



## OHIO EDISON COMPANY

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ROBERT J. McWHORTER  
VICE PRESIDENT

December 15, 1978

Mr. D. B. Vassallo  
Assistant Director for  
Light Water Reactor  
Division of Project Management  
U. S. Regulatory Commission  
Washington, D. C. 20555

Subject: Ohio Edison Company, et al  
Erie Nuclear Plant, Units 1 & 2  
Docket Nos. STN50-580 & STN50-581  
Cold Shutdown Design Requirements

Dear Mr. Vassallo:

This letter is in response to the October 27, 1978 letter from D. B. Vassallo (NRC) to Mr. R. J. McWhorter, V.P. (OEC) regarding the NRC cold shutdown design requirements imposed upon the Erie Nuclear Plant. As requested, this letter contains a singular, specific commitment by the Applicants addressing the NRC cold shutdown design requirements detailed in the above letter.

Additional seismic Category I, safety-grade steam generator dump valves (one additional valve per steam generator) will be incorporated into the design of the Erie Nuclear Plant. These additional valves are being provided to ensure the capability of cooling down the Erie Nuclear Plant assuming the most limiting single failure, with only offsite or onsite power available and a safe shutdown earthquake. Operation of these valves will be by local manual valve operators. A test of the local control for these modulating atmospheric dump valves will be conducted prior to plant operation to demonstrate that the plant can be cooled in a controlled manner and that the valves can be operated safely and effectively.

The addition of these modulating atmospheric dump valves to the Erie Nuclear Plant is intended to provide the capability, assuming the most limiting single failure with only onsite or offsite power available and a safe shutdown earthquake, to cool down to the decay heat removal system cut-in condition in approximately 36 hours.

The Erie Nuclear Plant will be analyzed to confirm the capability to depressurize, borate, and cool down to the decay heat removal system cut-in temperature within approximately 36 hours using only safety grade equipment and with only onsite or offsite power available. This analysis will also confirm that sufficient boration

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capability exists to maintain the reactor coolant system at a one percent  $\Delta k/k$  subcritical margin. When considering boration requirements, the highest worth control rod is assumed to be at the fully withdrawn position.

The Erie Nuclear Plant will reference a planned first-of-a-kind prototype steady state natural circulation qualification test to provide assurance of adequate boron mixing and natural circulation.

Specific procedures for cooling down using natural circulation will be provided at the operating license review stage.

A seismic Category I auxiliary feedwater supply is provided which will permit cool down to the DHR cut-in temperature assuming the most limiting single failure.

With these additional commitments concerning the cold shutdown issue, it is our understanding that Ohio Edison Company has satisfied all outstanding issues and that the SER Supplement can now be issued without further delay. Should the NRC modify its position with regard to cold shutdown, Ohio Edison Company reserves the right to modify these commitments accordingly.

Very truly yours,

*Robert J. McWhorter*

RJM/ROW:cvc

cc: DWHayes (USNRC OIE:III)  
RThoma (Oak Ridge National Lab)  
HKohn (OPSC)  
JAckerman (Ohio Dept. of Health)  
PGasteier (Erie County Commissioner)  
RIMustard (USEPA, Chicago)  
Librarian/Thermal Reactors Group  
(Brookhaven National Lab)  
Atomic Industrial Forum  
GCharnoff (SPPT)  
EStebbins  
RTufts

A F F I D A V I T

STATE OF OHIO    )  
                  ) SS.  
SUMMIT COUNTY    )

On December 15, 1978, before me, a Notary Public in and for the State and County aforesaid, personally appeared Robert J. McWhorter, who after being sworn according to law, deposed and said that he is Vice-President and an Officer of Ohio Edison Company, an Ohio corporation, that in such capacities he is authorized to make this Affidavit; and that the foregoing is true and correct to the best of his knowledge, information, and belief.

Robert J. McWhorter  
Robert J. McWhorter

Sworn to and subscribed before me the day and year aforesaid.

Josephine M. McElroy  
Notary Public

JOSEPHINE M. McELROY  
NOTARY PUBLIC - STATE OF OHIO  
RESIDENT OF SUMMIT COUNTY  
My Commission Expires Aug. 17, 1982