DEC 20 1973

Docket No. 50-237

Commonwealth Edison Company
ATTN: Mr. J. S. Abel
Nuclear Licensing Administrator -
Boiling Water Reactors
Post Office Box 767
Chicago, Illinois 60690

Gentlemen:

To continue our review of your report, as transmitted by letter dated March 16, 1973, relative to conversion of the Provisional Operating License No. DPR-19 to a full-term operating license for Dresden Unit 2, additional information is required. The information requested is described in the enclosure and pertains to the technical information in support of your application.

As indicated in our letter to you dated November 1, 1973, regarding our overall review schedule, we will need a satisfactory response to all enclosed questions by February 5, 1974, to meet the established schedule. Please inform us within seven days after receipt of this letter of your acceptance of the schedule date or provide a date that you will be able to meet. If you cannot meet the specified date as indicated in the preliminary estimates of your letter dated December 3, 1973, or if your reply is not fully responsive to our request, the overall schedule for completing our review will have to be extended. Since reassignment of the staff's efforts will require completion of the new assignment prior to returning to this review, the extension of our review schedule will most likely be greater than the delay in your response.

You are requested to provide this information in three signed and notarized originals and thirty-seven copies. If your response makes reference to the FSAR or amendments, identify the specific paragraph to which reference is made. Please contact us if you have any questions regarding the information requested.

Sincerely,

/s/ C. J. DeBevec

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Directorate of Licensing

5/5.1

Enclosure and cc: See next page

DEC 20 1973

Enclosure:
Request for Additional Information

cc w/enclosure:
John W. Rowe, Esquire
Isham, Lincoln & Beale
Counselors at Law
One First National Plaza
Chicago, Illinois 60670

Morris Public Library

Distribution
Docket File
AEC PDR
Local PDR
RP Reading
Branch Reading
JRBuchanan, ORNL
DJSkovholt, L:OR
TJCarter, L:OR
ACRS (16)
RO (3)
OGC
LShao, ~~KXXXESR~~ L:SEB
TIppolito, L:EICSB
WGammill, L:SAB
JKastner, L:RAB
DLZiemann, L:ORB #2
RDSilver, L:ORB #2
RMDiggs, L:ORB #2
SVarga, L:RP

5/5.2

OFFICE ➤	L:ORB #2	L:ORB #2	L:ORB #2			
X7403 SURNAME ➤	RDSilver:sjh	RMDiggs	DLZiemann for			
DATE ➤	12/19/73	12/19/73	12/20/73			

REQUEST FOR ADDITIONAL INFORMATION

CONVERSION OF PROVISIONAL TO FULL-TERM OPERATING LICENSE

DRESDEN UNIT 2

DOCKET NO. 50-237

1. Since the Technical Specifications appended to Provisional Operating License No. DPR-19 will be reissued at the time a full-term license is issued, the proposed changes to technical specifications should be submitted for our review as soon as possible. Therefore, please provide a listing of all changes to the Technical Specifications for Dresden Unit 2 that you will consider in connection with the license conversion. Include adequate supporting information for the changes being proposed.

2. Provide an assessment of the conformance of Dresden Unit 2 design and operation with the current Regulatory Guides of Division 1, extending the description of the application from Guide No. 1.35 through No. 1.67.

3. To assure that ferritic materials of pressure retaining components of the reactor coolant pressure boundary will have adequate fracture toughness during service hydrostatic and leak tests, provide revised temperature and pressure limitations established by using the requirements of Appendix G 2000 of the Summer 1972 Addenda to Section III of the ASME Boiler and Pressure Vessel Code as a guide. Also, provide the temperature limitations for core operation specified by Appendix G of 10 CFR 50. Indicate the operating limitations on heatup and cooldown plus the above information that will be included in proposed changes to the Technical Specifications.

4. Provide the proposed surveillance capsule withdrawal schedule and indicate the degree that Dresden 2 can comply with Appendix H to 10 CFR 50.

5. The following additional information regarding meteorology is required:

   a. Provide the specific values of the parameters applicable to the design basis tornado, to include translational wind velocity, rotational wind velocity, pressure drop and rate of pressure drop with respect to time.

5/5.3

OFFICE ➤						
SURNAME ➤						
DATE ➤						

b. Provide the specific design basis snow and ice load on the plant structures.

c. Provide a more specific description of the onsite meteorological measurement program, including the location and height of the new tower, the location of meteorological instruments on this tower, a description of the instruments and their accuracy specifications, data recording and processing methods, data disposition, and the proposed date on which the tower will become operational.

d. Provide the location and height of the auxiliary tower, the location of meteorological instruments on the tower, a description of the instruments and their accuracy specifications, data recording and processing methods, and data disposition.

e. In reference to Regulatory Guide 1.23, provide information concerning the provisions in the control room for monitoring meteorological parameters. These parameters should include wind speed and direction and atmospheric stability as indicated by temperature difference, measured on the new tower and the auxiliary tower (until the new tower becomes operational).

f. Provide joint frequency distributions of wind speed and direction by delta-T atmospheric stability class for at least one (and preferably two or more) full year period of onsite data, collected on the original site tower prior to the operation of the spray ponds, with a joint data recovery rate of at least 90%. Two sets of tables should be provided. One set of tables should be based on winds measured at the 35-foot level and temperature differences between the 35- and 125-foot levels; the second set of tables should be based on winds measured at the 300-foot level and temperature differences between the 125- and 300-foot levels. Specify the percent of data recovery for the period of record. Where periods of missing data are of days duration (as opposed to sporadic duration of a few hours at a time), specify the periods of missing data. Present any evidence as to the degree of representativeness of the period of data collection.

6. The following additional information regarding electrical and instrumentation systems is required:

a. Identify all design modifications made to any Class IE electric systems, auxiliary supporting systems, and reactor protection 3/5.4

systems since issuance of the POL. Provide a description of each modification, including their conformance to IEEE 279 and 308 and the GDC.

b. Operational transients and analyses have established that temperatures up to 340°F could be reached inside the primary containment. Provide the results of demonstration tests that show that all safety related equipment located inside the primary containment are qualified to withstand this more severe temperature environment. Your initial test program verified the suitability of the equipment to approximately 280°F.

c. Provide a discussion of your procedure that records failures of safety related equipment and systems, including the basis on which corrective actions are required. Your response should include the basis and limits that would require increased surveillance, equipment replacement, or design modification. Identify all items that have been or appear likely candidates to require corrective actions.

d. In reference to Section 2.4.16, submit the electrical diagrams which show the isolation condenser initiation circuitry and the switch that was added to permit condensate return valve throttling. Provide a failure mode analysis for the revised circuitry and discuss to what extent isolation capability is affected.

e. In reference to Section 2.4.22, submit the electrical diagrams which show the changes that have been made to the ECCS relay logic circuitry to permit easier and faster testing.

f. In reference to Section 2.4.23, submit the electrical and logic diagrams which show the changes to the Core Spray Pump discharge pressure switch permissive circuitry. Although it appears that the change is conservative, it is not clear that the configuration of the auto blowdown logic now satisfies the single failure criterion.

g. In reference to Section 2.4.26, the changes made to the IRM and APRM systems have not been supported by analysis. The 15% IRM trip has been deleted and no justification or confirmation as to the adequacy of the 15% APRM trip that replaces the IRM trip has been provided.

5/5/5

OFFICE ➤						
SURNAME ➤						
DATE ➤						

h. In reference to Section 2.4.27, the Turbine Stop Valve Closure scram must be designed to satisfy the requirements of IEEE 279. Your use of a time delay relay (unspecified delay) to inhibit stop valve closure scrams does not appear to be in accordance with protection system design requirements. Show that no single failure of the time delay relay(s) in the turbine bowl pressure trip circuitry will inhibit the required protective action. In your response, include the electrical and logic diagrams that show these changes.

i. In reference to Section 2.4.31, submit the electrical and logic diagrams which show the modification to the Reactor Water Cleanup system isolation logic.

j. In reference to Section 2.4.35, identify the moisture separator level switches that have been replaced. State the functions performed by the switches that have been replaced, and have had the 10-second time delay added to the circuitry. Submit the analysis to verify acceptability of this design change.

k. In reference to Section 2.4.42, submit your criteria with regard to isolation requirements for the corrosion test logic valves. Also submit the electrical and logic diagrams for the valve circuits that were modified.

l. It is not clear that system pumps and valves are tested to determine functionality on a periodic basis as required by Regulatory Guide 1.22. Discuss your testing program as it relates to the requirements of Regulatory Guide 1.22.

m. Your response to Regulatory Guide 1.32 does not address the concerns of the Guide. Expand your response to address this area.

n. In reference to Section 4.1.4, submit the electrical diagrams that show the modification to the manual circuitry for the Automatic Pressure Relief subsystem. Also, submit a failure mode analysis to show that the design change provides a manual system that meets the single failure criterion.

o. In reference to Section 5.1.10, submit the results of the GE tests conducted earlier this year on the pressure switches procured from five different manufacturers. Identify the switches that have exhibited the drift problem and identify the replacement by type, model, and manufacturer. The replacement unit must meet the qualification requirement for protection system equipment and the drift of the replacement units must be within the drift limits allowed by the Safety Analysis Report.

5.1.6

OFFICE ➤					
SURNAME ➤					
DATE ➤					

7. Additional information listed below is required to assess the acceptability of seismic instrumentation:

   a. The seismic instrumentation provided should be discussed and compared with the seismic instrumentation program described in AEC Regulatory Guide 1.12, "Instrumentation for Earthquakes". The basis for elements of the proposed program that differ from Regulatory Guide 1.12 should be submitted.

   b. Seismic instrumentation such as peak recording accelerographs and multielement seismoscopes that will be installed in selected Category I structures and on selected Category I components should be described. The basis for selection of these structures and components and the location of instrumentation, as well as the extent to which this instrumentation will be employed to verify the seismic analyses following a seismic event, should be specified.

   c. Describe the provisions for informing the control room operator of the value of the peak acceleration level experienced in the basement of the reactor containment structure within a few minutes after the earthquake. The basis for establishing predetermined values for activating the seismic instrument readout in the control room should be included.

   d. The criteria and procedures that will be used to compare measured responses of Category I structures and selected components in the event of an earthquake with the results of the system dynamic analyses should be provided.

8. Regarding onsite radiation protection to maintain personnel exposures to levels as low as practicable, the following additional information is required:

   a. Provide a description of how the considerations in Regulatory Guide 8.8, C.1, C.2, and C.4 have been utilized in the facility operation.

   b. What specific operational techniques and health physics practices have been utilized to attempt to reduce the plant personnel man-Rem per year exposures?

   c. Identify specific plant operations, including maintenance and inservice inspection, which have contributed significant personnel exposures and indicate the measures taken to reduce these exposures.

5/5.7

OFFICE ➤						
SURNAME ➤						
DATE ➤						

d. Based on plant experience to date, estimate the projected annual man-Rem expected to be received from normal operation, maintenance, inservice inspection in both near term and after a number of years' operation.

e. Describe any differences in operation, organization, and design modifications between the present plant and the information presented in the FSAR with regard to radiation protection.

f. What administrative review procedure is utilized for management evaluation of the program to maintain as low as practicable (ALAP) in-plant doses?

g. Indicate any changes in personnel qualifications of those responsible for conducting and reviewing the conduct of a program to achieve ALAP doses.

9. To permit our determination of allowable release of gaseous halogen effluents in accordance with Regulatory Guide 1.42 for levels as low as practicable, provide information concerning the locations of cows and pasturable land in the vicinity of the site. Provide the distribution of cows and pasturable land by 22.5° quadrant up to a distance of three miles from the stack.

515.8

OFFICE ➤						
SURNAME ➤						
DATE ➤						