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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION 82 SEP 20 10:51

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL 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.
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JOINT INTERVENORS' EXCEPTIONS
TO THE LICENSING BOARD'S
AUGUST 31, 1982 INITIAL DECISION

Pursuant to 10 C.F.R. § 2.762, the SAN LUIS OBISPO MOTHERS FOR PEACE SCENIC SHORELINE PRESERVATION CONFERENCE, INC., ECOLOGY ACTION CLUB, SANDRA SILVER, GORDON SILVER, ELIZABETH APFELBERG, and JOHN J. FORSTER ("Joint Intervenors") hereby submit exceptions to and initiate an appeal from the Atomic Safety and Licensing Board's ("licensing board") August 31, 1982 Initial Decision for the Diablo Canyon Nuclear Power Plant ("Diablo Canyon"). Exceptions are taken to the board's rulings and findings contained in various decisions and orders issued during the relevant aspects of the full power proceeding, including the following:

- (1) The June 19, 1981 Memorandum and Order Denying Joint Intervenors' Motion to Reopen Environmental Record for Consideration of Class Nine Accident ("June 19 Memcrandum");

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(2) The August 4, 1981 Memorandum and Order regarding admissibility of contentions ("August 4 Order");

(3) The August 27, 1981 Order regarding objections ("August 27 Order");

(4) the December 23, 1981 Order pursuant to Conference of Counsel ("December 23, 1981 Order");

(5) the January 11, 1982 Memorandum and Order regarding Request for Directed Certification ("January 11 Order");

(6) the January 15, 1982 Memorandum and Order in Response to Joint Intervenors' Motion for Summary Disposition of Contention 1 ("January 15 Order"); and

(7) the August 31, 1982 Initial Decision ("ID").

Joint Intervenors submit that the licensing board erred in its findings and rulings listed below and hereby take exception to each of them.

I. JUNE 19 MEMORANDUM

1. None of the requirements contained in NUREG-0737, the Revised Statement of Policy (CLI-80-42) (December 18, 1980), or the Commission's April 1, 1981 Order (CLI-81-5), impact the Commission's interim policy on accident considerations. (P. 2.)

2. Even though Diablo Canyon is located in a region of known seismicity, the probability of it sustaining a "class nine" accident is no greater than for any other reactor. (P. 3.)

3. No special circumstances exist at Diablo Canyon. (P. 3.)

4. Joint Intervenors' motion to reopen the record for consideration of class nine accidents is denied. (P. 3.)

II. AUGUST 4 ORDER

5. Combined Contentions 2 and 3, regarding hydrogen, are denied because the matters addressed are not required by NUREG-0737 and because Joint Intervenors have not supplied information of any kind which could be interpreted as a credible loss of coolant accident scenario. (P. 3.)

6. Contention 4, regarding decay heat removal, is denied because there is no basis for admitting this contention. (P. 4.)

7. Combined Contentions 8 and 9, regarding relief and block valves, are denied because Joint Intervenors have not supplied new significant factual information which raise serious questions concerning the safety or operability of relief or block valves at Diablo Canyon. (P. 4.)

8. Contention 10, regarding reactor vessel level instrumentation system, is denied because the Joint Intervenors have presented no genuine issue to be litigated. (Pp. 5-7.)

9. Contention 11, regarding small-break LOCA analysis, is denied because we find no reason presented by Joint Intervenors to justify its admissibility. (P. 7.)

10. Contention 15, regarding environmental qualification of safety-related electrical equipment, is denied because the Board does not see a litigable issue. (Pp. 7-8.)

11. Combined contentions 15 and 16, regarding systems interaction, are denied because the Board has determined that (a) this is not an explicit requirement of NUREG-0737 and (b) the Board finds no requirement in the regulations for the kind of comprehensive study requested. The Board further finds that this contention is too broad and non-specific to be accepted. (Pp. 8-9.)

12. Contention 17, regarding documentation of deviations, is denied because it would establish a requirement which is not found either in the Commission's regulations or NUREG-0737. Neither is new significant factual information supplied which could reasonably lead to a conclusion of improved safety if this proposed requirement were implemented. (Pp. 9-10.)

III. AUGUST 27 ORDER

13. The Board finds that the Joint Intervenors' Notice of Objections is not well taken. The objections are dismissed and the request for certification to the Commission is denied. (P. 1.)

IV. DECEMBER 23 ORDER

14. The Board concludes that under the Commission's ruling, no licensing board, including this one, has jurisdiction to consider impacts on emergency planning of earthquakes which cause or occur during an accidental radiological release. (P. 2.)

15. The Board will look to the November 17, 1981 Memorandum as the FEMA finding needed to carry out 10 C.F.R. 50.47. Joint Intervenors' request for certification to the Commission of a question about the use of a FEMA agency finding is denied. (Pp. 2-3.)

16. The Board finds no merit in Joint Intervenors' revised contention on environmental qualification, and the contention is therefore denied. (Pp. 4-5.)

V. JANUARY 11 ORDER

17. Governor Brown's request for directed certification regarding the effects of an earthquake on emergency planning is denied. (P. 2.)

VI. JANUARY 15 ORDER

18. Joint Intervenors' Motion for Summary Disposition of Contention 1 is denied because there is a genuine dispute as to material facts. (P. 2.)

VII. PID

A. Statement of Salient Facts

19. The Board finds that the emergency plan is acceptable in its present state of development. (P. 5.)

20. The record shows that the Joint Intervenors failed to prove their contentions regarding a change in classification of pressurizer heaters, block valves, and power-operated relief valves at Diablo Canyon. The Board's analysis of the facts shows that the public is not endangered by the use of such components installed at Diablo Canyon. (P. 5.)

B. Statement of Legal Issues and Their Resolution

21. The Board finds that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. (P. 5.)

22. There is no requirement that the pressurizer heaters be classified safety-grade. Connection of only one-half of the heater banks to the emergency power supply is adequate for the purpose. (P. 6.)

23. The Board concludes that the PORV systems are adequate for the functions to be performed. (P. 6.)

C. Emergency Planning

Standard (b)(1): Assignment of Responsibility

24. The applicant has established an emergency response organization for coping with radiological emergencies,

assigned duties, developed letters of agreement, and retained adequate staff to respond to an emergency and augment its initial response. (P. 11.)

25. This Board has no authority to enforce state emergency planning standards which exceed those standards required by federal regulations. (P. 12.)

26. The Board agrees that the requirements which the County Plan must meet are the federal requirements as stated in 10 C.F.R. 50.47 for a 10-mile plume Emergency Planning Zone and a 50-mile ingestion EPZ. Standard operating procedures within the 10-mile zone are complete. With respect to the standard operating procedures outside the 10-mile zone, we have the needed reasonable assurance since reasonable progress has been made to date in developing the SOPs. (Pp. 13-14.)

27. No planning for the plume exposure pathway is required for Santa Barbara County since it lies outside of the 10-mile EPZ defined in 10 C.F.R. 50.47. Neither is specific county planning required for the ingestion pathway since this planning is the responsibility of the state. There exists reasonable assurance that an emergency plan for Santa Barbara County will be integrated into the overall emergency response capability contemplated by the state. No county-level emergency planning is required in Monterey or Ventura Counties. (P. 15.)

28. With regard to the state plan, the Board concludes that (1) the plan is complete, (2) that a systematic process

of development and review between the state and FEMA has occurred, (3) that FEMA keeps abreast of current developments in the plan and will review it when it is complete, and (4) that there are no obstacles to the completion of the plan. The Board, therefore, concludes that there is reasonable assurance that the state plan will be substantially complete and capable of being implemented prior to full power operation of Diablo Canyon. (P. 17.)

29. The elements of planning important to an actual emergency response are incorporated into standard operating procedures, not letters of agreement. The record shows clearly that the county plans to obtain the letters of agreement and no problems in doing so were identified by any party. (P. 18.)

30. We have found sufficient mitigating circumstances to conclude that defections of emergency workers would not be of such magnitude as to jeopardize the successful implementation of the emergency plans. We are convinced that most responsible workers would solve their conflicts in a common-sense fashion by seeing to their families' safety and then reporting for duty. We are not convinced that a scientific survey of workers would add anything of significance to practical emergency planning. The Board finds that no scientific survey of potential emergency workers is needed to assure their availability during a radiological emergency. (P. 18-20.)

31. The Board finds that there is reasonable assurance that requirements of Planning Standard 10 C.F.R. 50.47(b)(1) have been or will be met prior to the granting of a license for full power operation. Preparation of an emergency plan is not required by federal regulations to be performed by Ventura, Monterey or Santa Barbara Counties. (Pp. 20-21.)

Planning Standard (b)(2): Onsite Emergency Organization

32. The applicant complies with Planning Standard (b)(2) regarding on-shift responsibilities, staffing, and augmentation of response capabilities. (P. 22.)

33. The Board concludes that the applicants' staffing plans are in substantive conformance to Table B-1 of NUREG-0654. (P. 23.)

34. We conclude that role conflict among plant operators is not of sufficient magnitude to cause the applicants' staffing plans under this standard to be unimplementable. (P. 24.)

Planning Standard (b)(3): Emergency Response Support and Resources

35. The applicant complies with Planning Standard (b)(3) regarding arrangements for assistance resources, accommodation of state and local staff, and identification of organizations capable of augmenting the response. (P. 25.)

36. The Board finds that Joint Intervenors' objections regarding letters of agreement, specifically regarding federal assistance, planning in counties other than San Luis Obispo County, standard operating procedures, and emergency workers, are without merit. The Board concludes that the plans for meeting Planning Standard (b)(3) comply with the Commission's regulations and NUREG-0654. (Pp. 25-26.)

Planning Standard (b)(4): Emergency Classification System

36. The Board concludes that the plans for this requirement meet the requirements of the Commission's regulations and NUREG-0654. Joint Intervenors' objections regarding the classification system, the level at which the sirens are sounded, and the compliance of the applicants' emergency classification system with NUREG-0654 are without merit. (Pp. 27-28.)

Planning Standard (b)(5): Notification Methods and Procedures

37. Joint Intervenors presented no facts justifying extending the early warning siren system into the state-extended BEPZ. (P. 32.)

38. We find that the county plan for mandatory sounding of sirens at the general emergency level and for discretionary sounding of sirens at the site area emergency level is valid and should not be disturbed. (Pp. 33-34.)

39. Joint Intervenors are in error in their assertion that 100% notification is required. Tone alert signals, vehicle-mounted sirens, special visits by patrol cars, helicopters, mounted loud speakers, paging devices, and telephone are sufficient to give reasonable assurance that essentially 100% of the population could be notified of an emergency, although 100% warning cannot be guaranteed. We conclude that this is a reasonable plan for notification of essentially 100% of the public within the plume exposure EPZ. (Pp. 34-35.)

40. The planned system of warning involving a cascade or sequence is not in conflict with NUREG-0654, Appendix 3. (P. 35.)

41. The Board concludes that the off-site plans for notification of the public are developed and that implementation is sufficiently complete to provide reasonable assurance that essentially complete and timely notification of the public can be achieved in accordance with 10 C.F.R. 50.47(b)(5). (P. 35.)

Planning Standard (b)(6): Emergency Communications

42. We find that the applicants' on-site emergency communications system is adequately designed and is capable of being implemented during an emergency. The record reveals no serious deficiencies in the on-site emergency communications system. (P. 36.)

43. The problems with the general communication system are of a non-critical nature for emergency response. We are unable to find the microwave system inadequately reliable at present. The Board concludes the critical requirements of the communications system for off-site communications in San Luis Obispo County are or will be met. (Pp. 37-38.)

44. The Board concludes that the on-site communications system for San Luis Obispo County is or will be adequate to cope with a radiological emergency at Diable Canyon and the plans for emergency communications meet the requirements of the Commission's regulations and NUREG-0654. (Pp. 38-39.)

Planning Standard (b) (7): Public Education and Information

45. The Board is not convinced that a social survey would offer useful improvement in public information planning. We see little value in a social survey in dealing with the problems of under- and over-reaction during an accident. We do not accept the likelihood that a social survey would assist in the development of a better plan for public information. As to the credibility of information, intervenors' witness agreed that the populous, on being warned of danger, would respond appropriately. The longest net distance from the plant that the vast majority of the population would have to travel in order to secure protection from plume radiation is four miles. We conclude that the numerous contingencies alluded to in Joint Intervenors' testimony would not cause the

plan to fail, even assuming they were to occur. Socioeconomic demographic population characteristics data which would be gathered through a social survey is irrelevant to the task of informing the public about the necessity to travel a limited distance from Diablo Canyon in an emergency. NUREG-0654 presumes that citizens will act reasonably on the information that is provided to them. (Pp. 42-47.)

46. The Board concludes that the actions planned by the applicant and county under Planning Standard (b)(7) give reasonable assurance that the public can and will be given adequate information on how they would be notified and what their actions should be if a radiological emergency should occur at Diablo Canyon. The requirements of the Commission's regulations and NUREG-0654 Part G have been or will be met. We decline to order a social survey since it is doubtful that the results of the survey could be used to improve public information planning.

Planning Standard (b)(8): Emergency Facilities and Equipment

47. The Board finds that the applicant and the county are in substantial compliance with the guidance of NUREG-0654 with respect to Planning Standard (b)(8). We conclude that the applicant has submitted an adequate description of its emergency facilities and equipment, that the staff and FEMA reviews have been adequate, and that adequate emergency

facilities and equipment exist or will be provided to cope with a radiological emergency at Diablo Canyon. (P. 48.)

48. There is no requirement that the Operational Support Center must be equipped with protective equipment for on-site personnel. (P. 49.)

49. The Board concludes that adequate emergency facilities and equipment to support the emergency response have been or will be provided and maintained in accordance with the requirements of Planning Standard (b)(8). (P. 50.)

Planning Standard (b)(9): Accident Assessment

50. The applicant has adequately demonstrated its capabilities for assessing and monitoring a radiological emergency at Diablo Canyon. (Pp. 51-52.)

51. We conclude that annual drills on the necessary UDAC calculations are adequate to enable the UDAC Staff to make the computations required. (P. 52.)

52. We conclude that the errors inherent in the instrumentation for vent monitoring are within the guidance contained in Regulatory Guide 1.97, Revision 2. There is no endangerment to public health and safety implicit in the instrument error levels which have been specified for vent monitor readings. We conclude that the uncertainties inherent in the meteorological dispersion model do not create any public health and safety concerns. (Pp. 52-54.)

53. We conclude the comprehensive environmental qualification of equipment is not warranted. We decline to order that asterisks be placed next to environmentally unqualified equipment in the emergency plan since this would add practically nothing to safety. Adequate capabilities exist for assessing significance of any radiological release from Diablo Canyon and for monitoring such releases. The Board concludes that the applicant and the county have made adequate provisions for accident assessment under Planning Standard 50.47(b)(9) and the criteria of Part I of NUREG-0654. (Pp. 55-56.)

Planning Standard (b)(10): Protective Actions

54. In regard to a range of protective responses as well as guidelines for a choice of protective actions consistent with federal guidance, the applicants' emergency plan fully satisfies the planning standard and evaluation criteria for Planning Standard (b)(10) of 10 C.F.R. § 50.47. The plans are clearly adequate and capable of being implemented. (P. 57.)

55. The Board concludes that evacuation time estimates were derived that are consistent with Appendix 4 of NUREG-0654 and that they realistically cope with the range of likely conditions that might occur during an emergency. The Board finds that the evacuation time estimates were done properly

and that the applicant's and San Luis Obispo County's emergency plan is in conformance with 10 C.F.R. § 50.47(b)(10) and the criteria of Part J of NUREG-0654. (Pp. 57-58.)

Planning Standard (b)(11): Radiological Exposure Control

56. The record shows that the applicant has established a program which, together with those of San Luis Obispo County and the State of California, provides the means for controlling the radiological exposures of emergency workers. They conform fully with the standards set forth in 10 C.F.R. § 50.47(b)(11). (P. 59.)

Planning Standard (b)(12): Medical and Public Health Support

57. The Board concludes that there is reasonable assurance that contaminated injured individuals either on or off the site can be properly treated in either primary receiving or back-up hospitals in an emergency. The number of ambulances available for transporting individuals is reasonable and the persons who would treat contaminated injured individuals are reasonably prepared. (P. 60.)

58. There is no reason to believe that there would be large numbers of physically injured contaminated individuals off-site in the event of an emergency, and, therefore, the facilities which normally serve the county would be expected to serve its emergency needs during a radiological emergency.

In view of the foregoing, we see no value to conducting off-site drills to transport persons to a hospital. (P. 61.)

59. The Board concludes that the planning organizations (applicant, county, and state) are in compliance with the Commission's regulations and the criteria of Part L of NUREG-0654. (P. 62.)

Planning Standard (b)(13): Recovery and Re-entry Planning and Post-Accident Operation

60. The applicant's plans regarding re-entry and recovery are adequate for the reasons stated in Findings 287 through 292. (P. 63.)

61. No requirement exists for cost estimates of re-entry and recovery since they are not relevant to public health and safety. (P. 64.)

62. We conclude that the State of California's plan for recovery and re-entry is minimally adequate in technical content considering the state lead responsibility. (P. 64.)

63. We have reasonable assurance that a recovery and re-entry operation could and would be undertaken in the aftermath of a possible radiological accident at Diablo Canyon. The Board concludes that the principal emergency response organizations have met the generalized planning criteria of the Commission's regulations and Section M of NUREG-0654. (Pp. 64-65.)

Planning Standard (b) (14): Exercises and Drills

64. Regarding the 1981 full field emergency preparedness exercise, the Board rejects assertions of Joint Intervenors which rest on unsupported differences of opinion since we found no evidence to show that these would enhance the goals of the exercise or provide a more adequate demonstration of capability than was actually obtained. We find it necessary to reject all assertions either stating or implying that the exercise was defective because an actual evacuation was not ordered. Regarding the participation of cities in the exercise, we do not take the lack of participation of several cities within the state BEPZ in the first exercise to be a serious defect in the planning of that exercise. We conclude that there is little to be gained by merely assuming adverse weather in an exercise as advocated by Joint Intervenors.

(Pp. 66-69.)

65. The Board concludes that the 1981 emergency exercise was reasonably tested to the applicants in the local state organization's capability for responding to an emergency at Diablo Canyon. The Board finds there is reasonable assurance that meaningful exercises and drills can and will be performed to demonstrate the overall capability of responding to an accident at Diablo Canyon. We conclude that the applicant and off-site organizations are in compliance with the Commission's regulations and the criteria of Part N of NUREG-0654.

(Pp. 69-70.)

Planning Standard (b)(15): Radiological Emergency Response
Training

66. The applicant's emergency plan, the state emergency plan, and the county plan provide adequate assurance that appropriate personnel both on-site and off-site have been and will be trained in radiological emergency response procedures and methods. Regarding specialized training of general emergency support personnel, the Board finds that none of the emergency planning requirements of the NRC require it. The Board concludes this is reasonable since we have no evidence that such workers would be exposed to an especially hazardous environment or that they could not rely on the monitoring which would be done by trained people in the event of an emergency. (Pp. 71-73.)

67. The Board concludes that the plans of the applicant, San Luis Obispo County, and the State of California are adequate to ensure that emergency response workers will be adequately trained in radiological emergency procedures. We find that the requirements of the Commission's regulations and the criteria of Part O of NUREG-0654 are met by the principal response organization having training responsibility for emergencies at Diablo Canyon.

Planning Standard (b) (16): Responsibility for the Planning Effort: Development of Periodic Review and Distribution of Emergency Plans

68. The Board concludes that responsibilities for plan development and review and for distribution have been established by the applicant and San Luis Obispo County. Regarding funding for maintenance and continued development and training, the Board finds the applicant's commitment to assure the funds necessary to maintain preparedness to be an adequate resolution of this issue. (Pp. 74-75.)

69. The Board concludes that the responsibility for the planning effort is adequately assigned and that the plan meets the requirements of the Commission's regulations and the criteria of Part O of NUREG-0654.

D. Contention 10: Pressurizer Heaters

70. The Board concludes that the Commission considered the question regarding the classification of pressurizer heaters as safety-grade and decided that the design and application of the pressurizer heaters and associated controls to safety-grade criteria were not necessary. (P. 77.)

71. The pressurizer heaters clearly do not serve to protect the integrity of the reactor coolant pressure boundary. (P. 78.)

72. There is reasonable assurance that it will be possible to maintain natural circulation, using safety-grade

systems as needed, without the use of the pressurizer heaters at Diablo Canyon. Consequently, we find the pressurizer heaters need only meet the less stringent "important to safety" criteria. (P. 80.)

73. The Board finds on the basis of the entire record relevant to this matter that the qualification of the pressurizer heaters as safety grade is not required either by the Commission or by the criteria of Appendix A of 10 C.F.R. Part 100 and that connecting only one-half of the heater banks to the emergency power supply is adequate for the purpose intended. (P. 81.)

E. Contention 12: Block and Power-Operated Relief Valves

74. The Board finds that there is more than reasonable assurance that the valves will operate as projected. The Board finds, on the basis of the entire record relevant to this matter, that the PORV's and their associated block valves and instrumentation and controls are not required by the criteria in Section III.C of Appendix A to 10 C.F.R. Part 100 to be qualified as safety-grade. Protection from low-temperature overpressurization is adequately provided for by two safety-grade PORV systems. The Board further finds that the PORV systems have been adequately designed, constructed, and tested. (Pp. 82-86.)

F. Conclusions

75. The Board concludes that the applicant's and the combined on-site state and local emergency response plans and preparedness comply with 10 C.F.R. § 50.33(g), 50.47 and revised Appendix E to Part 50. The Board also concludes that Governor Brown and the Joint Intervenors failed to prove that changes are required in the classification of pressurizer heaters, block valves, or PORV's. (P. 87.)

76. All other issues or contentions presented by the parties have been considered and found to be without merit. (P. 87.)

G. Findings of Fact

Planning Standard (b)(1): Assignment of Responsibility

77. The issue raised by Joint Intervenors regarding a shortage of on-site personnel is adequately resolved by PGandE's revision of Appendix E-2 of Procedure 1.1 of the Corporate Emergency Response Plan. (FF 12.)

78. Off-site organizations which will have a role in emergency response have been identified in written agreements between the applicant and state, local, private and federal organizations have been developed. (FF 95.)

79. The Board will apply the "minimum requirement" standard of emergency preparedness in its review of emergency planning at Diablo Canyon. Emergency planning must comply with 10 C.F.R. § 50.47 and Appendix E as a minimum. State

requirements which go beyond federal requirements are sufficiently different to be outside the jurisdictional authority of this Board. (FF 22.)

80. FEMA is keeping abreast of the developments in the state plan and is participating with the state and San Luis Obispo County in the development of emergency plans. (FF 23.)

81. The state plan is capable of implementation. (FF 24.)

82. The county and the relevant agencies consider the county plan final and could implement it even though no final signature approval has been provided. (FF 30.)

83. Approval of the San Luis Obispo County plan is not required by other reviewing authorities. Since the SOP's are being revised in a continuous process, the Board finds it reasonable to defer the administrative act of authentication until later. The absence of authentication does not imply that approval has been withheld or that the individual SOP's are affected. (FF 31.)

84. An emergency plan is not required for Santa Barbara County since the State of California has emergency responsibilities for the ingestion pathway planning zone. The Santa Barbara plan is expected to be complete in July 1982. A plan appropriate for the plume emergency pathway zone is not required for Santa Barbara County. (FF 33.)

85. Monterey and Ventura Counties are not required to prepare emergency plans of their own. (FF 34.)

86. No evidence of difficulty obtaining signatures on letters of agreement was brought forward at the hearing. Agreement letters are used for non-critical elements of emergency support. (FF 35.)

87. The Board concludes that the county letters of agreement supporting organizations are not critical to successful implementation of emergency planning. (FF 36.)

88. Role conflict would not affect the performance of trained professionals such as police officers, sheriff's personnel, physicians, nurses, and other medical personnel. (FF 39.)

89. The Board does not accept that the problem of role conflict is of such dimension as to render the emergency plan unimplementable. (FF 41.)

90. Volunteer workers have non-critical functions during an emergency. Some defections in their ranks would not cause critical damage to plan implementation. (FF 43.)

91. Experience from actual emergencies does not indicate that emergency workers will fail to perform their duties during an emergency. (FF 44.)

92. The scientific sociological survey of emergency workers is not necessary to insure implementability of the emergency plans. (FF 46.)

Planning Standard (b) (2): On-site Emergency Organization

93. The Board concludes that the applicant meets the shift manning requirements of Table V-1 of NUREG-0654.

(FF 51.)

94. We conclude that the NRC staff's overall review and conclusion and planned staff augmentation is reasonable.

(FF 65.)

95. There is no necessary dichotomy between seeing to families' safety and performing emergency duties. Most people would do both. (FF 69.)

96. We conclude that essential plant workers are trained as professionals and have had emergency training and that their expected behavior would, therefore, be similar to other trained professionals. We conclude that adverse resolution of role conflict could be an action taken by individuals but not by any substantial fraction of the plant staff as a whole in an emergency. Implementation of a site emergency plan would not be jeopardized even if one or a few individuals did fail to perform their emergency duties. (FF 70-71.)

97. The potential for role conflict does not prohibit a finding of adequate applicant compliance with this standard, and the Board concludes that the criteria of NUREG-0654 for implementation of Planning Standard (b) (2) have been met.

(FF 72.)

Planning Standard (b) (3): Emergency Response Support and Resources

98. The applicant has made arrangements for requesting and effectively using assistance resources. (FF 75.)

99. The Board concludes that the requirement of Planning Standard (b) (3) and the criteria of Part C of NUREG-0654 have been met. (FF 86.)

Planning Standard (b) (4): Emergency Classification System

100. The Board concludes that the delay during the August 1981 exercise in ordering sirens to be sounded was attributable not to a deficiency in the emergency classification system. (FF 93.)

101. The Board concludes that the applicant's standard emergency classification and action level system and procedures conform to the criteria of Part D of NUREG-0654 and Appendix 1 and meet the requirements of Planning Standard (b) (4) of 10 C.F.R. §50.47. (FF 97.)

Planning Standard (b) (5): Notification Methods and Procedures

102. The siren system meets the requirements of NUREG-0654 and follows guidelines of FEMA CPG 1-17 Outdoor Warning Systems Guide. (FF 106.)

103. The Board finds it reasonable to conduct a test of the siren system during August or September 1982. (FF 109.)

104. The provisions of NUREG-0654, Appendix 3, pages 3-7, apply to the methods by which organizations are to be notified and not to the means by which individual emergency are to be notified. (FF 111.)

105. Similarly, NUREG-0654 does not prohibit cascade or sequential warning systems for the notification of individual emergency workers. (FF 112.)

106. The Board concludes that principal offices within the county would be notified by simultaneous notification methods, that redundant notification methods consisting of both radio and telephone exist throughout the county warning system, and that sequential call-down methods which are used are reasonable and not in conflict with the intent of NUREG-0654. (FF 114.)

107. The county plan provides for notification of those in the population who may not be adequately warned by the siren system. (FF 115.)

108. At levels of emergency less than a general emergency, the public would be kept informed through normally scheduled radio and television broadcasts. Under these circumstances, the Board finds it reasonable that a particular signal be reserved for conditions under which prompt action is needed by the public. Mandatory use of the sirens for less serious incidents would dilute the effectiveness of the signal even with an effective broadcast system. (FF 118-19.)

109. We conclude that the provision of mandatory sounding of the early warning system at the general emergency level and discretionary sounding at the site area emergency stage is reasonable. (FF 81.)

110. The Board finds that there is no body of evidence to support the assertion that the San Luis Obispo County telephone system is unreliable for emergency use. (FF 123-25.)

111. The Board concludes that the early warning siren system will, together with supplemental methods of notification, provide essentially complete notification of the general public in the event of an emergency at Diablo Canyon. We therefore conclude that the off-site emergency plans and the applicant's emergency plans meet the requirement of 10 C.F.R. § 50.47(b)(5) and the criteria of Part E of NUREG-0654.

Planning Standard (b)(6): Emergency Communications

112. The applicant has submitted plans which provide for prompt communication capability between the applicant, the county, the state and the NRC. (FF 133.)

113. The Board finds that significant Priority 2 communications recommendations regarding tone alert monitoring radio receivers, the addition of a repeater station on Davis Peak, and additional radio paging capabilities, have been or will be carried out. (FF 147.)

114. The Board concludes that while the county communications system as a whole may have deficiencies, the applicant and the county have taken steps to insure that the specific channel needed for an emergency at Diablo Canyon has been or will be upgraded. The equipment needed has been ordered and should be in place by May 20, 1983. The Board concludes that the radio communication required in a nuclear emergency would be performed on the county VHF channel or the UHF channel which is or will be in good condition.

(FF 148-59.)

115. The Board concludes that there is reasonable assurance that the critical functions of communication could be performed using the green channel and the UHF channel in an emergency at Diablo Canyon and that the county plan is in compliance with 10 C.F.R. § 50.47(b)(6). (FF 160.)

Planning Standard (b)(7): Public Education and Information

116. The Board finds that PGandE's failure to comply with FEMA guidance memorandum number 19 is insignificant.

(FF 171-72.)

117. The fact that populations evacuated from TMI in larger numbers than expected or went further than expected or failed to use public shelter areas has no apparent bearing on public health and safety. We are unable to ascertain that the proposed sociological survey could be used to enhance the effectiveness of public notification or education in the

Diablo Canyon area since over-response appears harmless to public health and safety and the data that would be collected in a survey would be of limited relevance to a public information program. (FF 176-85.)

118. Peoples' statements about their likely behavior under stress conditions while being interviewed under nonstress conditions appear unreliable. We are not convinced by the testimony of Dr. Erikson. (FF 186.)

119. We find unconvincing the proposition that radiological emergencies or disasters differ substantially from other forms of disaster for the purpose of immediate evacuation. We do not see why the public's behavior during an evacuation would be dependent on the nature of the hazard. (FF 187.)

120. The Board concludes that (1) sociological information is irrelevant to designing a public information system which is reasonably reliable and (2) has been taken into account in the San Luis Obispo County emergency plan. We conclude that the existing public information program, when implemented, would provide reasonable assurance that the public can be notified effectively in the event of a radiological accident and that no public surveys are required. (FF 188.)

Planning Standard (b) (8): Emergency Facilities and Equipment

121. The Board has examined the evidence on Planning Standard (b) (8) and finds the evidence to be as stated in the Staff's Proposed Findings of Fact. (FF 191-97.)

122. The Board concludes that the storage of two evacuation kits in the Operational Support Center, the structure where on-site personnel are expected to gather during an emergency, is adequate for the purposes of emergency response. We find that two such kits are reasonable and that the OSC is adequately stocked with equipment for the purpose intended. (FF 199-204.)

123. The fact that neither the state nor the county has independent radiation monitors on site is insignificant. There are no regulatory requirements for state or county monitoring on site. (FF 205.)

124. FEMA has obtained satisfactory assurance that concerns related to Planning Standard (b) (8) have been resolved and that necessary equipment will be installed by May 20, 1983. (FF 210.)

125. The Board concludes that the issues raised by Joint Intervenors on Planning Standard (b) (8) have been resolved and that there exists reasonable assurance that adequate emergency facilities and equipment to support an emergency response have been or will be provided and maintained. We conclude that the applicant and San Luis Obispo County are in compliance with the requirements of 10 C.F.R. § 50.47(b) (8) and Part H of NUREG-0654. (FF 211.)

Planning Standard (b) (9): Accident Assessment

126. The capability exists to predict core damage prior to a release in the event of a LOCA. (FF 215.)

127. The applicant has the capability for continuing radiological assessment during an accident. (FF 218.)

128. Field monitoring capabilities have been established. San Luis Obispo County and the State of California have also made provisions to assess the consequences of radiological releases during off-normal and accident conditions. (FF 219.)

129. We conclude that the accuracy of instruments specified by applicant's witnesses for monitoring of radiological doses is sufficient for the purpose intended and complies with Regulatory Guide 1.97, Revision 2. (FF 227.)

130. The meteorological model used by the applicant is conservative. The Board concludes that the uncertainties in parameters or computed results of the meteorological model for plume dispersion are not significant for the purpose intended. The Board finds that the uncertainties inherent in the meteorological model are not significant for public health and safety in that adequate means exist for monitoring actual radiation doses to the public. (FF 229-30).

131. The Board concludes that the accident assessment equipment which is listed in Staff Exhibit 32 is or will be installed and that no additional corrective actions are needed to meet the requirements of this planning standard. The Board

is satisfied by the applicant's written commitment to complete the remaining items prior to June 1, 1983. (FF 234.)

132. Based on the fact that the applicant intends to train its operators on the equipment which is not environmentally qualified, and further on the fact that the criteria for environmental qualification include consideration of the impact of failure on operators, the Board concludes that the applicant's emergency procedures are adequate. We conclude that this is an issue of minor safety significance. (FF 235-42.)

133. The Board concludes that on-site and off-site plans for accident assessment comply with the standards of NUREG-0654, Section I and of 10 C.F.R. § 50.47(b)(9).

Planning Standard (b)(10): Protective Actions

134. Procedures for the activation and functioning of the on-site emergency organizations, including use of an emergency warning signal system, are in place. Methods exist to account for plant staff personnel, visitors, and any construction workers who may be on site. The applicant can evacuate on-site non-essential personnel even during heavy rains on more than one road. (FF 246-47, 250.)

135. The evacuation time estimates made by applicant conform with the requirements of Appendix 4 of NUREG-0654 and are therefore accepted for the purposes of this case. (FF 252.)

136. Ingestion pathway protective actions have been developed by the applicant, state, and the county. (FF 256.)

137. The county plan has provisions for notifying all segments of the transient and resident population; for protecting persons whose mobility is impaired due to institutional or other confinement; for use of radio protective drugs for emergency workers and institutionalized persons; a means of relocation, including buses needed for non-car owners and school population; and precautionary measures such as limited hospital admissions, closing schools, parks and beaches. (FF 257.)

138. The time estimates by PRC Voorhees were realistically made over a range of normal and adverse conditions. These provide a range of estimates of evacuation times to decisionmakers. Accidents are considered in traffic flow estimates and they do not affect overall time estimates significantly. The number of ambulance and bus trips required would be too small to impact overall evacuation times. The number of vehicles involved in an evacuation is not undercounted since the estimate of 1.3 vehicles per household is consistent with recent studies. Voluntary evacuation from outside the BEPZ will not cause traffic backups within the EPZ. (FF 259.)

139. We conclude that time estimates for emergency evacuation of the public within the plume exposure EPZ are valid and in conformance with Appendix 4 of NUREG-0654. The

applicant has conformed to the on-site criteria of NUREG-0654 for protective actions. The Board, therefore, finds that adequate protective actions can be taken both on-site and off-site in the event of an emergency and the requirements of 10 C.F.R. § 50.47 and criteria of Part J of NUREG-0654 have been met. (FF 260.)

Planning Standard (b)(11): Radiological Exposure Control

140. Applicant's means for controlling radiological exposures to emergency personnel during an emergency adhere to the criteria of NUREG-0654, Part K, and satisfy the requirements of 10 C.F.R. § 50.47(b)(11) and Appendix E.IV.e of 10 C.F.R. Part 50. (FF 264.)

141. The Board finds that on-site and off-site planning meet the requirements of 10 C.F.R. §50.47 and the criteria of Part K of NUREG-0654. (FF 266.)

Planning Standard (b)(12): Medical and Public Health Support

142. Emergency medical services are needed for persons having traumatic injury, but not for treatment of contaminated individuals. Contaminated injured persons do not require an ambulance for emergency transportation to a health care facility. (FF 275.)

143. The Board concludes that treatment capability exists to handle a substantial number of injured contaminated persons in an emergency. (FF 27.)

144. We have no evidence before us nor do we see any reason for believing that the number of physical injuries among the general public would increase substantially during a radiological emergency. Thus, we conclude that the number of ambulances and physicians that normally serve the county could reasonably be expected to serve the general population during a radiological emergency. (FF 278.)

145. The Board concludes that adequate transportation and treatment facilities exist for the treatment of contaminated injured individuals in a radiological emergency. There is reasonable assurance that medical personnel providing those services are adequately prepared to treat contaminated individuals. We therefore find that the criteria of Planning Standard B-12 have been met by the applicant and off-site organizations. (FF 284.)

Planning Standard (b) (13): Recovery and Re-Entry Planning and Post-Accident Operations

146. General provisions for recovery and re-entry through the post-emergency recovery organization have been established by the applicant. (FF 287.)

147. General provisions for recovery and re-entry have been completed in the state plan. (FF 292.)

148. The Board is unable to rely upon deposition testimony of the Deputy Director of the State Office of

Emergency Services regarding the inadequacy of the state plan for recovery and re-entry. (FF 294.)

149. We conclude that the state, with the help of others, could conduct a recovery and re-entry operation if needed. (FF 295.)

150. The Board concludes that there is no need for estimating costs of recovery and re-entry after a major accident because the estimates would be speculative and would not contribute to the protection of public health and safety. (FF 297.)

151. The Board finds that the applicant, the county, and the state have established general plans and criteria for conducting a re-entry and recovery operation in the event of a radiological emergency at Diablo Canyon. We have reasonable assurance that a recovery and re-entry could and would be undertaken in the vicinity of Diablo Canyon both on-site and off-site in the event of a radiological emergency. (FF 298.)

Planning Standard (b) (14): Exercises and Drills

152. During the full field exercise on August 19, 1981, the county demonstrated a good capability to alert, notify, and mobilize emergency personnel. (FF 302.)

153. Joint Intervenors' criticisms of the August 19, 1981 drill are all subject to the provision of Part 50, Appendix E, Section F(1) that an exercise not include mandatory public evacuation. Joint Intervenors' assertions on these items

therefore do not identify defects in the exercise that was performed. (FF 311.)

154. It is not self evident that different assumptions or actions with respect to the accident scenario utilized for the August 19 exercise would improve the plan or state of preparedness of the applicant, the county or the state, and our record does not give us any reasons for thinking so. (FF 313.)

155. We have no evidence that assumptions of adverse weather conditions would assist in testing the adequacy of the various emergency plans. (FF 314.)

156. The Joint Intervenors' contention regarding failure to utilize the current draft of the county plan during the August 19 exercise is without merit. (FF 315.)

157. It appears to the Board that the uncovering of deficiencies during the August 19 exercise constitutes a successful aspect of the exercise. (FF 316.)

158. The Board finds that the applicant's and the county's emergency plans were adequately tested in the August 19 exercise. The Board concludes that the applicant's and the county's emergency response plans conform to the guidelines given in Part N of NUREG-0654 and are in compliance with Planning Standard (b)(14). (FF 318.)

Planning Standard (b) (15): Radiological Emergency Response Training

159. The applicant, the county, and the state have radiological training programs. (FF 321-22.)

160. Site-specific emergency response training for off-site emergency organizations which may be called upon to provide assistance in the event of an emergency is provided. (FF 323.)

161. No criterion or regulation of the NRC requires training for general personnel who might have a role in emergency response such as auto repair, phone assistance, EBS personnel, and other workers other than monitoring personnel. The Board finds no evidence that general workers who might have some role in supporting emergency response would be exposed to a hazardous environment even if they did remain behind during an evacuation. Joint Intervenors' assertion that these workers should have radiological emergency training is without support in the record. (FF 330-32.)

162. The Board concludes that there is reasonable assurance that radiological emergency response training is being provided by the applicant, the state, and the county to those personnel who may be called on to assist in an emergency and that the training requirements under Planning Standard (b) (15) have been met. (FF 334.)

Planning Standard (b)(16): Responsibility for the Planning Effort: Development of Periodic Review and Distribution of Emergency Plans

163. The applicant's commitment to ensure that funds necessary to maintain preparedness are available is adequate assurance that the plan will be maintained and updated as necessary. (FF 345.)

164. The Board concludes that it has reasonable assurance that Planning Standard (b)(16) has been adequately considered by the applicant and the county, and that it has been reviewed by the staff and is capable of being implemented. The requirements of 10 C.F.R. §50.47(b)(16) and the criteria of Part E of NUREG-0654 have been met by the applicant and San Luis Obispo County. (FF 247.)

H. Contention 10: Pressurizer Heaters

165. No particular safety function is served by maintaining the plant at a hot stand-by condition. (FF 354.)

166. Operation of the pressurizer heaters is not required to place and maintain the system in a cold shut-down condition. (FF 355.)

167. Pressure control in the reactor coolant system can be maintained by systems other than the pressurizer heaters, e.g., by using the charging and let down or the high head safety injection systems, both of which are safety-grade. (FF 356.)

168. The pressurizer heaters are not needed to maintain natural circulation in the Diablo Canyon Plant system.

(FF 358.)

169. The Staff has found provision of emergency power at Diablo Canyon to be adequate for purposes of the NUREG-0737 requirement. (FF 359.)

I. Contention 12: Block and Power-Operated Relief Valves

170. Only one PORV is necessary to perform the intended pressure relief function. (FF 364.)

171. The additional instrumentation and controls on the safety-grade PORV's affect the ability of the valves to open, but do not affect the ability of the valves to close and remain closed. (FF 365.)

172. A Masoneilan series 20000 model PORV, representative of those used at the Diablo Canyon plant, has been tested by EPPI and has passed all test criteria. (FF 366.)

173. A Velan model B-10-3054B-13MS block valve was tested by EPRI under conditions representative of potential Diablo Canyon plant conditions. The valve fully opened and closed on demand. (FF 367.)

174. The applicant will submit plant-specific reports as required by the NRC, including qualification data on block valves and analyses of results of EPRI relief valve testing for applicability to the Diablo Canyon plant. (FF 368.)

175. A failure of a PORV in the open position would cause the equivalent of a small-grade LOCA. This would be terminated by the closure of the associated safety-grade block valves. (FF 370.)

176. If an associated block valve failed to isolate a stuck-open PORV, the capability of the ECCS would be sufficient to permit safe shutdown of the reactor without the core being uncovered or damaged. (FF 371)

177. No evidence was presented which would indicate that the operation of the PORV's and block valves is related to the capability of the operator to shut down and maintain the reactor in the safe shutdown condition. (FF 372.)

J. Conclusions of Law

178. On-site emergency preparedness for Diablo Canyon, Units 1 and 2, provides assurance that effective protective measures can and will be taken in the event of a radiological emergency. (P. 216.)

179. The on-site emergency response plan for Diablo Canyon, Units 1 and 2, meets the requirements of emergency planning standards of Section 50.47(b) and Appendix E of 10 C.F.R. Part 50. (P. 216.)

180. In accordance with the Commission regulations and practices, only the systems and components which perform a critical safety function set forth in Section III.C of

Appendix A of 10 C.F.R. Part 100 need be classified as "safety-related." (P. 216.)

181. The pressurizer heaters at Diablo Canyon do not perform any other critical safety function stated in section III.C of Appendix A of 10 C.F.R. Part 100 and need not, therefore, be classified as safety-related. (P. 216.)

182. The block valves at Diablo Canyon do not perform any other critical safety function listed in Section III.C of Appendix A of 10 C.F.R. Part 100 and need not, therefore, be classified as safety-related. (P. 216.)

183. The PORV's perform only one safety function, that of low-temperature overpressurization. (P. 217.)

184. Contentions 10 and 12 fail to raise an issue requiring a change in the classification of the pressurizer heaters, block valves, or PORV's. (P. 217.)

185. The activities authorized by the license can be conducted without endangering the health and safety of the public, insofar as the issues discussed herein are concerned. (P. 217.)

186. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public. (P. 217.)

J. Miscellaneous Exceptions

In addition to the foregoing, Joint Intervenors hereby take exception to the Board's failure to rule in the following respects:

187. The Board failed to admit any evidence regarding the effect on emergency response planning of a major earthquake preceding, occurring simultaneously with, or occurring proximate in time to a radiological emergency at Diablo Canyon.

188. The Board failed to grant Joint Intervenors' motion for a view of the northern evacuation route during adverse weather conditions in January 1982.

189. The Board failed to require completion of all relevant applicant, state, and county emergency response plans prior to a decision on PGandE's full power license applications.

190. The Board failed to require completion of standard operating procedures for all relevant county and state agencies, including California Polytechnic University at San Luis Obispo and California Men's Colony.

191. The Board failed to require an adequate level of public education before authorizing full power operation.

192. The Board failed to require a FEMA finding regarding the California state plan prior to ruling on PGandE's full power license application.

193. The Board failed to allocate correctly the burden of proof. It failed to properly credit the testimony of witnesses on behalf of, and the concerns raised by, Joint Intervenors.

194. The Board failed to rule that the consideration at this time of the issue of compliance with the Commission's emergency response planning regulations is premature.

195. The Board failed to postpone consideration of the issue of compliance with the Commission's emergency planning regulations until assurance of corrected actions required by FEMA had been demonstrated.

196. The Board failed to require that the applicant produce witnesses from the State Emergency Response organization to testify regarding the adequacy of state preparedness.

197. The Board failed to require completion of all letters of agreement and standard operating procedures prior to consideration of the adequacy of relevant applicant, state, and county emergency plans under the Commission's emergency preparedness regulations.

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198. The Board failed to require PgardE to comply with the mandatory showing under 10 C.F.R. §50.47(c)(1) with respect to each of the standards set forth at 10 C.F.R. §50.47(b).

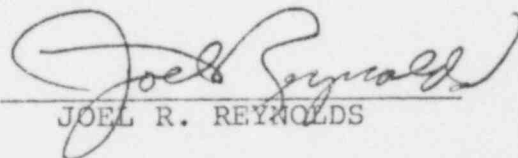
DATED: September 16, 1982

Respectfully submitted,

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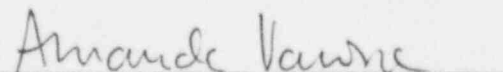
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