

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSIONDOCKETED
USNRCBefore the Atomic Safety and Licensing Board

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OFFICE OF SECRETARY
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In the Matter of:)
 CONSUMERS POWER COMPANY,) Docket Nos. 50-329
 (Midland Plant, Units 1 and 2)) 50-330
) Operating License

RESPONSE BY MARY SINCLAIR TO
CONSUMERS POWER COMPANY REQUESTS FOR
ADMISSION OF THE TRUTH OF RELEVANT MATTERS OF FACT

September 14, 1982

The statements that are made by the Applicant in their "Request for Admission of the Truth of Relevant Matters of Fact" are not proper statements for admission for the following reasons:

1) It is irrelevant and immaterial whether these data are the same as in the report attached because the basis of that study was later discredited and proved unreliable by the actual performance of the Dresden cooling pond which was observed after that study was made. The report itself states that the average monthly data were developed from data from 1956-1966 (p.21) for the model that was constructed for this study.

On the other hand, the Dresden cooling pond was constructed in 1971 to accommodate Dresden Units II and III which went into operation in January, 1970, and January, 1971, respectively. A description of the cooling pond is in the FES of Dresden II and III, Section 3.4.3 November, 1973. Referring to the Bechtel (1973) study, the Midland FES, clearly states that the data on the cooling pond available to the Staff at the time the FES-CP was prepared "were derived from data from observations at cooling ponds with considerably smaller air-water temperature differentials than are now expected at the Midland pond."(FES 5-6) FES 5-6 goes on to say that these were "limited observations and that new information has become available since that early study was made. This new information includes the studies of steam fog over cooling ponds by Currier et al.,

(FES Ref. 2) in 1974 and Hicks (FES Ref. 3, 4) in 1977 and 1978 and that these models "have been confirmed by observations over operating cooling ponds in Illinois and Arizona." (FES 5-6)

2) It is irrelevant and immaterial to the whole point of my contention that the data referred to in paragraph 1 of Request for Admission was a study to determine the performance of the Midland pond, because it was later found to be inaccurate based on the information given in FES 5-6 as discussed in paragraph 1. These new data were also brought to the attention of the Midland County Road Commissioner and City Planning Commission by James Carson, meteorologist for Argonne Laboratories in September, 1978. It is the whole point of my contention 5 that the new data based on the new and more relevant information should have been used in Table 4.1 and 4.2, 4-24, 25 of the FES instead of using thermal performance data that were discredited and known to be unrealistic by the Staff itself.

3) As I stated before, it is immaterial where or how the data was arrived at, although I appreciate seeing the study for the first time. The Staff admits that it is inaccurate and unreliable based on more recent information as discussed in paragraph 1.

4) The statement that NRC analysis of fog and ice generation was based "mostly" on data collected at Dresden is ambiguous. Other models (Currier, Hicks, etc.) and other ponds are mentioned in the DES and FES texts. It is difficult to tell on which of these studies or observations their analysis is based.

However on p. 9-19 of the FES, the Staff's comment states that their conclusion about dense, frequent fog over Gordenville Road is based primarily on observations of steam fog near the cooling pond for the Dresden pond.

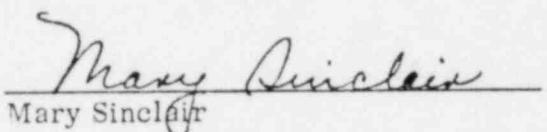
It is the point of my contention that the thermal performance tables of the cooling pond should have been developed based on the new data available from various sources in the '70's mentioned in the DES and the FES, rather than relying on thermal performance data from a study that has been demonstrated to be deficient in a significant way, i.e., fog and ice generation. For example, with the knowledge that much denser fog can be expected based on observations

at Dresden, etc., than was believed would happen based on the Bechtel model, the total evaporation (Column 3 of Tables 4.1 and 4.2, FES 4-24, 25) must be expected to be higher than the Bechtel (1973) tables would indicate. This could also affect the percent imposed heat load lost by evaporation, etc. (Column 4 of Table 4.1 and 4.2)

The Staff also states that the heat load at the Midland pond will be 21% greater than that at Dresden (FES 9-19). This increased heat load should be reflected in the thermal performance tables of the pond. The amount of water lost through evaporation from this higher heat load can alter significantly the length of time that the pond can remain effective as a cooling source.

This is an important economic and safety consideration.

Respectfully submitted,


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