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 EISENHUT, D. G. Division of Licensing

SUBJECT: Responds to 810505 Generic Ltr 81-21 re natural circulation  
 cooldown. Controlled cooldown has been accomplished at least  
 twice w/o reactor vessel voiding. Training programs include  
 training in postulated station blackout events.

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## WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

November 13, 1981

Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Gentlemen:

Docket No. 50-305  
Operating License DPR-43  
Kewaunee Nuclear Power Plant  
Generic Letter 81-21: Natural Circulation Cooldown (May 5, 1981)



In response to the referenced letter:

1. A review of operating history has revealed that Kewaunee Nuclear Power Plant has successfully accomplished (on at least two occasions) controlled natural circulation cooldown from operating conditions without reactor vessel voiding.

The most recent event occurred on January 17, 1980, when a transformer failure resulted in a partial station blackout. During the event, safe shutdown (hot) and natural circulation cooldown (to within Residual Heat Removal System operating limits) was achieved with no complications.

The "Natural Circulation Operation" Operating Procedure currently in place, in conjunction with the normal cooldown procedure, specifies normal cooldown parameters and precautions and limitations to be observed to prevent reactor vessel voiding.

For more details see our May 26, 1981, response to NRC Generic Letter 81-04.

2. The Kewaunee Nuclear Power Plant Technical Specifications state: "The specified minimum water supply in the condensate storage tanks (75,000 gallons) is sufficient for two hours of hot shutdown plus

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cooling of the plant to the cold shutdown condition and maintenance of this condition for an additional four hours. Unlimited replenishment of the condensate supply is available from Lake Michigan through the Service Water System."

3. The Kewaunee Plant licensed operator training and retraining programs include training in postulated station blackout events. This training incorporates the review of plant procedures pertinent to the station blackout events and controlled natural circulation operation. In addition, simulator training sessions include simulator exercises in a station blackout event utilizing the turbine driven auxiliary feedwater pump and natural circulation cooldown operations.

The normal cooldown procedure addresses forced circulation cooldown with references to the natural circulation cooldown procedure in the event that the reactor coolant pumps are, or become, unavailable. The natural circulation procedure specifies precautions and limitations to insure valid pressure/temperature indication, continued maintenance of natural circulation flow and adequate subcooling. In addition, the procedure describes reactor vessel voiding symptoms and action to be taken for the prevention or mitigation of vessel voiding.

Very truly yours,

*E. R. Mathews*

E. R. Mathews, Senior Vice President  
Power Supply & Engineering

snf

cc - Mr. Robert Nelson, NRC Resident Inspector

Subscribed and Sworn to  
Before Me This 13th Day  
of November 1981

*Sharon A. Toft*  
Notary Public, State of Wisconsin

My Commission Expires:  
March 24, 1985