

NRC 2001-020

10 CFR 50.55a(a)(3)(ii)

April 10, 2001

Document Control Desk
U. S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555-0001

Ladies/Gentlemen:

DOCKETS 50-266 AND 50-301
ASME SECTION XI RELIEF REQUEST LLR-2
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

In accordance with the requirements of 10 CFR 50.55a(a)(3)(ii), Point Beach Nuclear Plant (PBNP) requests an alternative to the ASME Section XI, 1992 Edition with 1992 Addenda, Examination Category L-A, Table IWL-2500-1 requirements. This edition/addenda requires VT-3C examination of concrete surface areas not exempted by the Code. The PBNP containments have a façade structure that results in difficulties in safely completing the examinations required by the Code. Attached relief request LLR-2 provides the details on the basis for our request and the proposed alternative examination.

An expedited review of this relief is requested to support implementation of our IWL program. In accordance with our telephone conversation with members of your staff on April 9, 2001, it is requested NRC review be completed by May 15, 2001. Please contact Craig Prothero of our staff at 920/755-6515 if there are questions regarding this relief request.

Sincerely,



Thomas J. Webb
Licensing Director

Attachment

A047

NUCLEAR MANAGEMENT COMPANY, LLC
POINT BEACH NUCLEAR PLANT

CONTAINMENT INSPECTION PROGRAM
RELIEF REQUEST LRR-2
GENERAL VISUAL EXAMINATION OF CLASS CC

Component:

Containment Vessel

Exam Area:

Class CC Containment surfaces

IWL Component Drawing:

PBC-333 through PBC-340

ASME Section XI Category:

Examination Category L-A, Table IWL-2500-1, ASME Section Code, 1992 Edition,
1992 Addenda

ASME Section XI Item Number:

L1.11 All Areas

ASME Section XI Code Requirement:

IWL-2510, Examination of Concrete, requires that "concrete surface areas, including coated areas, except those exempted by IWL-1200(b), shall be VT-3C visual examined for evidence of conditions indicative of damage or degradation, such as defined in ACI 201.1 R-68, in accordance with IWL-2310(b). Selected areas, such as those that indicate suspect conditions, shall receive a VT-1C examination in accordance with IWL-2310(a)."

Proposed Alternate Examinations:

Accessible concrete surface areas, including coated areas and areas subjected to strains and pressures (e.g., penetrations, hatch areas etc. except those exempted by IWL-1200(b), shall be VT-3C visual examined for evidence of conditions indicative of damage or degradation, such as defined in ACI 201.1 R-92¹, in accordance with IWL-2310(b). Selected areas, such as those that indicate suspect conditions, shall receive a VT-1C examination in accordance with IWL-2310(a). Accessible areas shall be considered those areas where visual examinations can be performed from floors, roofs, platforms, walkways, ladders, ground surface, or other permanent vantage points.

Inaccessible concrete surface areas, including coated areas, except those exempted by IWL-1220(b), shall be examined by general visual examination with recording criteria as required by Regulatory Guide 1.35, Revision 3 and defined in ACI 201.1 R-92.

In addition to the above identified alternative examinations, PBNP shall perform a VT-1C examination on the tendon end anchorages under Category L-B, Item 2.30, as required by the provisions of IWL-2521.

Code Requirement From Which Relief is Requested:

Relief is requested from IWL-2510, Examination of Concrete for VT-3C, of all concrete surface areas, including coated areas, except those exempted by IWL-1220.

Basis For Relief:

The conventional method of accomplishing a VT-3C examination on all concrete surface areas, including coated areas, with the exception of those exempted is by the use of remote visual magnification aids such as binoculars or a spotting scope. This method of accomplishing a VT-3C examination on all required concrete and coated areas is not possible at PBNP because both the Unit 1 and Unit 2 containment vessels are totally enclosed within a permanent façade structure.

The façade structure prevents remote magnification inspections that many facilities are using to examine concrete areas that are inaccessible due to lack of walkways, platforms, etc. Performing a VT-3C examination of inaccessible concrete areas between the buttresses would require suspending examination personnel over the side of the containment structure or by utilizing remote inspection cameras suspended over the side of the containment.

Suspending personnel over the side of the containment structure exposes personnel to unnecessary safety hazards without providing a compensating benefit. Performing a remote

¹ ACI 201.1R-92 became effective October 1, 1992, and supersedes ACI 201.1 R-68 (Revised 1984)

inspection utilizing an imaging system is not practical from a cost-benefit perspective. In addition, the façade structure prevents exposure of the containment concrete surfaces to environmental degradation effects of wind, rain, snow, etc.

It is more beneficial to focus the examination of concrete surfaces to the areas of high stress where degradation is most expected to occur. These areas include tendon end anchorage areas, containment hatches and penetrations. Penetration and containment hatch areas are accessible and will be VT-3C inspected as proposed.

The tendon end anchorage areas will be inspected in accordance with Category L-B. Since inservice degradation is most likely to occur in areas of high stressed concrete, Category L-B exams will provide sufficient indication of inservice degradation. Should an indication be discovered by a Category L-B exam, IWL-3310 requires an evaluation of the extent, nature, and frequency of additional exams.

Category L-A requires exams of all areas of low stress concrete. Performing exams on all areas of low stress concrete does not provide a safety benefit commensurate with the level of effort and risk to personnel required to perform these exams. The proposed general visual examination on inaccessible areas does not result in a reduction of safety since there are no anticipated degradation mechanisms for these areas.