Nuclear Regulatory Commission
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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23

REVISED RELIEF REQUESTS
CONTAINMENT LINER AND MOISTURE BARRIER

Sir or Madam:

By letter dated January 20, 1999, Carolina Power & Light (CP&L) Company submitted requests for relief from certain requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Subsections IWE and IWL for Refueling Outage 19, scheduled for September 1999. During a conference call between CP&L and NRC on June 17, 1999, CP&L agreed to submit revisions to requests IWE/IWL-01 and IWE/IWL-02. The revised requests are attached.

If you have any questions concerning this matter, please contact Mr. H. K. Chernoff.

Sincerely,


R. L. Warden

Manager - Regulatory Affairs

JSK/jsk

Attachment:

I. Revised Relief Requests

c: L. A. Reyes, NRC, Region II
R. Subbaratnam, NRC, NRR
NRC Resident Inspector, HBRSEP

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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
RELIEF REQUEST NO. IWE/IWL-01
VISUAL EXAMINATION OF INSULATED CONTAINMENT LINER

Code Requirements for Which Relief is Requested

The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, 1992 Edition, 1992 Addenda, Section XI, Table IWE-2500-1, "Examination Categories" Examination Category E-A, requires a visual examination of 100% of the accessible surface areas of containment in accordance with paragraphs IWE-3510.2, "Visual Examinations on Coated Areas," and IWE-3510.3, "VT-3 Visual Examinations on Noncoated Areas," for Class MC, and metallic liners of Class CC, components.

The required examination method for these examinations is a VT-3 examination. One examination per 10-year inservice inspection interval is required at the end of the inspection interval.

Specific Relief Requested

Relief is requested from performing VT-3 examinations, in accordance with the ASME B&PV Code, 1992 Edition, 1992 Addenda, Table IWE-2500-1, Examination Category E-A, on the surface areas of the containment liner which are insulated. It is proposed to perform a VT-3 examination on those portions of the insulated containment liner that are exposed when a maintenance activity requires removal of the liner insulation.

This request for relief is applicable to the insulated portion of the containment liner classified as Class MC and subject to the requirements of Table IWE-2500-1, Examination Category E-A, at the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

Alternative Examination(s)

The alternative examinations proposed is to perform a VT-3 examination on those portions of the insulated containment liner that are exposed when a maintenance activity requires removal of the liner insulation. This examination will be completed if not previously performed in the inspection interval.

Prior to RO 18 in 1998, a project was initiated to remove some of the insulation panels to inspect the containment liner for potential corrosion. During RO 18, 44 panels were removed to inspect for corrosion. The size of a typical panel is approximately 3'-8" x 7'-8". The results of the inspection revealed that on the containment liner at various locations on the lowest row of sheathing panels, the coating had degraded and

that there was some amount of corrosion of the containment liner. The evaluated thickness of the containment liner was greater than the minimum design thickness. It was also noted that for those sheathing panels removed above the lowest row, the coating degradation was less and the corrosion of the containment liner was minimal. It was concluded that the primary cause of the corrosion was a 1975 event that resulted in at least 12 inches of water on the containment floor.

Therefore, a decision was made to remove the accessible sheathing panels on the lowest row to inspect the containment liner for potential corrosion and to repair degraded coatings. This inspection and repair will continue in RO 19 in 1999 and complete in RO 20 in 2001. Of approximately 58 panels on the lowest row of sheathing, 18 panels were removed in RO 18, approximately 24 panels are planned to be removed in RO 19, and approximately 16 panels are planned to be removed in RO 20. A small number of these panels may not be able to be removed because of obstructions or high radiation areas. When the removal, inspection, and recoating of this lowest row of panels is complete, corrosion due to the 1975 event will be arrested and the corrective action will be complete.

In addition to the lowest row of panels, additional panels at various locations and elevations have and will be removed to accommodate maintenance during outages. This would bring the total number of sheathing panels removed during these three outages to approximately one hundred (100). The total number of sheathing panels in containment is estimated to be approximately 2000.

Basis for Requesting Relief

In accordance with 10 CFR 50.55a(a)(3)(i), relief is requested for HBRSEP, Unit No. 2 on the basis that the proposed alternatives in conjunction with the examinations that have occurred during Refueling Outage (RO) 18 and the examinations that will occur during RO 19 and RO 20 would provide an acceptable level of quality and safety.

Justification for Granting Relief

Relief is requested from the Code requirements for VT-3 examinations of the containment liner in areas that are insulated. Alternative examinations described above provide an acceptable level of quality and safety.

The containment liner at HBRSEP, Unit No. 2 is covered by insulation and stainless steel sheathing. This insulation and sheathing form part of the defense in depth philosophy of

the containment liner at HBRSEP. The three barriers that protect the containment liner pressure boundary are as follows:

1. Insulation and sheathing.
2. Coating.
3. Containment liner thickness.

Although not technically complex, the removal of sheathing panels to inspect the containment liner is intrusive to the design of this moisture barrier and expends significant resources. In RO 18 approximately 35 man-hours were expended per panel. These resources do not include project management time, scaffolding hours, or potential critical path polar crane time. Specifically, one of the panels required use of the crane to erect a scaffold. Inspection and repair of this sheathing panel required approximately 28 hours of scheduled polar crane time.

Based on the defense in depth design of the containment liner and the inspections that have been completed, and will occur during RO 19 and RO 20, the inspection of the containment liner behind those areas of the containment liner that are insulated is not warranted, unless the sheathing panels are removed for maintenance purposes.

The proposed examinations provides an acceptable level of quality and safety without presenting an undue challenge to the moisture barrier insulation panels.

Implementation Schedule

This relief will be implemented during the HBRSEP, Unit No. 2 first inspection interval for containment inspections required by ASME B&PV Code, 1992 Edition, 1992 Addenda, Subsections IWE and IWL.

This relief is requested to be approved by July 5, 1999.

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
RELIEF REQUEST NO. IWE/IWL-02
VISUAL EXAMINATION OF MOISTURE BARRIERS

Code Requirements for Which Relief is Requested

The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, 1992 Edition, 1992 Addenda, Section XI, Table IWE-2500-1, "Examination Categories," Examination Category E-D, requires a visual examination of the containment moisture barrier, in accordance with Figure IWE-2500-2, "Examination Areas for Moisture Barriers," for Class MC, and metallic liners of Class CC, components.

The required method is a VT-3 examination. One examination per 10-year inservice inspection interval is required. Deferral of the test to the end of the interval is not permitted.

Specific Relief Requested

Relief is requested from performing VT-3 examinations, in accordance with ASME B&PV Code, 1992 Edition, 1992 Addenda, Table IWE-2500-1, Examination Category E-D, on the containment moisture barriers. In lieu of this requirement, it is proposed that a VT-3 examination of the containment moisture barrier be performed when maintenance activities require removal of the liner insulation.

This request for relief is applicable to components classified as Class MC and subject to the requirements of Table IWE-2500-1, Examination Category E-D, at the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

Alternative Examination(s)

The alternative examination to the 10-year VT-3 examination of containment moisture barriers is to perform a VT-3 examination on those portions of the 228-foot elevation concrete-metal liner moisture barrier that are exposed when a maintenance activity requires removal of the associated barrier insulation. The examination will be completed if not previously performed in the inspection interval.

During the last refueling outage, Refueling Outage (RO) 18, 18 insulation panels at the 228-foot elevation were removed and the moisture barrier at the 228-foot elevation was visible. The moisture barrier was removed to allow inspection of the containment liner adjacent to the moisture barrier. The containment liner adjacent to the moisture barrier did not show evidence of corrosion, indicating that the moisture barrier was performing its function.

Based on the inspection in RO 18, a decision was made to removed the sheathing panels on the lowest row to inspect for corrosion. A small number of these panels may not be able to be removed because of obstructions or high radiation areas. This inspection of the moisture barrier will be completed in RO 19 and RO 20.

Basis for Requesting Relief

In accordance with 10 CFR 50.55a(a)(3)(i), relief is requested for the HBRSEP, Unit No. 2 on the basis that the proposed alternatives would provide an acceptable level of quality and safety.

As shown in Figure IWE-2500-2 and noted in Table IWE-2500-1, moisture barrier materials at concrete-to-metal interfaces are intended to prevent intrusion of moisture against the pressure retaining metal containment shell or liner. For HBRSEP, Unit No. 2, the moisture barrier that meets this definition is the epoxy joint filler that interfaces with the concrete-to-containment liner interface at the 228-foot elevation. Figure 1 provides details of that interface. This moisture barrier is covered with insulation that provides an additional moisture barrier. The specification for the insulation requires: the exposed surface be impervious to water; suitable water seals at points where the insulation ends are exposed to containment atmosphere; and sealant use to prevent water leakage to the containment liner. The combination of the epoxy joint filler moisture barrier and the impervious insulation, in conjunction with the examinations that have occurred during RO 18 in 1998 and the examinations that will occur during RO 19 in 1999 and RO 20 in 2001 provide an acceptable level of quality and safety.

Justification for Granting Relief

The containment internal moisture barrier is covered with an additional layer of insulation and stainless steel sheathing. The specification for the additional layer of insulation and stainless steel sheathing requires that the exposed surface be impervious to water, suitable water seals at points where the insulation ends are exposed to containment atmosphere, and sealant use to prevent water leakage to the containment liner.

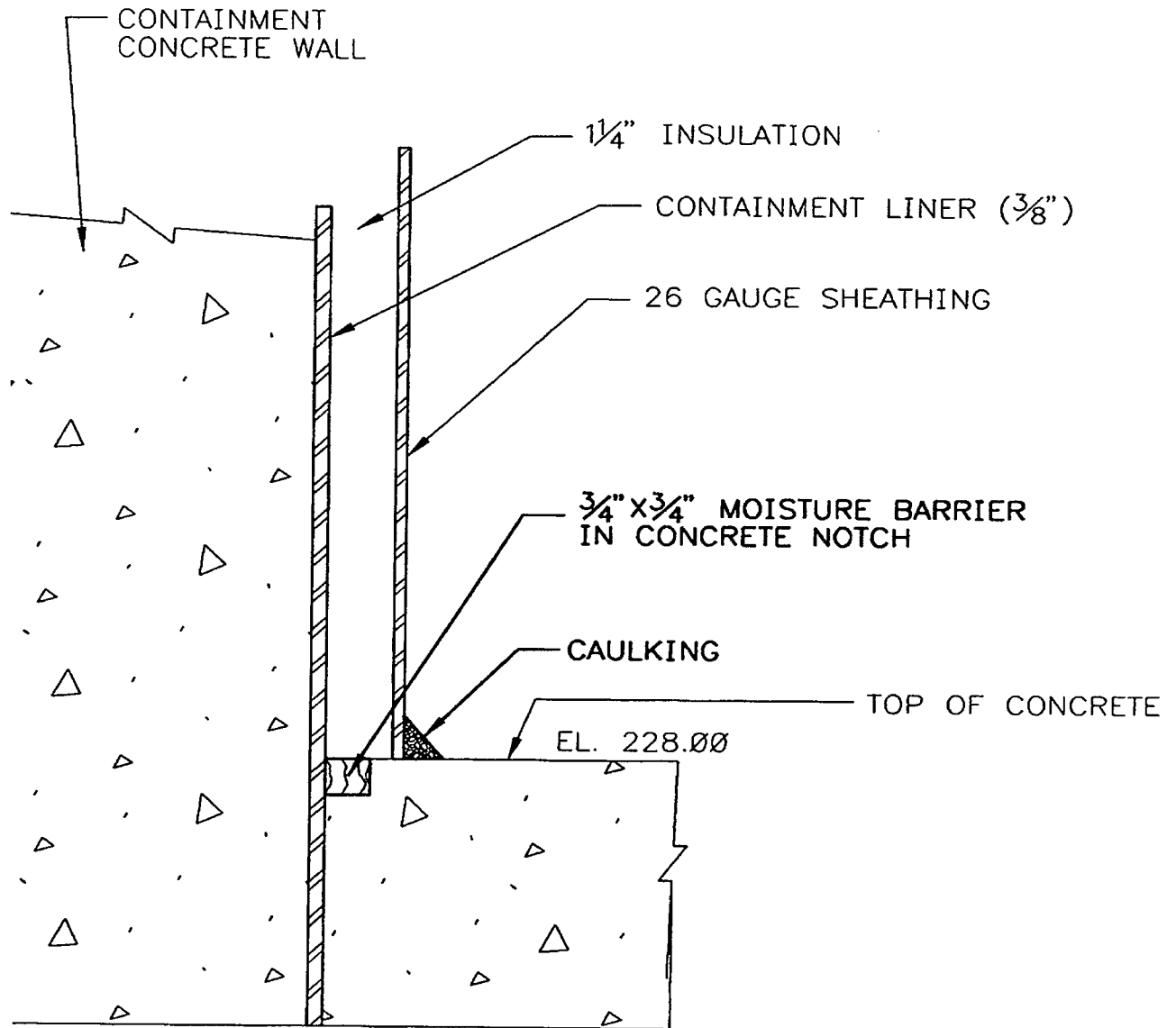
The proposed examination provides an acceptable level of quality and safety while not presenting an undue challenge to the moisture barrier insulation panels.

Implementation Schedule

This relief will be implemented during the HBRSEP, Unit No. 2 first inspection interval for containment inspections required by ASME B&PV Code, 1992 Edition, 1992 Addenda, Subsections IWE and IWL.

This relief is requested to be approved by July 5, 1999.

FIGURE 1



MOISTURE BARRIER DETAIL