Consumers Power
POWERING MICHIGAN'S PROGRESS

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DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
TECHNICAL SPECIFICATIONS CHANGE REQUEST REVISION -
SURVEILLANCE OF PRESTRESSING SYSTEM (TAC No. M65428)

Consumers Power Company submitted a Technical Specifications Changes Request on May 4, 1987 which incorporated changes to the surveillance of the containment prestressing system which resulted from our commitments in resolution of Systematic Evaluation Program Topic III-7.A. The Consumers Power commitments, described in NUREG-0820, October 1982, Section 4.11, were to develop acceptance criteria consistent with the then draft ASME Code or equivalent.

The intent of this proposed Technical Specification Change Request, and of the previous change request, is to comply with the acceptance criteria requirements of the pending ASME code Section XI, Subsection IWL. In addition, changes have been proposed to revise the specifications to be compatible with the pending ASME code, except for one instance. The proposed code, if approved as presently drafted, would require one common tendon from each of the three groups of tendons to be a common tendon that would be subject to surveillance during each inspection. The merits of this requirement are still being debated and have not been resolved. Because we do not feel it is prudent to impose unnecessary cyclical loading that could induce fatigue stress, we have not proposed a specification for common tendon surveillance.

The previous change request of May 4, 1987 did not incorporate the selection criteria that is in the pending Subsection IWL of the Code. This was due to a misinterpretation of the proposed requirements. This revision to the May 4 change request incorporates the pending selection criteria and increases the number of tendons to be tested from our present Technical Specifications which require 3 tendons of each type to be inspected. Subsection IWL will allow a two percent sample size for each type of tendon. At Palisades, there are 165-dome tendons, 180-vertical tendons, and 522-hoop tendons. A two percent sample size rounded to the higher integer is 4-dome, 4-vertical and 11-hoop tendons. However, the code also allows a maximum required to be 5, therefore, we have proposed 5-hoop tendons in the specification.

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The Code selection criteria of two percent for the 10-year and subsequent inspections is allowable if the acceptance criteria is met for the earlier inspections. The conclusions from the 1, 3, 5, and 10-year inspections were that there was no evidence of abnormal degradation in the containment structure post tensioning system. Based on these conclusions, Consumers Power Company has proposed incorporation of the two percent sample size. The highlights of the previous surveillances summarized in the updated FSAR, Section 5.8.8.3, discuss several problems encountered during the inspections. However, these problems did not result in failure to meet the acceptance criteria.

The other significant revision to the May 4 previous specification change request is that the reporting requirements for failure to meet the acceptance criteria have been changed to require reporting under 10CFR50.73. This complies with the draft Code subsection IWL and proposed revision 3 to Regulatory Guide 1.35.

Several informal questions from the NRC have been presented to Consumers Power Company concerning the May 4, 1987 submittal. The above discussions on the revision to the reporting requirements and the two percent sample size address two of the questions. Other responses follow:

In the Analysis of no Significant Hazards Consideration, a substantiation of the statement "the revisions in measurement methods, definition of laboratory testing and acceptance criteria do not affect the bases of the Specifications", was requested. This statement should have read "the revisions... do not result in a reduction in the margin of safety". Certainly the proposed revision is the result in a change to the basis of the specification which will include the ASME code, Section XI, Subsection IWL. The proposed revisions to the sample sizes, measurement methods, conducting of laboratory testing and acceptance criteria are enhancements to the previous specifications and add to the margin of safety of those specifications.

The basis for reducing the number of tendons undergoing complete detensioning was requested. The pending Code, Subsection IWL-2523.1, and draft Regulatory Guide 1.35, revision 3, paragraph 4.1 both indicate that one of each tendon type is to be detensioned. This is the basis for the change to our present Technical Specification requirement to detension all tendons inspected.

Concerning the reporting requirements in Section 8 of Regulatory Guide 1.35, revision 3, the proposed specification will require that failure to meet the acceptance criteria in the specification will require reporting under the provisions of 10CFR50.73. This meets the intent of section 8 in Regulatory Guide 1.35. However, whereas the Regulatory Guide 1.35 suggests reporting the presence of significant voids in the grease filler, and the presence of free water, there are no specific acceptance criteria for these two variables. These variables in fact are only indicators of potential problems that could exist in the tendon wires themselves. It is, rather, the chemical and physical properties of the grease and tendon wires that are subject to acceptance criteria that, if not met, will result in a licensee event report for failing to meet a condition of the Technical Specifications. Therefore,

although the Regulatory Guide 1.35 suggests reporting of the presence of significant grease voids or presence of free water, these variables are not subject to reportability under 10CFR50.73 and are not proposed as part of this specification change request. Such variables are conditions which will be evaluated and reported in the post inspection special report required by Specification 6.9.3.3 to be submitted 90 days following completion of the inspection.

In the updated FSAR, Section 5.8.8.3, highlights of previous surveillances are provided. The third year surveillance indicates water was found in the end cap to a dome tendon (D2-53). The FSAR summarizes the 3-year inspection report, submitted April 29, 1974, which notes that the deleterious product content was within the established acceptance limits for chlorides, nitrates, and sulfides and no evidence of wire corrosion was observed. This conclusion parallels the overall conclusions in all the previous inspection reports that there was no evidence of abnormal degradation in the containment post tensioning system. Because the acceptance criteria was met for the filler material as described in the inspection report, no subsequent inspections were made on this tendon during later surveillances.

Finally, a comment on the highlights of previous inspections discussed in Section 5.8.8.3 of the FSAR. The highlights are a paraphrasing of the summary sections of each inspection report, and, although brief, they do represent the most noteworthy items in each inspection. Our review indicates no need to upgrade the information contained in these highlights.

This change request replaces in its entirety the change request of May 4, 1987. Revisions of the previous change request are noted in the right margins of the change section and on the page changes.

We request this submittal be given your prompt review as the inspection of the prestressing system has begun.

A check for $150.00 accompanied the May 4, 1987 request.

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Director, Nuclear Licensing

CC Administrator, Region III, NRC
NRC Resident Inspector - Palisades

Attachment