



Commonwealth Edison

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October 30, 1980

Mr. James G. Keppler, Director
Directorate of Inspection and
Enforcement - Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Dresden Station Unit 3
Quad Cities Station Units 1 and 2
Response to NRC Order Concerning
Environmental Qualification of Class IE
Electrical Equipment
NRC Docket Nos. 50-237, 50-254/265

- References (a): D. G. Eisenhower letter to J. S. Abel dated
September 19, 1980
- (b): J. G. Keppler letter to C. Reed dated
January 16, 1980
- (c): J. G. Keppler letter to C. Reed dated
September 30, 1980

Dear Mr. Keppler:

Reference (a) transmitted a Revised Order for Modification of License requiring Commonwealth Edison Company to submit certain environmental qualification of electrical equipment information by November 1, 1980.

Enclosed for your review are two (2) copies each of the Bechtel Power Corporation Final Reports for Dresden Unit 3, and Quad Cities Units 1 and 2, each entitled "Response to IE Bulletin 79-01B" (dated November 1, 1980). The Dresden Unit 3 report consists of three (3) volumes, and the Quad Cities Units 1 and 2 report consists of five (5) volumes. This information fully and completely responds to the staff's Revised Order.

References (b) and (c) transmitted IE Bulletin 79-01B and Supplement No. 2 to IE Bulletin 79-01B respectively. Although Supplement No. 2 was issued at a late date, Commonwealth Edison assumes that it will be used by the Staff to measure the adequacy

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of our responses. In that regard, we have provided information concerning position indication limit switches as indicated below:

(1) Valve Position Indicators

Supplement No. 2 to IE Bulletin 79-01B, Question/Answer 5 states that "valve position indicators", among other items, should be qualified to function in the relevant accident environment. This submittal addresses all safety related limit switches which have a control function. None of the limit switches excluded from this report perform a safety related function, i.e., the switches do not activate or block any action designed to mitigate the consequences of an accident.

Supplement No. 2 to IE Bulletin 79-01B made significant changes in previous staff directions in the following area:

(2) One Hour Plus Requirement

Supplement No. 2 Question/Answer No. 12 states that equipment designed to perform its safety function within a short time into an event must be qualified for a period at least 1 hour in excess of the time assumed in the accident analysis. The staff had previously indicated that it would be acceptable to environmentally qualify equipment that performs its safety function within a short time after an accident begins for the period of time it can reasonably be expected to be required^{1/}. This may be substantially less than 1 hour, for example, in the case of an isolation valve. This submittal addresses all equipment from the standpoint of performing its safety function within the time frame the equipment is required to function. We believe this approach to be technically justifiable.

^{1/} Discussed in the August 27, 1980 Bethesda, Md. meeting attended among others by P. DiBenedetto, J. Lombardo, C. Crane and E. McKenna for the NRC, and N. Smith and H. Stolc for Commonwealth Edison and in the July 28, 29, and 30 Dresden Station meeting attended among others by J. Lombardo and C. Crane for the NRC and R. Mirochna and N. Smith of Commonwealth Edison.

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In addition, this submittal may not be in explicit agreement with NRC Staff guidance in the following respect:

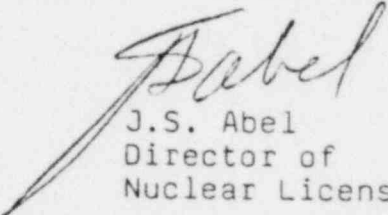
(3) Radiation Source Terms

The radiation source terms to be used in environmental qualification of electrical equipment are contained in NUREG-0578 and NUREG-0588 as referenced by IE Bulletin No. 79-01B. These documents require noble gases, halogens, and particulates to be released instantaneously. The enclosed Environmental Qualification submittal has assumed noble gases are instantaneously released, with halogens and particulates released instantaneously after a time relay of ten minutes. This is conservative relative to time dependent core release mechanisms discussed in WASH-1400.

In the case of small break LOCA's, Commonwealth Edison has determined RPCI to be a qualified system up to the point in an accident scenario where it is no longer needed. At this point, the harsh radiation environment is assumed to exist (large break LOCA source term). Although this requires the use of methods not explicitly contained in NUREG-0578 and NUREG-0588, we believe this approach to be technically sound.

If you have any questions in this regard, please contact this office.

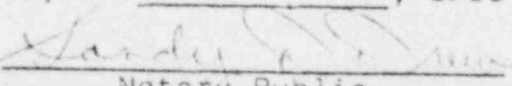
Very truly yours,


J.S. Abel
Director of
Nuclear Licensing

cc: Director, Division of Reactor
Operations Inspection (2 w/att.) ✓

NRC RIII Inspector - Dresden w/Dresden att.
NRC RIII Inspector - Quad Cities w/Quad Cities att.

SUBSCRIBED and SWORN to
before me this 31st,
day of October, 1980


Notary Public