



UNITED STATES
ATOMIC ENERGY COMMISSION

WASHINGTON, D.C. 20545

IN REPLY REFER TO:

Docket No. 50-249

May 12, 1966

Commonwealth Edison Company
72 West Adams Street
Chicago, Illinois 60690

Attention: Mr. Murray Joslin
Vice President

Gentlemen:

This refers to the additional information provided in Amendment No. 1 dated May 3, 1966, to your application, dated February 10, 1966, for a construction permit and facility license which would authorize construction and operation of a nuclear power reactor, designated as Unit No. 3, at the Dresden site located in Grundy County, Illinois.

Our review of the information provided indicates that certain areas related to safety require further clarification to complete our evaluation. On this basis you are requested to provide the additional information listed in the attached enclosure.

The additional information should be submitted as an amendment to your application.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "R. L. Doan", is written over a faint, larger version of the same signature.

R. L. Doan, Director
Division of Reactor Licensing

Enclosure:
As stated above

DRESDEN NUCLEAR POWER STATION

UNIT 3

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

ADDITIONAL INFORMATION REQUIRED

1. Please clarify the basis for the data given in Figure D-5-1 of Amendment No. 1 below the energy range of 200 cal/gm since these data points cannot be found in your stated references.
2. If one postulates that the withdrawal of two rods simultaneous with a failure of the rod block function is incredible as indicated in question D-8-1 of Amendment No. 1, then a rod block function failure coincident with a continuous single rod withdrawal at power must be considered. Please provide this analysis and state the extent and consequences of fuel damage that could occur before the reactor scrams to terminate the transient.
3. Please discuss the effects or the consequences of reactivity transients relating to rod drop and rod ejection accident analyses if one were to conservatively assume the cumulative effects of uncertainty in determining reactivity feedback.
4. In your response to question D-2-C of Amendment No. 1 please clarify the basis for indicating that, ". . .the containment structure would probably retain its integrity at even 2 1/2 times its design pressure and that the primary vessel heated an additional 500°F due to the exposure to the hot core." Does this include consideration of a simultaneous loading from the design earthquake?
5. In regard to the design of the shared containment spray system, please clarify the location of the valves and the design bases used to evaluate the adequacy of single valves in critical piping systems. Also clarify the protective features provided against a rupture in a cross-over line that could lead to a loss of suppression pool water.

We believe that when this system is required to function, no single failure should preclude system operation. The proposed design appears to be deficient in this regard and that Criterion No. 18 does not appear to be satisfied. Your comments on these considerations are invited.

6. Please clarify the following interrelationship between the Units of the Dresden Power Station caused by the station electrical system: One 4.16 Kv auxiliary power bus in Unit 2 and one in Unit 3 are interconnected to the 34.5 Kv standby power source which is connected to the standby power system of Unit 1 and the 138 Kv station bus. The 4.16 Kv swing bus that provides power for the containment cooling system shared by Unit 2 and by Unit 3 is connected to one 4.16 Kv auxiliary power bus in Unit 2 and one in Unit 3. Considering that the diesel-generators for Unit 2 and for Unit 3 (which are the prime emergency power sources) can make connections to the 4.16 Kv emergency power busses in the other Unit, please clarify the bases which would lead to the conclusion that emergency and standby power sources for all three units are truly separable and that these interconnections in the station electrical system do not provide an adverse interaction between units during normal and abnormal modes of operation in the station.
7. Please identify and discuss the safety aspects of the changes made to the station ventilation system as indicated in revised Figure 36.
8. The information provided in response to question C-1-1 of Amendment No. 1 does not appear to be applicable or sufficient to conclude that the collet fingers are functionally and structurally adequate to prevent a rod ejection accident. Can further information be provided to eliminate the uncertainties of an analysis based on static tests and the extrapolation to the current design of test results reported in GECR-5089 on an earlier design?
9. Please discuss the consequences of tornado strength winds in relation to the storage and handling of reactor fuel.