

100-140124

October 21, 1982SECY-82-429

ADJUDICATORY ISSUE

(Commission Meeting)

FOR: The Commissioners

FROM: Albert P. Kenneke, Assistant Director for Technical Review
Office of Policy Evaluation

SUBJECT: ATOMIC SAFETY AND LICENSING BOARD AUGUST 31, 1982 DECISION ON
DIABLO CANYON UNITS 1 AND 2

PURPOSE: To provide OPE's immediate effectiveness analysis of the
Licensing Board's initial decision.

DISCUSSION:

The Atomic Safety and Licensing Board assigned to the operating license proceeding for the Diablo Canyon Nuclear Power Plant, Units 1 and 2, issued an Initial Decision (ID) on August 31, 1982. Previous partial initial decisions were issued on June 12, 1978, September 27, 1979 and July 17, 1981. The present decision deals with emergency planning, pressurizer heaters, and power-operated relief and block valves, the remaining issues before the Licensing Board relating to full-power operation. The Board concluded that the Director of Nuclear Reactor Regulation is authorized to issue a full-power operating license to Diablo Canyon subject to certain conditions on emergency planning issues and the following caveat: "It does not, nor is it intended to impinge in any way on the status of the Commission's suspension of the Diablo Canyon Plant's low-power license or on the independent design verification program ordered by the Commission."

OPE provides in this memorandum its analysis as to whether the Commission should make the Board's decision immediately effective. The enclosure contains a summary of the Board's decision on each of the hearing issues. OGC has no legal objections to the Commission considering the facts of this memorandum in reviewing the Board's decision.

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Information in this record was deleted
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We believe that

Based upon our review of the record, we do not perceive

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ENCLOSURE:

Summary of August 31, 1982 Board Decision for Diablo Canyon Units 1 and 2

This paper is tentatively scheduled for discussion at a Closed Meeting during the Week of November 8, 1982. Please refer to the appropriate Weekly Commission Schedule, when published, for a specific date and time.

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Enclosure

SUMMARY OF AUGUST 31, 1982 BOARD DECISION
FOR DIABLO CANYON, UNITS 1 AND 2

Introduction

On August 31, 1982, the Licensing Board issued its Initial Decision (ID) on the remaining issues in the case relating to full power operation. The Licensing Board authorized the Director of Nuclear Reactor Regulation to issue full power operating licenses to the Diablo Canyon Nuclear Plant, Units 1 and 2, after certain conditions, discussed below in the summary of Contention 1, are met. The ID also contained the following caveat: "It does not, nor is it intended to impinge in any way on the status of the Commission's suspension of the Diablo Canyon Plant's low-power license (CLI--81-30; 14 NRC 950 (1981)) or on the independent design verification program ordered by the Commission (id., at 955-958)."

The parties to this proceeding were the applicant, Pacific Gas and Electric Company, the staff, Governor Brown representing the State of California, and the Joint Intervenors consisting of the San Luis Obispo Mothers for Peace; Scenic Shoreline Preservation Conference, Inc.; Ecology Action Club; Sandra Silver; Gordon Silver; Elizabeth Apfelberg; and John F. Forster. All parties were represented by counsel.

A summary of each contention addressed in the hearing and the Board's findings are discussed below. This summary follows the order used in the Board's presentation.

EMERGENCY PLANNING ISSUES

Emergency Planning (Contention 1)

Contention 1 was admitted by the Board in its Order of August 4, 1981. This contention stated that: "PG&E and the combined onsite, state, and local emergency response plans and preparedness do not comply with 10 CFR 50.33(g), 50.47 and revised Appendix E to Part 50." The Board concluded, on the basis

Release

of all the testimony and exhibits in the record, that the applicant's and the combined on-site, state and local emergency response plans and preparedness comply with NRC requirements.

The Joint Intervenors contended that the emergency plan was not acceptably well-developed. The Board considered the relevant portions of the record in the light of the requirements set forth in Appendix E of 10 CFR Part 50 and the standards contained in Section 50.47 thereof, and found that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. However, the Board stipulated that the following conditions be met before the full power license is issued:

- (a) The Director of Nuclear Reactor Regulation shall verify that the 12 deficiencies in the San Luis Obispo County emergency plan noted by FEMA have been corrected. 1/
- (b) The Director of Nuclear Reactor Regulation shall obtain a written acquiescence by the appropriate State jurisdiction binding them to participate in those Standard Operating Procedures required to be followed by Federal Regulations.
- (c) The Director of Nuclear Reactor Regulation must secure FEMA findings on the adequacy of the State Emergency Response Plan; and
- (d) The Director of Nuclear Reactor Regulation must verify that tone alerts or equivalent warning devices are operational in schools, hospitals and other institutions.

1/ An itemized list of the 12 deficiencies as noted by FEMA is provided in the Attachment.

The Board also recommended the following "Suggestions for Further Action":

1. That County letters of agreement be obtained.
2. That the Staff assure itself of the reliability of radio communications which depend on the San Luis Obispo County microwave system.
3. That the Staff investigate the significance and degree of compliance with the requirements contained in footnote 1 of Part L of NUREG-0654.
4. That the Staff investigate whether the State has conducted an appropriate assessment of additional hospitals as required by criterion L(3) of NUREG-0654.
5. That the Staff assure, in consultation with FEMA, that the State plan contains a substantive response to the implementing criteria of Standard b(13) as regards radiological criteria for reentry of contaminated areas.
6. That the problem of potential role conflict in an emergency be addressed in instructions to emergency workers.

Planning Standard b(1): Assignment of Responsibility - Joint Intervenors asserted that: There is no evidence of emergency planning in Santa Barbara, Monterey or Ventura Counties; State and local plans contain no letters of agreement; standard operating procedures are not complete; Santa Barbara County Plan is not in compliance with applicable regulations; none of the affected local jurisdictions have signed off or approved the San Luis Obispo County Plan; and emergency workers might be unavailable because of role conflicts.

The Board found that California had established its emergency planning zones (EPZs) around Diablo Canyon in a manner which differs substantially from the federal zones defined in 10 CFR Section 50.47 c(2). There are a total of five emergency planning zones considered in this case; the California basic EPZ (BEPZ), the extended EPZ, the California ingestion pathway EPZ, the federal plume exposure EPZ, and the federal ingestion pathway EPZ. The Board did not inquire into the technical bases for the California zones since they are larger than the federal zones and encompass them. The Board concluded that the State acted within its responsibility when it established its emergency planning zones.

The Board stated that it agreed with staff and applicant arguments that the requirements which the County plan must meet are the federal requirements stated in 10 CFR Section 50.47 for a 10-mile plume EPZ and a 50-mile ingestion EPZ. Nonetheless, the Board found that it is the State-defined BEPZ which is to be implemented by the State, County and applicant at Diablo Canyon. The Board concluded:

Where, as here, the State has chosen EPZ's which are greatly different from those defined in Federal regulations, we find it appropriate to regard the Federal zones as minimum requirements for planning. In this case compliance with the Federal requirements, while necessary, does not necessarily assure integration of licensee, State and local planning as stated in NUREG-0654.

Hence, the Board found it appropriate to inquire into the status of planning beyond the federally-prescribed EPZ's to assure itself that the incomplete procedures would be integrated into the overall County plan in a timely manner.

With respect to planning in Santa Barbara, Ventura and Monterey counties, the Board found that the northern boundaries of Santa Barbara County lie some 18 miles to the southeast of the Diablo Canyon plant outside of the 10-mile EPZ.

Notwithstanding its distance from the plant, the County has contracted to have an emergency plan prepared. Thus, the Board found reasonable assurance that an emergency plan for Santa Barbara County would be integrated into the overall emergency response capability contemplated by the State even though not required by 10 CFR Section 50.47. The Board stated that Monterey County falls within the limits of the 50-mile federal ingestion pathway zone to the north of Diablo Canyon, while portions of Ventura County fall within the state-defined ingestion pathway zone to the south. The Board concluded that no county-level emergency planning in these two counties is required.

With respect to the State plan, the Board found that FEMA's interim findings, submitted November 2, 1981, addressed the County and not the State plan because of the specific local-state relationship in California. In this relationship, it is the County which has the basic responsibility for protection of life and property. The State has specific emergency responsibilities for the ingestion pathway EPZ and for establishing criteria for reentry and recovery of contaminated zones after an emergency. Although FEMA has not issued its findings on the adequacy of the State plan, it expected plan completion and commencement of review in mid-1982. The Board concluded 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.

With respect to the emergency responsibilities of supporting organizations, the Board found that offsite organizations which will have a role in emergency response have been identified and written agreements between the applicant and State, local, private and federal organizations have been developed. The Board also found that the "record shows clearly that the County plans to obtain the letters and no problems in doing so were identified by any party. These letters should be obtained prior to full-power operation."

The Board found that the State has completed approximately 85 to 90 percent of its standard operating procedures (SOPs), and expected that the remainder will be completed along with the basic plan by July 1982. FEMA will review the plan and prepare findings at that time. The Board stated that there are to be 31 SOPs incorporated into the San Luis Obispo Emergency Plan. Of these, 21 are complete. The completed SOPs apply to cities, fire districts and school districts within the federally-defined 10-mile plume exposure pathway zone, while the incomplete plans apply to organizations which are outside the federal zone but within the state BEPZ. As noted before, San Luis Obispo County is planning to observe the state-defined BEPZ in its completed emergency plans. The Board found that the evidence shows that the County "should experience no insurmountable difficulties in completing the remaining SOPs."

Finally, Joint Intervenors alleged that emergency workers necessary to successful implementation of the emergency plan might not be available because of the possibility of role conflicts and requested that a scientific sociological survey of emergency workers be undertaken to assess such role conflicts. The focus of concern in this issue was the "volunteers" or general workers, such as gas station attendants, bus drivers, and others who might have less critical but useful duties to perform during an emergency. The Board acknowledged that some general workers might not report for duty in a radiological emergency; however, it found sufficient mitigating circumstances to conclude that defections would not be of such magnitude as to jeopardize the successful implementation of the plan.

In conclusion, the Board determined that those aspects of State and local emergency plans which have been found to be incomplete should be completed prior to the granting of an operating license. These include: FEMA findings on the adequacy of the State plan as it applies to Diablo Canyon, and authentication of SOPs which are required by federal regulations. The Board

also determined that the staff should assure itself, based on FEMA findings on the adequacy of the State plan, that planning for Santa Barbara County has been integrated into the overall state-local emergency response capability. The Board found that San Luis Obispo County letters of agreement with supporting organizations should be completed. The Board also found that the problem of role conflict should be addressed in instructions to emergency workers.

Planning Standard b(2): Onsite Emergency Organization - Joint Intervenor questioned the ability to evaluate staffing requirements as specified in Table B-1 of NUREG-0654, "Minimum Staffing Requirements for NRC Licensees for Nuclear Power Plant Emergencies," particularly with respect to staff augmentation on evenings or weekends. The guidance given in Table B-1 of NUREG-0654 sets goals for the time in which licensees should be able to augment their regular shift staff in an emergency. The Board found that all but one of the goals were met. Studies of staff travel times by the applicant show that during evenings and weekends the 30-minute augmentation goal for 11 additional persons cannot be fully met; initial augmentation will take place over a period of from 20 to 45 minutes and possibly extending up to one hour. The Board concluded that the deviation from guidance was not excessive considering the remote location of the site and the overall ability of the applicant to respond to an emergency and to augment its shift staff.

Joint Intervenor also raised the possibility that plant operators might evacuate themselves and their families during a radiological emergency rather than report for emergency duty. The Board concluded that role conflict, even if it exists for a few plant operators, is not of sufficient magnitude to cause the applicant's staffing plans under this standard to be incapable of implementation.

Planning Standard b(3): Emergency Response Support and Resources - Joint Intervenor's objected that: the State and County plans contain no letters of agreement and support resources have not been identified, the State plan contains insufficient detail as to the extent of federal assistance or times of arrival, counties other than San Luis Obispo County have not begun the planning process, several SOPs are incomplete, and emergency workers outside the danger zone might not move into that zone if asked to do so. Based on the record, the FEMA findings, the lack of contradictory evidence, and in light of the fact that it had addressed questions related to letters of agreement, emergency preparedness in other counties, standard operating procedures, and responses of emergency workers supra, the Board concluded that the plans for meeting this standard comply with NRC requirements.

Planning Standard b(4): Emergency Classification System - Joint Intervenor's alleged that the existing classification system failed to accomplish prompt public notification during the August 19, 1981 emergency planning exercise, that the classification system should require sounding of sirens preferably at the alert level but as a minimum at the site area emergency level, and that applicant's emergency classification system is not in total compliance with NUREG-0654. The Board found that, during the emergency exercise of August 19, 1981, an order to simulate sounding of the emergency warning sirens was not given within 15 minutes after the onset of a general emergency. The staff and the applicant acknowledged that this was a deficiency uncovered by the exercise and that it should be remedied. The Board did not consider Joint Intervenor's assertions regarding the early warning sirens as being within the scope of this planning standard and addressed this matter in its discussion of Planning Standard b(5) below. The Board also found that the deficiencies in the emergency classification system were remedied in the applicant's emergency plan. Thus, there was no remaining controversy on this matter. Based on the evidence, the favorable

FEMA findings on this standard, and the lack of contradictory evidence, the Board concluded that the plans met the relevant requirements.

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

Intervenors alleged that the siren system was faulty in a number of ways. For example: The system may be inadequate to notify persons inside of large structures, such as schools and hospitals; the sirens are located only in the BEPZ, although the San Luis Obispo County Plan provides for the possibility of evacuation of the extended EPZ; and mandatory sounding of sirens should take place at the alert stage or as a minimum at the site area emergency stage in order to assure prompt public notification. Additionally, the overall warning system may not be adequate for notification of 100 percent of the population within the required time limit.

The Board noted that the applicant, the County and the State have developed plans for the methods and procedures they will use for disseminating information in the event of an emergency at Diablo Canyon. An area-wide siren system, designated the early warning system (EWS), has been installed within the state BEPZ to alert members of the general public to tune their radios to the emergency broadcast system so that they might receive emergency instructions. In addition to the siren system, supplementary means of warning have been developed. These include warning of populations in parks and on beaches by mobile vehicles, equipped with public address units. Other populations, such as those that are isolated or otherwise out of siren range, will be notified by automobile, by off-road vehicles carrying public address systems, or helicopters as required. Ships at sea will be notified by marine radio and directly by the U. S. Coast Guard. Schools, hospitals, convalescent hospitals and other institutions will be notified by instructions from the County by way of a tone alert radio system; persons not likely to have such a system, such as the deaf or homebound, will be warned by direct patrol car visits, home calls or teletype service as

appropriate. However, the Board found that all of these alerting devices had not yet been installed at the time of the hearing and required that tone-alert or equivalent warning devices be operational in schools, hospitals and detention facilities and other large structures prior to full-power operation.

The Board found no justification for extending the early warning siren system into the State-extended BEPZ. With respect to sounding the sirens at lesser levels of emergency, the Board found 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 was valid and should not be disturbed.

Finally, the Board found Joint Intervenors "in error" in their assertion that 100% notification is required. As noted, the plan calls for not only a siren system but for numerous special arrangements for notification of populations within the entire EPZ who may not receive the initial notification by means of the siren. The Board found that "these mechanisms were sufficient to give reasonable assurance that essentially 100 percent of the population within the plume exposure EPZ could be notified of an emergency although 100 percent warning cannot be guaranteed."

FEMA's findings on emergency planning identified several areas of deficiency regarding this planning standard b(5). Corrective actions were needed to provide technical specifications for design and maintenance of the EWS; to establish radio and phone links among the EOC, the emergency broadcast stations and the County on giving emergency instructions to the public; to complete and test operability of the EWS/EBS; and to provide pagers to key County personnel. The Board concluded that the offsite plans for notification of the public were developed and implementation was sufficiently complete to provide reasonable assurance that essentially complete and timely

notification of the public would be achieved. The Board stipulated that deficiencies in implementation noted by FEMA must be corrected and verified by the staff and FEMA prior to full-power operation.

Planning Standard b(6): Emergency Communications - Governor Brown and Joint Intervenors argued that the San Luis Obispo County communications network was inadequate for implementation of the emergency response plan, particularly with respect to radio communication. The Board found that offsite communications in the County will rely on commercial telephone service, dedicated telephone service, radio-activated pagers, and radio communication. The San Luis Obispo County radio communications network is complicated by mountainous terrain in the area which inhibits radio communication. In order for radio communication to reach the entire County, several mountaintop radio transmitters are used to broadcast the same message at one time. The message to be broadcast must be sent to the transmitters from the Sheriff's Department by way of a microwave transmitter system. The system would be vulnerable to failure if the Sheriff's microwave system failed or if one of the mountain repeater stations were to fail. The history of the microwave system reflects a number of design and maintenance problems. Governor Brown and the Joint Intervenors argue that these problems make the system inadequate in the event of an emergency.

The Board was convinced that the communication system contains a number of design and maintenance difficulties which should be corrected, and accepted the statement of actions needed to upgrade the system. Nevertheless, the Board found that "disaster control activity of the County does not depend with equal criticality on all of the components of the local government communications system" and concluded that the "critical requirements of the communications system for offsite communications in San Luis Obispo County are or will be met." At the same time, the Board suggested that the staff

assure itself of the continuing reliability of emergency communication systems which are dependent on the County microwave system.

Planning Standard b(7): Public Education and Information - Joint Intervenor and Governor Brown faulted the planning under this standard in three ways. First, they asserted that San Luis Obispo County has not implemented a public information program. This assertion is based on the undisputed fact that the County has not yet published its information booklet or pamphlet. Second, they asserted that the public knowledge of evacuation routes and expected responses in the event of an emergency is at the present time very low. Third, they asserted that the public information program is deficient in its design because it does not take account of certain specific local information concerning attitudes and perceptions of the County residents. Such information could be obtained through a sociological survey of the local population and the resulting information could be used to sharpen the development of the County's public education program.

The Board found that the County plans to publish an information booklet containing emergency information but had not done so at the time of the hearing. It also noted that the current public knowledge of emergency response in the County is low. The Board concluded that the early publication of this booklet is important to the overall information needs of the public regarding emergency planning in San Luis Obispo County and that its issuance should not be delayed. It required that a public information booklet be published at the earliest reasonable date and that it be disseminated to the public well in advance of full-power operation at Diablo Canyon.

The Board heard testimony on the relative advantages and disadvantages of a sociological survey from social and behavioral scientists who served as witnesses for the Joint Intervenor and the applicant. The Board was not

convinced that such a survey would offer useful improvement in the development of a better plan for public information. The Board found that a program that makes the public aware of the information on emergency planning and evacuation will be sufficient, when implemented, to provide reasonable assurance that the public can be notified effectively in the event of a radiological emergency.

Planning Standard b(8): Emergency Facilities and Equipment - Joint Intervenor argued that, although an EOF has been established, it is inadequate because it is housed in a trailer on an interim basis until completion of the permanent facility in about mid-1983. They claim that the temporary EOF could not be relied upon during "adverse environmental conditions." The Board found these conditions were "unspecified and vague and unsupported by evidence." The Joint Intervenor also asserted that the Operational Support Center (OSC) is in violation of NUREG-0654 requirements that specific equipment, such as respiratory equipment, protective clothing, portable lighting, monitoring equipment, cameras, and communications equipment, be stored there. The Board found that the plan specifies that on-site personnel would be outfitted with protective equipment elsewhere in the plant, and concluded that the equipment stored in the OSC was reasonable for the purpose intended.

The FEMA review of this standard resulted in its recommendation for installation of additional communications equipment and a backup power source for the Emergency Operations Center(EOC). The Board noted that agreements with the applicant and County have been reached and that FEMA will verify that corrective actions have been taken when they are complete. The Board concluded that correction of the deficiencies noted by FEMA should be verified as complete prior to plant operation.

Planning Standard b(9): Accident Assessment - Joint Intervenors asserted that the County personnel who perform the hand calculations in the Unified Dose Assessment Center (UDAC) receive only annual drills and do not perform these calculations in the course of their normal employment. The Board found that "an expert should be able to perform the required computations with no difficulty given the guidance available," and concluded that annual drills on the required computations are adequate to enable the UDAC Staff to make the computations if needed. Joint Intervenors also argued that the plant vent monitor readings used to estimate radioactive release in the event of an emergency have a band of error which has not been estimated. The Board found that the errors inherent in the instrumentation for vent monitoring are within regulatory guidance and that "there is, therefore, no endangerment to public health and safety."

Joint Intervenors asserted that there are unquantified errors in the deposition velocity, plume height and dispersion prediction, parameters used by the meteorological dispersion model, or in the results calculated from the model. The Board stated that the meteorological dispersion model is used for tracking the plume and giving guidance to field teams, but not as a principal means of dose assessment. "In view of the conservatism built into the meteorological model, its intended use, and the planned means for dose assessment," the Board concluded that the uncertainties inherent in the model do not create any public health and safety concerns. Joint Intervenors also asserted that the applicant had failed to demonstrate compliance with applicable guidance contained in Regulatory Guide 1.97, Revision 2, that adequate accident monitoring instrumentation equipment to support the emergency response is maintained and in use. The Board found that the applicant had made a written commitment to the staff to correct the items needed for compliance with Regulatory Guide 1.97 by June 1, 1983.

Governor Brown asserted that the emergency operating procedures for the operators at Diablo Canyon were inadequate because they do not contain notations as to the capability of instruments which might be relied on in the event of an emergency. The Board found that the applicant had recognized this problem and assured the Board that its operators were aware which instruments mentioned in its emergency operating procedures might not be available due to lack of environmental qualification.

Planning Standard b(10): Protective Actions - The principal challenge to this planning standard came from Joint Intervenor's technical witnesses who disputed the accuracy of evacuation time estimates that had been determined by two different contractors hired by the applicant. The basis for the challenge was that the contractors' studies had not utilized sufficiently conservative assumptions in deriving their estimates. The Board concluded that evacuation time estimates realistically coped with a broad range of likely conditions and degrees of traffic control that might occur during an emergency.

Planning Standard b(11): Radiological Exposure Control - FEMA's evaluation of site preparedness to control radiological exposures of emergency workers set out a single corrective action, i.e.; "Provisions must be made for the distribution of dosimeters, both self-reading and permanent-record devices, to emergency workers. This equipment should be permanently located in the county." FEMA will verify the corrective action when taken. The Board concluded that the corrective action recommended by FEMA must be completed prior to operation at full power. In all other respects the Board found that the onsite and offsite planning provided the means for controlling radiological exposures of emergency workers.

Planning Standard b(12): Medical and Public Health Support - Joint Intervenor's alleged that the number of ambulances and physicians available

for treating contaminated injured individuals was not adequate in the event of a major radiological emergency at Diablo Canyon. The Board stated that the intervenors' reasoning appeared to be based on the hypothesis that radiation contamination of otherwise uninjured individuals requires emergency transportation and prompt treatment at a hospital. The Board found that the appropriate remedy for personal contamination with radioactive material is decontamination, which does not require the emergency services of a physician and that decontamination centers have been prescribed by both the State and County in their plans. The Board also found that there was no reason to believe that there would be large numbers of physically injured contaminated individuals offsite 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.

The Board stated that its record did not address the listing of the integrated public health and medical treatment facilities existent in the County as prescribed in footnote 1 of Part L of NUREG-0654. It recommended that the staff investigate the significance and the degree of compliance by the State and local agencies in the Diablo Canyon area and that the staff assure an appropriate resolution. The Board also recommended that the staff assure that the State has conducted an appropriate assessment of other hospitals as required by Criterion L(3) of NUREG-0654, i.e., to specify the capabilities of hospitals and other emergency medical services for dealing with contaminated injured individuals.

Planning Standard b(13): Recovery and Reentry Planning and Postaccident Operation - Joint Intervenors alleged that neither the applicant nor the State have estimated or provided for possible costs of reentry and recovery in their emergency plan. The Board stated that no such estimates or provisions are required in either NRC regulations or NUREG-0654. However, the Board found that the state plan for recovery and reentry is "minimally

adequate in technical content considering the state lead responsibility" and suggested that the staff should assure, in consultation with FEMA, that the State plan contains a substantive radiological criteria for allowing reentry into an evacuated area.

Planning Standard b(14): Exercises and Drills - An integrated full-scale emergency exercise was conducted at Diablo Canyon on August 19, 1981. The Board indicated that:

Several elements important to the overall emergency response were not observed during the 1981 exercise because necessary equipment was not available at the time. Items not tested include the siren system, the monitor receivers for hospitals and schools, the emergency broadcast communications link, and the set-up of the unified dose assessment center. FEMA has indicated an intent to test and observe these elements as the equipment is installed. The Board anticipates that these elements will be tested in the 1982 exercise as well.

Joint Intervenors believed that the exercise was faulty because certain items, aside from equipment, were not tested in the exercise. For example, general public evacuation was not included. However, the Board rejected this assertion, noting that NRC regulations state that the emergency exercise is to be carried out without mandatory public participation. Joint Intervenors also believed that the emergency exercise was defective because the early warning siren system was not available and no backup means of notification was used. The Board stated that all parties agreed that testing of the emergency siren system prior to plant operation is vital. The intervenors also believed that adverse weather conditions should have been assumed. The Board concluded that some exercises should be conducted during adverse weather in the future. FEMA's evaluation findings for the August 19 exercise indicated numerous detailed suggestions for improvement of emergency plans. The Board concluded that the 1981 emergency exercise reasonably tested the applicant's and the local and state organizational capability for responding to an emergency at Diablo Canyon.

Planning Standard b(15): Radiological Emergency Response Training - Joint
Intervenors asserted that the "Corporate Emergency Response Plan" should provide more specific information on training programs involving corporate emergency personnel. The Board stated that the applicant had revised its procedures to provide the necessary information and the NRC staff reviewed it and found it adequate. The Board concluded that this adequately resolved the issue. Joint Intervenors also suggested that persons performing general emergency support roles such as auto repair, phone assistance, EBS personnel and other workers should have some form of radiological response training since they might be required to stay behind to perform their functions during an evacuation. The Board found no evidence that general support workers would or could be required to remain behind indefinitely during an evacuation, or that they would be exposed to more hazards than the general public, and dismissed the suggestion.

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

Joint Intervenors raised a number of issues including the designation by the applicant of an overall Emergency Planning Coordinator, specification of training requirements for emergency planners, and specification of the method for conducting an independent annual review of emergency plans. The Board stated that the applicant subsequently revised its corporate emergency response procedure implementing plans to remedy these deficiencies, and that staff reviewed each revision and found it adequate. The Board concluded that these issues were adequately resolved.

Joint Intervenors objected that the County Board of Supervisors for San Luis Obispo County had not committed to pay for necessary efforts for maintenance and continued development and training required by this standard. The Board found that this assertion was not contradicted in testimony. However, the applicant testified that it had made a commitment to assure that the funds

necessary to maintain preparedness are available. The Board found this an adequate resolution.

HARDWARE ISSUES

Pressurizer Heaters (Contention 10)

This contention alleges that the pressurizer heaters and associated controls should be classified as safety-grade and required to meet all applicable criteria. The staff, applicant, and Governor Brown presented testimony on this contention. Joint Intervenor did not present testimony but did cross-examine all witnesses.

In his proposed findings, Governor Brown stated that while there is no express requirement that pressurizer heaters be classified as safety-grade, substantial safety benefits would be realized by changing the classification. Joint Intervenor proposed findings concluded that the pressurizer heaters are the preferred choice for maintaining pressure and upgrading their classification would make them more reliable.

The Board found that the pressurizer heaters are not required to remain functional in the event of a safe shutdown earthquake as set forth in Section III(c) of Appendix A to 10 CFR Part 100. The Board also found that the pressurizer heaters are not needed to maintain natural circulation. The applicant connected two of the four heater banks to the emergency power supply in order to minimize actuation of the emergency core cooling system in accordance with Item II.E.3.1 of NUREG-0737.

The Board concluded that the pressurizer heaters at Diablo Canyon do not perform any of the critical safety functions stated in Section III.C of Appendix A to 10 CFR Part 100 and need not, therefore, be classified as safety-related.

Block and Power-Operated Relief Valves (Contention 12)

The contention alleges that the power-operated relief valves (PORV), associated block valves, and the instruments and controls for these valves should be classified as safety-grade and required to meet all applicable criteria. The staff, applicant, and Governor Brown presented testimony on this contention. Joint Intervenors did not present testimony but did cross-examine all witnesses.

The applicant testified that the valve bodies of the three PORVs and block valves form a part of the reactor coolant system and meet applicable safety-grade design criteria. The Board found that one safety-related function of the PORVs is to protect against low-temperature overpressurization. Two of the PORVs perform that function and meet safety-grade criteria. The applicant testified that the third PORV was installed to provide the capability for full load rejection without reactor trip. This PORV, which performs no safety-related function, is constructed to safety-grade standards with the exception of its instrumentation and controls. All three block valves are safety-grade. If a PORV failed in the open position and the associated block valve failed to isolate, then the capability of the ECCS would be sufficient to permit safe shutdown of the reactor without the core being uncovered or damaged.

Governor Brown acknowledged in his proposed findings that five of the six valves that are the subject of this contention are safety-grade. However, he went on to conclude that ... "there appears to be no sound basis for not qualifying the last PORV to safety-grade standards."

The Board concluded that the block valves at Diablo Canyon do not perform any of the critical safety functions listed in Section III.C of Appendix A to 10 CFR Part 100 and need not, therefore, be classified as safety-related. The PORVs at Diablo Canyon perform only one safety function, that of

low-temperature overpressurization. Two of the PORVs are qualified to safety-grade standards; the other PORV, which is provided to allow full load rejection without reactor trip, is qualified safety-grade in all aspects except for an independent control mechanism. As a result, Contention 12 failed to raise an issue requiring a change in the classification of the block valves or PORVs.

ATTACHMENT: Corrective Actions Recommended by FEMA

ATTACHMENT

Corrective Actions Recommended by FEMA

Standard E

1. The technical specifications for design and maintenance of the proposed warning system should be submitted for preliminary review and approval by FEMA.
2. Pagers should be provided for alerting key County response personnel.
3. A reliable communications link consisting of both a two-way radio capability and a dedicated telephone line must be established between the EOC and the two Emergency Broadcast System stations. Communications lines to both radio station KVEC and radio station KSLY are required in order to provide full 24-hour coverage. Also, an agreement between the two radio stations and San Luis Obispo County regarding dissemination of emergency instructions to the public needs to be formulated.
4. The public warning system must be completed and operational in accordance with the NRC established deadline.

Standard F

5. The County radiological monitoring team members should be supplied with radios to establish a direct communications link to the County Unified Dose Assessment Center Supervisor.

Standard G

6. The public information program required under this planning objective must be carried out to ensure that emergency response instructions are made available to both resident and transient populations.

Standard H

7. The additional telephone capability needed for operations in the EOC should be established and those lines should be installed.
8. The EOC should have a backup power source to ensure continuing operations under conditions of a commercial power failure.
9. Develop and install a system that will allow the cities involved in the plume exposure zone to be kept informed of the developing situation from the EOC.

Standard K

10. Provisions must be made for the distribution of dosimeters, both self-reading and permanent record devices, to emergency workers. This equipment should be permanently located in the County.

Standard N

11. The annual drill and training schedule for the County should be established and activities under that schedule begun.

Standard O

12. Same as Standard N.