



**PUBLIC
SERVICE
INDIANA**

James Coughlin
Vice President -
Nuclear

10/20
R
October 20, 1978

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docket Nos. STN 50-546
STN 50-547

Dear Mr. Denton:

In June of 1978 PSI transmitted to you additional information concerning our Ultimate Heat Sink Cooling Tower Design. On September 15, 1978, Mr. Jerry Wilson of the NRC requested the additional questions listed below be answered. Accordingly, we hereby submit our responses to the following NRC questions:

1. Request: What is the final useable volume of water in the basin?
Response: 14,380,000 gallons of useable water will be stored in the ultimate heat sink basin.
2. Request: What is the drift loss associated with the 30 day accident sequence?
Response: A drift loss of 225,000 gallons would be associated with the tower operation over this 30 day period.
3. Request: Provide a sketch of the tower arrangement.
Response: Please find attached Drawing MS-129 Essential Service Water Cooling Tower General Arrangement.
4. Request: Please provide a sketch of the tower operation.
Response: The attached sketch "Sketch of Tower Operation Counterflow Induced Draft Cooling Tower" diagrammatically describes the operation of the Essential Service Water Cooling Tower.
5. Request: Provide the fan size of the tower and a range of air flows.
Response: Each cell of the cooling tower is equipped with a 26 foot diameter, 8 bladed fan. The maximum width of each fan blade is 31 inches. The fans are designed to run at two speeds. At full speed, the fan will induce an air flow of 669,000 cfm. The associated air flow for the fan at half speed is 335,000 cfm.

7810300184

1000 East Main Street, Plainfield, Indiana 46168

317 . 839 . 9611

NOV 5 1978
see LIST
REMOVED
LTC

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

-2-

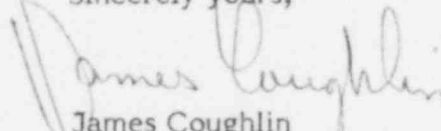
October 20, 1978

6. Request: Relate the information filed June 9 to the Marble Hill design; for example, a temperature response curve based on fan speed with an upper or lower bound or enveloping curves.

Response: Please find attached copies of the performance curve included with the Ceramic Cooling Tower Company design for the Marble Hill towers. These curves show the range vs. approach at the design conditions and wet bulb temperature vs. approach for various ranges with the fan at full and half speed.

If you have any questions from these responses or believe that further clarification is necessary, please contact me.

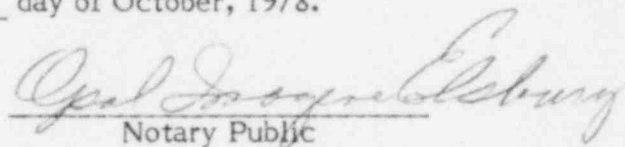
Sincerely yours,


James Coughlin
Vice President-Nuclear

SJB:bai

State of Indiana)
) SS:
County of Hendricks)

Subscribed and sworn to me this 20th day of October, 1978.


Notary Public

My commission expires: Feb. 19, 1979
County of Residence: Hendricks