

October 4, 2000

Mr. David Lochbaum
Nuclear Safety Engineer
Union of Concerned Scientists
1707 H Street NW, Suite 600
Washington, DC 20006-3919

Dear Mr. Lochbaum:

By letter dated August 29, 2000, you provided comments on Consumers Energy Company's (CEC's) application dated April 27, 2000, for a license amendment to revise the expiration date of the Palisades Plant's Operating License from March 14, 2007, to March 24, 2011. You also commented on CEC's July 6, 2000, response to the NRC staff's request for additional information regarding CEC's February 21, 2000, letter forwarding a reevaluation of the Palisades reactor vessel neutron fluence. In this reevaluation, CEC concludes that the Palisades reactor vessel will not reach the pressurized thermal shock screening criteria of 10 CFR 50.61 until at least the year 2014. In your August 29, 2000, letter, you state that the Union of Concerned Scientists (UCS) has concluded that the NRC staff should not approve the license extension until after the NRC's examination of the Palisades reactor vessel neutron fluence evaluation is completed. This UCS conclusion is based upon:

- (1) A second correction to an unrelated NRC staff safety evaluation for Relief Request No. 11;
- (2) A finding by the NRC's Office of Research that the response by the licensee for Indian Point 2 regarding the operational assessment methodology for ensuring steam generator tube integrity was "weak and incomplete;" and
- (3) A number of technical considerations and questions about CEC's July 6, 2000, responses to the NRC staff's request for additional information regarding (1) use of dosimetry results to check the reactor vessel's chemical composition, (2) the computer code SIMULATE-3's treatment of cross-flow or mixing of coolant between fuel assemblies; (3) comparisons of SIMULATE-3's calculated results to measured in-core temperatures and fuel assembly powers; and (4) a 2-percent underpower operating condition from Cycle 1 to Cycle 12 due to an error in the calibration of a feedwater flow venturi.

The NRC agrees with UCS that the licensee's request to extend the Palisades operating license should not be approved until and unless the NRC staff first has reasonable assurance that the Palisades reactor vessel will continue to meet the requirements of 10 CFR 50.61, "Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock [PTS] Events," throughout any additional period of operation as the NRC may authorize. The NRC staff's review is being performed in accordance with 10 CFR 50.61(b)(1), which requires that "...the licensee shall have projected values of RT_{PTS} [reference temperature] accepted by the NRC, for

each reactor vessel beltline material for the EOL [end of life] fluence of the material,” and that “This assessment [of RT_{PTS}] must be updated...upon request for a change in the expiration date for operation of the facility.”

Regarding item (1) above, you state that the need to make a second correction to the safety evaluation regarding Relief Request No. 11 suggests that the NRC staff placed "schedule" ahead of "quality." Based upon discussions with the NRC staff members involved with the original correction by letter dated October 14, 1998, and the additional correction by letter dated February 14, 2000, the NRC staff finds that the need to make the second correction was due to oversight rather than a concern for schedule. Indeed, there was no rigid schedule for issuing either correction. The second error was not recognized when the original error was being corrected because it involved a separate matter than the error upon which the NRC staff was focused at that time (i.e., the original error involved the reference to an examination from the “outside” surface, whereas the second error involved the reference to a “manual” inspection). The discussions also indicate that these errors in the original safety evaluation resulted from oversight, rather than schedule. Notwithstanding the reason for either error, the NRC staff agrees that its efforts to accommodate the licensee’s schedules must not compromise NRC review quality or other safety considerations, and our management policies and procedures are consistent to this end.

Regarding item (2) above, you state that “At Palisades, the NRC staff must complete its evaluation into the reactor vessel neutron fluence question before it can determine if the safety analysis provided by the plant owner is also ‘weak and incomplete’....” As previously mentioned, the NRC staff’s review is being performed consistent with 10 CFR 50.61(b)(1), and the NRC staff’s conclusions regarding the requested license extension will be based, in part, upon the NRC staff’s review of the reactor vessel’s fracture toughness projections for the end of plant life. The NRC staff’s technical review team for the Palisades reactor vessel, which also includes a contractor from the Brookhaven National Laboratory, consists of very experienced nuclear engineers who are well qualified in the speciality fields of pressure vessel fluence evaluations, reactor vessel dosimetry, material irradiation damage, and materials science. The NRC is confident that this experienced and knowledgeable review team will assure that the licensee complies fully with the requirements of 10 CFR 50.61.

Regarding item (3) above, your technical considerations and questions involve additional information that the NRC staff had requested of the licensee and the licensee’s responses dated July 6, 2000. Since the date of your letter, the licensee has provided further additional information by letter dated August 31, 2000, which is available on the ADAMS Public Library component on the NRC’s web site (the Electronic Reading Room) using ADAMS Accession No. ML003748280. Since item (3) involves matters of ongoing NRC staff review, we will address these items upon completion of our review.

Thank you for your comments and participation in this matter. I trust that this letter has been responsive to your underlying concern regarding the sequence of the NRC staff's review, including items (1) and (2) above. Your specific technical considerations and questions (item 3 above) will be considered by the NRC during its continuing review. If you have any questions regarding this letter, please contact me at (301) 415-3049 or by e-mail at dsh@nrc.gov.

Sincerely,

/RA/

Darl S. Hood, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Thank you for your comments and participation in this matter. I trust that this letter has been responsive to your underlying concern regarding the sequence of the NRC staff's review, including items (1) and (2) above. Your specific technical considerations and questions (item 3 above) will be considered by the NRC during its continuing review. If you have any questions regarding this letter, please contact me at (301) 415-3049 or by e-mail at dsh@nrc.gov.

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Darl S. Hood, Senior Project Manager, Section 1
 Project Directorate III
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