



**Consumers
Power**

**POWERING
MICHIGAN'S PROGRESS**

Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

David W. Rogers
Plant Safety and Licensing Director

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Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT - 10CFR50.61 PRESSURIZED
THERMAL SHOCK - REVISED INFORMATION

Consumers Power Company (CPC) letters dated June 5, 1992 and January 7, 1993 submitted our projection that the Palisades reactor vessel (RV) beltline material would exceed the 10CFR50.61 screening criterion (The Criterion) after the end of licensed life. That projection was based on rationale which proposed omission of HBRobinson (HBR) and Oyster Creek (OC) surveillance weld data. This letter updates our projection and, using the previously omitted HBR and OC data, projects that the welds in the Palisades reactor vessel beltline which were fabricated using weld wire from Heat No. W5214 will exceed The Criterion in the year 2004 - three years before the end of licensed life. It also informs the staff that we plan to revise our projection again after obtaining and testing samples from welds (fabricated using Heat No. W5214 weld wire) in our retired steam generators.

Attachment 1 contains the data and describes the methodology used to determine revised best estimate copper and nickel content values for welds in the Palisades RV beltline which were fabricated using wire from Heat No. W5214. The revised best estimate copper and nickel content values were used with the same fluence values reported in Section 4 of our June 5, 1992 submittal to determine a revised date those welds will exceed The Criterion. Attachment 2 contains a description of the Palisades Reactor Vessel Project Plan. Attachment 3 is a non-proprietary version of Attachment 1. Material contained in Attachment 1 is proprietary to Combustion Engineering, Incorporated. As such, we request that it be withheld from public disclosure in accordance with the provisions of 10CFR2.790 and that this material be appropriately safeguarded. The specific proprietary information is marked by a vertical line in the right margin. The reasons for the classification of this material as proprietary are delineated in the affidavit provided as Attachment 4.

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Since the revised projection indicates that material in the Palisades RV beltline will exceed The Criterion before the end of licensed life, we are required by 10CFR50.61(b)(4) to submit "... analysis and schedule for implementation of such flux reduction programs as are reasonably practical to avoid exceeding the PTS screening criterion . . ." This letter serves to meet that requirement by providing our planned actions to (1) obtain additional information to further update our projection and (2) be prepared to implement, if necessary, thermal annealing or other means such as using ultra low leakage core designs to ensure that the Palisades RV beltline material will not exceed The Criterion before the end of licensed life. Therefore, the commitment made in our June 5, 1992 submittal to provide such information 90 days after receiving a safety evaluation is hereby closed.

During a November 9, 1993 meeting, the staff informed us that they did not agree with the methodology we used in our June 5, 1992 and January 7, 1993 projections because we omitted the HBR and OC weld wire Heat No. W5214 surveillance weld data. Instead, they suggested a methodology which considers the possible variation of weld chemistry due to the welding process (single or tandem arc) and includes the use of the HBR and OC surveillance weld data. They advised that we consider this methodology, use it if we find it acceptable, and determine and submit a revised projection of the date when the Palisades RV welds containing Heat No. W5214 will exceed The Criterion. Additionally, the staff requested that we inform them of the implementation schedule for our planned activities (retired steam generator weld sampling, implementing the CEQG topical to establish an alternate surveillance program, and participating in the CEQG weld variability study) which will provide information that will allow us to more accurately estimate the physical properties of the Palisades RV welds. Attachment 2 to this letter provides that schedule. It is our understanding that this information is being requested to help the staff evaluate the date we have projected and to show that we will have adequate time to submit (three years before exceeding the Criterion per 10CFR50.61(b)(5)) justification for continued operation if that is necessary.

Also as a result of the November 9, 1993 meeting, we understand that the fluence calculation methodology submitted in our June 5, 1993 submittal is acceptable. We will continue to use that methodology for our projections.

We have completed evaluation of the staff suggested methodology of: (1) including the HBR surveillance weld copper and nickel content and the OC surveillance weld copper content in the calculation of the best estimate copper and nickel content of Heat No. W5214 welds; and, (2) in the best estimate averaging process, weighting each tandem arc weld copper content data point as two (two wires used in the weld process) while weighting each single arc weld copper content data point as one (one wire used in the welding process). In view of the fact that the Palisades RV Heat W5214 welds were fabricated using the two-wire tandem arc process and some of the data we use to determine best estimate chemistry for Heat W5214 came from welds fabricated using the one wire single arc process, we have concluded that our previous estimate should be revised and that the best estimate of the chemical composition for the Palisades RV Heat No. W5214 welds is the weighted average where single arc welds are given a weight of one and tandem arc welds are given a weight of two.

Using the HBR and OC surveillance weld data and using the weighted averaging process, we project (Attachment 1) that the Palisades RV limiting beltline material (axial welds fabricated using weld wire Heat No. W5214) will exceed The Criterion in the year 2004. This projection will be confirmed or revised again when additional information is provided by sampling (Attachment 2) the welds in our retired steam generators (fabricated using the same procedure and weld material as the RV welds) or by determining RT_{PTS} by use of a supplemental surveillance program. The steam generator sampling program is expected to provide additional weld chemistry data and initial RT_{NDT} values before the end of 1994. This information will be used in the manner prescribed by 10CFR50.61(b)(2) to further update our projection of the value of RT_{PTS} at the end of licensed life or planned license life.

In this letter and its attachments, when we state that we "expect to" or "plan to" or "are considering" with respect to performing or accomplishing various activities and that we plan or expect to complete them before a described time period, such statements should not be interpreted as to indicate a commitment. However, the actions committed in Items I, III.A and IV of Attachment 2 will be completed in a timely manner to allow submittal, if necessary, of an analysis in compliance with 10CFR50.61(b)(5).



David W. Rogers
Plant Safety and Licensing Director

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

Attachments