

Illinois Power Company

U-0619
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Docket No. 50-461

March 21, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

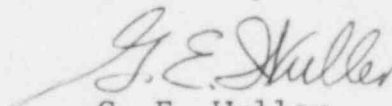
Dear Mr. Schwencer:

Subject: Clinton Power Station Unit 1
Degraded Core Hydrogen Control

- References:
- 1) IP letter U-0309 10/16/81, G. E. Wuller to W. R. Butler, NRC, Preliminary Report on the Hydrogen Ignition System for the Clinton Power Station
 - 2) IP letter U-0590 12/29/82, G. E. Wuller to A. Schwencer, NRC; submittal of responses to NRC Staff questions on degraded core hydrogen control.
 - 3) Telcon on 3/3/83 between NRC (H. Abelson and A. Notafrancesco) and IP (E. Kant, J. Shepard, J. Peterson).

References (1) and (2) provided information on the Clinton Hydrogen Ignition System. During the recent telephone conference (reference 3), we were requested to give further information or clarification on six questions/concerns generated by the NRC Staff review. Attached is the Illinois Power response to the verbal questions.

Sincerely,



G. E. Wuller
Supervisor-Licensing
Nuclear Station Engineering

GEW/jmm

attachment

cc: Dr. H. Abelson, NRC Clinton Project Manager
Mr. L. Ruth, NRC CSB
Mr. A. Notafrancesco, NRC CSB
Mr. H. H. Livermore, NRC Resident Inspector
Illinois Department of Nuclear Safety

Boo!

Question 1

How many circuit breakers are in Clinton's design?

Response

There are six (6) 120V breakers per division serving 10-12 igniters each for a total of twelve circuit breakers. This design is significantly improved over other systems licensed by the NRC because fewer igniters are lost when a circuit breaker opens.

Question 2

There appears to be an error in the elevation at azimuth 309° in Figure 8-1 (reference 2). The figure specified el. 704'-0".

Response

The Staff is right; the correct elevation is 764'-0".

Question 3

There was concern whether the open areas at the various levels within containment (Question 6 of Reference 2) are in-line or offset.

Response

The open areas are, for the most part, in line with each other such that containment spray can pass from one elevation to the next. This assumption is important in applying the generic application of containment spray carryover to the wetwell.

Question 4

How many igniters are in the wetwell?

Response

Our current system design includes twelve igniters in the wetwell region. This is three more than the nine shown in the preliminary design.

Question 5

- A) Reference 1, page 18, shows 62,156 lbs of Zircaloy while the FSAR gives a value of 65,100. Resolve the conflict.
- B) The table on Page D-i (ref. 1) shows eight (8) vacuum breakers, while figure 8-1 (ref. 2) shows only four (4). Explain.

Response

- A) The FSAR (Table 6.2-52) value of 65,100 lbs includes the weight of the spacers. In our analysis only the cladding surrounding the active fuel was assumed.
- B) There is no conflict. Figure 8-1 shows 4 sets of vacuum breakers. Each set has two vacuum breakers in series totaling eight (8) breakers.

Question 6

The vacuum breaker flow area of 2.67 ft^2 appears incorrect. See page D-i of reference 1.

Response

The Staff is correct. The flow area should be 0.267 ft^2 each rather than 2.67 ft^2 . Incidentally, the flow area quoted for Grand Gulf₂ is not 3.27 ft^2 . Grand Gulf changed their flow area to 1.09 ft^2 (total) in a later NRC submittal.