

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

'81 OCT 29 P4:46

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of
PACIFIC GAS AND ELECTRIC COMPANY
(Diablo Canyon Nuclear Power
Plant, Units 1 and 2)

Docket Nos. 50-275 O.L.
50-323 O.L.

JOINT INTERVENORS' REVISED CONTENTION
ON ENVIRONMENTAL QUALIFICATION OF
SAFETY-RELATED ELECTRICAL EQUIPMENT

In its August 4, 1981 Memorandum and Order ("August 4 Order"), the Atomic Safety and Licensing Board ("Licensing Board") authorized Joint Intervenors, "if they so desire," to file a contention focusing on specific areas of inadequacy in the NRC Staff's evaluation of the environmental qualification of Class 1E electrical equipment at Diablo Canyon Nuclear Power Plant ("Diablo Canyon"). (August 4 order, at 8.) The board directed that the contention be filed 15 days after service of the Staff's SER Supplement 15 ("Supp. 15").

Consistent with the board's instruction, Joint Intervenors hereby submit their revised environmental qualification contention. The contention is based generally on the lessons learned during the TMI-2 accident when safety-related equipment deemed to be qualified during the original NRC review of the plant failed.

(See discussion in Joint Intervenor's motion to reopen, at 41-43 (March 24, 1981).) More specifically, it arises out of the numerous deficiencies in environmental qualification of safety-related electrical equipment at Diablo Canyon conceded by PG&E in its June 10, 1981 report to the NRC Staff as well as the seriously inadequate NRC Staff review of the issue discussed in its SER Supp. 15. For the reasons discussed at length in the contention itself, in the attached affidavit of Gregory C. Minor, and in the Statement of Clarified Contention and Motion to Reopen previously filed herein, Joint Intervenor's submit that operation of Diablo Canyon would violate General Design Criteria 1, 2, 4, and 23, and Sections III and XI of Appendix B to 10CFR Part 50.

Accordingly, Joint Intervenor's respectfully request that the attached contention be admitted for hearing in the Diablo Canyon full power licensing proceeding.

DATED: October 23, 1981

Respectfully submitted,

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REVISED CONTENTION

ENVIRONMENTAL QUALIFICATION OF SAFETY-RELATED

ELECTRICAL EQUIPMENT

Joint intervenors contend that the Diablo Canyon safety related equipment has not been demonstrated to be fully qualified to operate correctly under the environmental extremes of operating and accident conditions, nor has it been fully demonstrated that they comply with the aging requirements necessary to insure proper operation over the required life of the equipment. Thus, they are not in compliance with 10CFR50 Appendix A, General Design Criteria 1, 2, 4, and 23 and Appendix B, Sections III and XI.

The Applicant's Environmental Qualification Report (EQR) and the NRC evaluation in SER Supplement 15 have not fully demonstrated the adequacy of safety related equipment. There remain several deficiencies in the equipment, the testing techniques and the plan for resolution.

Equipment qualification problems identified in the June 10, 1981 PG&E letter to NRC staff remain largely unresolved and additional equipment has been added to the list. Three types of pressure transmitters are identified as due for replacement but no equipment has been identified as (1) qualified to be used in replacement and (2) having the necessary qualified life. The schedules for replacement are not consistent with the need to have qualified equipment installed before fuel load and operation. The transmitters are:

- Rosemount Model 1152
- Barton Model 764 (Lot 1)
- Fischer & Porter Models 10B and 50EP

Qualification of several devices has not been completed thus giving no basis for acceptance. Examples of this situation are:

- ITT General Control Valve Motor Operators (NH92)
- Target Rock Solenoid Valves 79AB
- TMI related changes

In determining the qualified life of several components, tests have only been conducted for very brief periods at elevated temperatures. Thus the qualified life of the component is substantially less than the plant lifetime (estimated at 40 years) and in some cases even less than the requirement for accident conditions (e.g. Fischer & Porter pressure transmitters). These deficiencies are proposed to be compensated for by establishing maintenance and surveillance procedures to verify capability of the equipment to function properly. However, these procedures have not been described in the FSAR or implemented at Diablo Canyon. The schedule to complete definition of the qualified life of all safety-related equipment at Diablo Canyon has fallen behind six months since June 1981.

There is inadequate consideration of instruments and post accident monitoring equipment as described in ~~the~~ Reg Guide 1.97 Rev 2 and NUREG 0737. This equipment meets the Applicant's criteria for inclusion in the EQR since it will be used in the event of an accident to "achieve or support prevention of a significant release of radioactive material to the environment" (EQR, page III-1). Therefore, it should be identified and qualification requirements listed in the Environmental Qualification Report and evaluated in the SSER #15 along with other equipment meeting the Applicant's criteria.

The accidents used by the Applicant to establish the qualification requirements do not include the full range of accidents for which the equipment must operate. The Anticipated Transient Without Trip (ATWT) event is included as an emergency procedure in the EQR (EP-OP-38, EQR p. A 2-25), but there is no assurance provided by either the Staff or the Applicant that the 29 types of instruments, components, and their related equipment identified in the ATWT emergency procedure are qualified to operate through the worst case ATWT environment.

Whereas the applicant has reviewed the possibility that failures of individual pieces of equipment may mislead the operator, there is no indication that common-cause, common-mode, or other multiple failures of unqualified and/or documentation-deficient equipment has been adequately evaluated by either the Applicant or the Staff. Multiple failures or erroneous indications have been shown to mislead operators in transients and accidents such as Davis-Besse (1977 and 1981), Rancho Seco (1978), TMI-2 (1979) and Crystal River (1979). There is insufficient proof that Diablo Canyon operators would react properly to multiple failures of unqualified or inadequately designed equipment.

For the above reasons, the Joint Intervenors contend that, in view of deficiencies in the Diablo Canyon environmental qualification program and equipment, the staff review contained in SSER 15 is inadequate and operation of Diablo Canyon would violate 10CFR50 Appendix A, General Design Criteria 1, 2, 4 and 23 and Appendix B Section III and XI.