

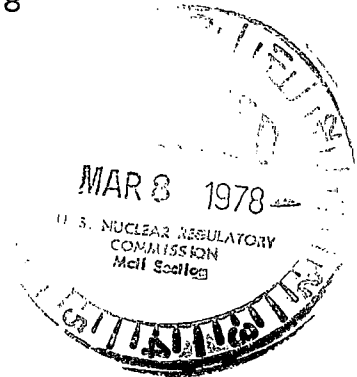


Commonwealth Edison  
One First National Plaza Chicago, Illinois  
Address Reply to: Post Office Box 767  
Chicago, Illinois 60690

REGULATORY DOCKET FILE COPY

February 24, 1978

Mr. Victor Stello, Director  
Division of Operating Reactors  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555



Subject: Dresden Station Unit 2  
Systematic Evaluation Program  
NRC Docket No. 50-237

Reference (a): V. Stello, Jr. letter to R. L.  
Bolger, dated December 23, 1977

Dear Mr. Stello:

The enclosed information is being submitted in response to Reference (a) concerning the environmental qualification of safety related electrical equipment.

Although not all of the components have qualification data available, the information that is available and the fact that very few components are required to mitigate the consequences of a DBE that could cause an adverse environment give us assurance that plant response to these DBE's will be as designed and that continued operation of Dresden Unit 2 will not jeopardize the health and safety of the public.

Three signed originals and forty (40) copies are being submitted for your use.

Very truly yours,

M. S. Turbak  
Nuclear Licensing Administrator  
Boiling Water Reactors

Enclosure

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RESPONSE TO NRC 12/23/77 LETTER  
ENVIRONMENTAL QUALIFICATION OF SAFETY RELATED  
ELECTRICAL EQUIPMENT

The attached tables list all the safety related electrical equipment for Dresden Unit 2 and all available information concerning equipment location, function, environmental conditions, and qualifications. Attachment 1 provides references for items listed on the attached tables for the environmental parameters of the DBE's, required equipment functions, and previous NRC correspondence.

Many of the items listed do not have environmental qualification data available at this time. The majority of these safety related items are located in the main reactor building. The events which could cause an adverse environment in these areas are the high energy pipe break events (HEPB). Special Report #37, Rev. 1 indicates that the pressure transients for these events are insignificant in the main reactor building areas and are of short duration. Since no adverse environment is postulated in these areas, we do not see the need to pursue additional qualification data.

Additionally, items exist in areas which will see an adverse environment, but are not required to function to terminate or mitigate the event causing the environment. Since the items are not required to function for the initiating event, we do not intend to pursue qualification data for these items.

Any items which do not meet these two criterion for exclusion will be investigated further if necessary to locate applicable environmental qualification data.

Since the reactor building environment is not expected to degrade significantly, virtually all of the safety related equipment and power supplies would remain available for use, even though the table indicates that they would not be necessary for the DBE's considered.

The most severe HEPB, the main steam line rupture external to the containment, has been evaluated in the FSAR as being coincident with a loss of offsite power. The FSAR indicates that only the HPCI system is required for adequate core cooling, although other safety systems would remain available if needed. The only HPCI component in the steam tunnel (x-area) is the injection valve, MO-2301-8, which has qualification data available.

For a loss of coolant accident (LOCA) in the containment, all external equipment would be unaffected by the environment and remain available. The external radiation doses would remain below that necessary to cause failure of electrical cable insulation and other components. The equipment in the containment which must function during and often a LOCA are the main steam isolation valves, the relief valves, and the recirculation pump valves. All of these components have qualification data available except the Target Rock safety/relief valve solenoid valves. Since the four electromatic relief valves are expected to remain operable, failure of the Target Rock valve would not be of any safety concern. We will pursue qualification data for this valve and submit it at a later date.

Other events which may cause adverse environments, such as flooding and loss of ventilation, were not specifically evaluated since these single events are not expected to cause a greater than normal release of radioactivity from the site.

In addition to the information presented above, the continuing surveillance program at the station lends assurance that widespread failures will not go undetected and make components unavailable when needed. Components are tested on weekly, monthly, quarterly, and refueling cycle frequencies and failures detected are factored into preventative maintenance or replacement programs.

Based on the above, we have concluded that the necessary safety related electrical equipment will function as required under the environmental conditions created by the LOCA and HEPB design basis events.

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