UHS

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Thomas S. Moore
Dr. John H. Buck
Dr. W. Reed Johnson

September 6, 1984
(ALAB-781)

In the Matter of	)	
PACIFIC GAS AND ELECTRIC COMPANY	)	Docket Nos. 50-275 OL 50-323 OL
(Diablo Canyon Nuclear Power Plant, Units 1 and 2)	)	

Joel R. Reynolds and John R. Phillips, Los Angeles, California, and David S. Fleischaker, Oklahoma City, Oklahoma, for the San Luis Obispo Mothers for Peace, et al., joint intervenors.

Byron S. Georgiou, Sacramento, California, and Herbert H. Brown and Lawrence Coe Lanpher, Washington, D.C., for Edmund G. Brown, Jr., (former) Governor of the State of California.*

Malcolm H. Furbush, Robert Ohlbach, Philip A. Crane, Jr., and Richard F. Locke, San Francisco, California, and Arthur C. Gehr and Bruce Norton, Phoenix, Arizona, for Pacific Gas and Electric Company, applicant.

Lawrence J. Chandler, Donald F. Hassell and Sherwin E. Turk for the Nuclear Regulatory Commission staff.

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* Since the briefing of the issues decided in this opinion, George Deukmejian has assumed the office of Governor. Pursuant to Governor Deukmejian's request, he has been substituted for Governor Brown as the representative of the State of California. The Attorney General of the State of California is now representing Governor Deukmejian.

DECISION

All parties appealed the Licensing Board's August 31, 1982 initial decision, LBP-82-70, 16 NRC 756 (1982), authorizing a full power license for Pacific Gas and Electric Company's Diablo Canyon Nuclear Power Plant, Units 1 and 2. In this decision, we address the appeals of the joint intervenors and the Governor of California from that decision. Previously, in ALAB-776, 19 NRC ___ (June 29, 1984), we decided the appeals of the applicant and the NRC staff. The present appeals challenge the adequacy of emergency planning at Diablo Canyon. In addition, the joint intervenors dispute the sufficiency of the NRC's environmental review of the Diablo Canyon project.[1]

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[1] The adjudicatory history of the Diablo Canyon project extends over a period exceeding a decade and can be traced through numerous agency decisions. See, e.g., ALAB-334, 3 NRC 809 (1976) (authorization of Part 70 license to store new fuel); LBP-78-19, 7 NRC 989 (1978) (partial initial decision on environmental and some safety issues); LBP-79-26, 10 NRC 453 (1979) (partial initial decision on non-TMI issues, e.g., risk from aircraft, seismic and security); ALAB-598, 11 NRC 876 (1980) (reopening of record for seismic issues); ALAB-644, 13 NRC 903 (1981) (seismic findings on reopened record); LBP-81-21, 14 NRC 107 (1981) (partial initial decision authorizing fuel loading and low power testing); ALAB-653, 14 NRC 629 (1981) (security findings based on reopened record; expurgated findings attached to CLI-82-19, 16 NRC 53 (1982)); CLI-81-22, 14 NRC 598 (1981) (immediate effectiveness review); CLI-81-30, 14 NRC 950 (1981) (suspension of low power license); ALAB-728, 17 NRC 777 (1983) (low power authorization affirmed);

(Footnote Continued)

I.

In its initial decision, the Licensing Board made detailed factual findings on the numerous facets of the onsite and offsite emergency response planning for Diablo Canyon.[2] The Board then concluded that emergency planning for the facility complies with the Commission's emergency response regulations and provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.[3] On appeal, the joint

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(Footnote Continued)
CLI-83-27, 18 NRC 1146 (1983) (fuel loading and precriticality testing authorized); CLI-84-2, 19 NRC 3 (1984) (hot system testing authorized); ALAB-763, 19 NRC 571 (1984) (findings on adequacy of unit 1 design following reopening of record); CLI-84-5, 19 NRC 953 (1984) (lifting suspension of low power license); CLI-84-13, 20 NRC ___ (August 10, 1984) (immediate effectiveness review).

[2] LBP-82-70, supra, 16 NRC at 763-792, 799-849.

What we stated in ALAB-776, supra, 19 NRC at ___ n.4, concerning the format of the Licensing Board's initial decision warrants repeating:

> The Board's initial decision consists of essentially two parts. The first is a lengthy "opinion" discussing the issues, the evidence, and the Board's resolution of the issues. LBP-82-70, supra, 16 NRC at 759-98. The second is an equally lengthy listing of "findings of fact" and "conclusions of law" largely repetitious of what the Board already stated in the first part of its decision. Id. at 798-855. Besides being exceedingly time consuming for both the writers and the readers, this format holds the potential for creating . . . inconsistencies within the four corners of the decision.

[3] LBP-82-70, supra, 16 NRC at 761, 797-98.

intervenors and the Governor challenge these conclusions on several grounds.[4]

A. They assert that the Board erred in making these determinations without first considering the effects upon emergency planning of a major earthquake which causes, or occurs during, a radiological emergency at the facility.[5] In a prehearing conference order the Licensing Board rejected the attempt to inject this issue into the proceeding,[6] relying upon the Commission's then recent decision in Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-81-33, 14

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[4] Pursuant to 10 CFR 2.762 (1982), the joint intervenors filed 198 exceptions to the Licensing Board's initial decision and other related rulings while the Governor filed 83 exceptions. See Joint Intervenors' Exceptions to the Licensing Board's August 31, 1982 Initial Decision (September 16, 1982); Exceptions of Governor [of California] To Licensing Board Initial Decision of August 31, 1982 (September 16, 1982). Only those issues briefed by the joint intervenors or the Governor are treated in this opinion. The remaining exceptions are deemed waived for failure to brief them on appeal. See Public Service Electric and Gas Co. (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 NRC 43, 49 (1981); Public Service Co. of Indiana (Marble Hill Station, Units 1 and 2), ALAB-461, 7 NRC 313, 315 (1978).

[5] See Joint Intervenors' Brief In Support Of Exceptions (November 8, 1982) [hereinafter Joint Intervenors' Brief] at 21-30; Brief of Governor [of California] In Support Of Exceptions (November 8, 1982) [hereinafter Brief of Governor] at 2-8.

[6] See Memorandum and Order of December 23, 1981 (unpublished) at 1-2.

NRC 1091 (1981). That decision held the agency's regulations do not require specific consideration of the impacts of earthquakes on emergency planning.

The joint intervenors and the Governor raised this same issue in their earlier appeals[7] from the Licensing Board's partial initial decision authorizing fuel loading and low power testing at Diablo Canyon.[8] In ALAB-728, we resolved this issue against them, holding that the Commission's San Onofre decision "could not be more emphatic or clear: the possible complicating effects of an earthquake on emergency planning should not be considered in individual licensing proceedings."[9] Normally, our resolution of this issue in ALAB-728 would be the law of the case and preclude any further consideration of the same issue on appeals from the Licensing Board's initial decision. In this instance, however, the Commission has, in effect, directed certification of the issue on its own motion.[10] After

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[7] See Joint Intervenors' Brief In Support Of Exceptions (September 2, 1981) at 53-55; Brief of Governor [of California] On Appeal Of The Licensing Board Partial Initial Decision of July 17, 1981 (September 2, 1981) at 35-40.

[8] See LBP-81-21, 14 NRC 107 (1981).

[9] 17 NRC 777, 793 (1983).

[10] See 10 CFR 2.718(i).

declining to review ALAB-728,[11] the Commission, on April 3, 1984, announced that it would decide whether the effects of earthquakes on emergency planning at Diablo Canyon should be considered.[12] In a decision issued August 10, the Commission "determined that the information before it does not warrant departure from the decision in San Onofre that the NRC's regulations 'do not require consideration of the impacts on emergency planning of earthquakes which cause or occur during an accidental release.'"[13] In these circumstances, the issue appealed by the joint intervenors and the Governor is no longer before us.

B. The joint intervenors also argue that the Licensing Board erred in authorizing a license for Diablo Canyon without first addressing the consequences of a Class 9 accident at the facility.[14] Like their argument concerning the complicating effects of earthquakes on emergency planning, the joint intervenors raised this issue on their appeal from the Licensing Board's partial initial

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[11] See CLI-83-32, 18 NRC 1309 (1983).

[12] See CLI-84-4, 19 NRC ___ (1984).

[13] CLI-84-12, 20 NRC ___, ___ (slip opinion at 1) (1984).

[14] See Joint Intervenors' Brief at 47-53.

decision authorizing fuel loading and low power testing. Once again this issue was resolved against them in ALAB-728.

In a Memorandum and Order dated June 19, 1981, the Licensing Board denied the joint intervenors' motion to reopen the record to consider the environmental consequences of a Class 9 accident at Diablo Canyon.[15] On appeal of the decision authorizing low power testing, the joint intervenors argued that the Board's denial of their earlier motion was error. They asserted that the Commission's June 13, 1980 policy statement entitled "Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969," 45 Fed. Reg. 40,101, mandated that the agency consider Class 9 accident sequences for Diablo Canyon in its Environmental Impact Statement (EIS).[16] In ALAB-728, we fully rehearsed the evolution of the agency's treatment of so-called Class 9 accidents from the time such postulated events received no consideration through the issuance of the Commission's 1980 policy statement, which announced that future agency environmental impact statements should include their consideration. Contrary to the joint intervenors' argument

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[15] LBP-81-17, 13 NRC 1122 (1981).

[16] See Joint Intervenors' Brief In Support Of Exceptions (September 2, 1981) at 56-57. See also ALAB-728, supra, 17 NRC at 795.

that pending cases required consideration of Class 9 accidents, we held that the policy statement, by its terms, was limited to proceedings where the agency had not yet issued a final EIS.[17] In the case of Diablo Canyon where the final EIS had already been issued, supplemented, litigated and found adequate, we held that the "change in policy announced in 1980 was not intended by the Commission to apply."[18] We went on to note, however, that the Commission's policy statement did not completely foreclose consideration of Class 9 accidents in proceedings like Diablo Canyon if certain "special circumstances" were shown. But we found that

> in their brief, joint intervenors make no argument that "special circumstances" exist at Diablo Canyon so as to require expanding the already completed EIS for the facility. Therefore, we need not consider that question. We note, however, that in denying the joint intervenors' motion to reopen the record, the Licensing Board concluded that no such special circumstances existed with respect to Diablo Canyon.[19]

The joint intervenors now seek to argue on this appeal that the Licensing Board's conclusion that no special circumstances exist at Diablo Canyon was erroneous. Their argument comes too late. Nothing barred the joint

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[17] ALAB-728, supra, 17 NRC at 795-96.

[18] Id. at 796.

[19] Id.

intervenors from raising this additional argument on their previous appeal. Indeed, they were required to put forth all their arguments on this issue at that time. To allow a second appeal of the same issue would lead to endless litigation.

In any event, the joint intervenors' argument that special circumstances exist at Diablo Canyon is without merit. As noted in ALAB-728, the Commission's policy statement set forth the "unique circumstances" in cases that had in the past warranted consideration of Class 9 accidents.[20] The Commission cited the novel design of the proposed Clinch River Breeder Reactor, the high population density surrounding the proposed Perryman site, and the potentially serious radiological exposures associated with water pathways from Offshore Power Systems' floating nuclear power plants. It then indicated that final environmental statements should be expanded to include Class 9 accident analyses only in "similar special circumstances."[21] The joint intervenors do not contend that Diablo Canyon presents circumstances similar to those listed in the Commission's policy statement. Rather, they argue there is a fourth

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[20] ALAB-728, supra, 17 NRC at 796; 45 Fed. Reg. 40,101, 40,102 (1980).

[21] 45 Fed. Reg., supra, at 40,103.

category -- proximity to a natural hazard -- that demands consideration of Class 9 accidents because Diablo Canyon is located in the vicinity of the Hosgri Fault and in a region of known seismicity.

The "natural hazard" category relied upon by joint intervenors originated with the Commission's opinion in Public Service Co. of Oklahoma (Black Fox Station, Units 1 and 2), CLI-80-8, 11 NRC 433, 434 (1980). There the Commission reversed our order requiring the staff to inform the Commission whether Class 9 accidents should be considered for that reactor.[22] Black Fox preceded the Commission's policy statement and was an evolutionary step toward the policy's development. In that decision, the Commission listed the same three categories of special cases that subsequently appeared in the policy statement. It also noted a fourth category, i.e., "proximity to man-made or natural hazards," that represented the "type of exceptional case that might warrant additional consideration."[23] Because the natural hazards category was not subsequently repeated in the policy statement, that category's continuing validity is suspect. Nor is the natural hazards category

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[22] See ALAB-573, 10 NRC 775, 790-92 (1979).

[23] CLI-80-8, supra, 11 NRC at 434 (emphasis in the original).

"similar" to the other categories in the policy statement.[24] Putting these distinctions to one side, the natural hazard category still does not advance the joint intervenors' position.

Contrary to joint intervenors' argument, the fact that Diablo Canyon is located in the vicinity of the Hosgri Fault and in a region of known seismicity does not make the Diablo Canyon situation "unique" or "exceptional" as required by the policy statement and Black Fox. Pursuant to General Design Criterion 2 (GDC 2) of 10 CFR Part 50, Appendix A, nuclear power plants are required to be designed to withstand earthquakes and certain other natural hazards. Specifically, it directs that they

> shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The design bases for these structures, systems, and components shall reflect: (1) Appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated, (2) appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena and (3) the importance of the safety functions to be performed.[25]

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[24] See Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), ALAB-705, 16 NRC 1733, 1742 n.24 (1982).

[25] 10 CFR Part 50, Appendix A, Criterion 2.

Diablo Canyon, like other licensed facilities, has been found to meet this standard.[26] In other words, the effects of the hazards listed in GDC 2 are typical of those that all commercial reactors must be designed to meet. They are not the "unique" and "exceptional" circumstances that under the Commission's precedents and policy statement require consideration of Class 9 accidents.[27] Accordingly, the Licensing Board was correct in concluding that no special circumstances exist at Diablo Canyon that require consideration of Class 9 accidents.[28]

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[26] At the time the joint intervenors moved to reopen the record for consideration of Class 9 accidents at Diablo Canyon, the Licensing Board had already conducted exhaustive hearings on the effects of seismic forces on the facility. Subsequently, the Board found the seismic design adequate. See LBP-79-26, 10 NRC 453 (1979). Thereafter, we reopened the record to hear new evidence that was not available to the Board below and, after further hearings, affirmed the Licensing Board's decision. See ALAB-644, 13 NRC 903 (1981).

[27] We note that the Director of Nuclear Reactor Regulation has also denied two petitions filed pursuant to 10 CFR 2.206 seeking to have the agency consider the effects of Class 9 accidents at Diablo Canyon. See DD-80-22, 11 NRC 919 (1980); DD-81-3, 13 NRC 349 (1981). The second petition was filed by the joint intervenors. In denying both petitions, the Director found that there were no special circumstances at Diablo Canyon warranting the consideration of Class 9 accidents.

[28] The joint intervenors also argue that the Licensing Board's failure to consider the consequences of Class 9 accidents violates the National Environmental Policy Act, 42 USC §§ 4321 et seq., and the regulations of the Council on Environmental Quality, 40 CFR 1502.9(c). The explicit

(Footnote Continued)

C. Next, the joint intervenors and the Governor argue that the Licensing Board erred in authorizing the issuance of a full power license before the Federal Emergency Management Agency (FEMA) issued "final" findings on the adequacy of the state and local offsite emergency response plans for Diablo Canyon. They argue that such "final" FEMA findings, and their right to rebut them, are mandated by the Commission's emergency response regulations, 10 CFR 50.47(a)(2).[29] This issue was decided in ALAB-776 in resolving the appeals of the applicant and the staff from the Licensing Board's initial decision. In opposing those appeals, the joint intervenors and the Governor made the identical argument and proffered the same interpretation of the Commission's regulations.[30] We held that the Commission's emergency response regulations did not require "final" FEMA findings on the adequacy of offsite emergency

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(Footnote Continued)
purpose of the Commission's June 13, 1980 policy statement, however, was to ensure compliance with NEPA. We are, therefore, bound by the policy statement. See ALAB-705, supra, 16 NRC at 1738 n.13.

[29] See Joint Intervenors' Brief at 12-20, 37-38; Brief of Governor at 12-14.

[30] See Joint Intervenors' Response To Pacific Gas And Electric Company And NRC Staff Briefs In Support Of Exception To August 31, 1982 Initial Decision (December 20, 1982) at 4-11; Brief Of Governor [of California] In Reply to PG&E And NRC Staff Briefs In Support Of Exceptions (December 20, 1982) at 1-6.

response plans, and that interim FEMA findings and the testimony of FEMA witnesses with respect to the adequacy of such plans was all that was needed to comply with the regulations. Further, with respect to the state plan and preparedness, we found that the hearing record fully supported the Licensing Board's conclusion that there was reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.[31]

D. Central to the development of offsite emergency response plans under the Commission's regulations is the concept of emergency planning zones (EPZs), i.e., those areas around a plant for which planning is needed so that timely and effective actions can be taken to protect the public in the event of a radiological emergency.[32] The Commission's regulatory scheme contemplates the establishment of two such zones: the plume exposure pathway that "shall consist of an area about 10 miles (16 km) in radius" and the ingestion pathway that "shall consist of an

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[31] ALAB-776, supra, 19 NRC at ___ (slip opinion at 13).

[32] See 10 CFR 50.47(c)(2); 10 CFR Part 50, Appendix E; "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," NUREG-0654/FEMA-REP-1, Rev. 1 (November 1980) at 10.

area about 50 miles (80 km) in radius."[33] As we stated in reviewing this regulatory scheme in Cincinnati Gas & Electric Co. (Wm. H. Zimmer Nuclear Power Station, Unit No. 1), ALAB-727, 17 NRC 760, 765 (1983),

> [t]he plume EPZ is concerned principally with the avoidance in the event of a nuclear facility accident of possible (1) whole body external exposure to gamma radiation from the plume and from deposited materials and (2) inhalation exposure from the passing radioactive plume. The duration of those exposures could vary in length from hours to days. The ingestion EPZ is established primarily for the purpose of avoiding exposures traceable to contaminated water or foods (such as milk or fresh vegetables), a potential exposure source that could vary in duration from hours to months.

The Commission's regulations then require that emergency response planning within these two zones meet the requirements set forth in 10 CFR 50.47(b).

In its emergency response planning for Diablo Canyon, the State of California established substantially larger EPZs around the plant than those specified in 10 CFR 50.47(c)(2). Although recognizing the Commission prescribed EPZs, the State established three zones that more than

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[33] 10 CFR 50.47(c)(2). The Commission's emergency response regulations further provide that "[t]he exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries." Id.

encompassed the federal zones: the California Basic EPZ (plume); the California Extended EPZ (plume); and the California Ingestion Pathway EPZ.[34] The Basic EPZ, for instance, has an average radius of about 15 miles but extends 18 miles beyond the plant to the north and 20 miles to the southeast.[35] Following the example of the State, San Luis Obispo County (the jurisdiction in which the plant is located) adopted the same state zones in its emergency reponse plan.[36]

In its initial decision, the Licensing Board noted the five EPZs (i.e., three state and two federal) applicable to Diablo Canyon and held that

> the Federal requirements are minimum standards for planning and not inflexible targets which must not be exceeded. This Board, however, has no authority to enforce State standards which exceed those required by Federal regulations. That is for the State to do.[37]

Because the county emergency plan incorporating the California Basic EPZ would be implemented in the event of a radiological emergency at Diablo Canyon, the Board inquired

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[34] See Applicant's Ex. 73, Appendix C at 7, 12, and Figs. 2, 6.

[35] Id. at Fig. 2.

[36] See Applicant's Ex. 80 at I.5(2) and Fig. I.5-6.

[37] LBP-82-70, supra, 16 NRC at 764. See also id. at 801-02.

into the status of planning in the state zones beyond the areas set forth in 10 CFR 50.47(c)(2) only to assure that all levels of emergency response would be integrated. The Board then generally found that offsite planning within the federal EPZs was adequate and met the Commission's emergency response requirements of 10 CFR 50.47(b). Additionally, it found that beyond the federal zones there was reasonable assurance that planning would be sufficient to permit appropriate integration prior to full power operation.[38]

On appeal, the joint intervenors and the Governor assert that the Licensing Board erred in failing to give effect to the state designated zones. They argue that the Board's conclusion, which largely ignores the state zones beyond the areas specified in the Commission's regulations, contravenes established principles of federal-state comity -- principles that are specifically recognized by section 274 of the Atomic Energy Act, 42 U.S.C. §2021.[39] The applicant and the staff, on the other hand, support the Licensing Board's treatment of the state zones, arguing that the Board properly declined to require compliance with the

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[38] See id. at 765, 768, 802.

[39] See Joint Intervenors' Brief at 31-36; Brief Of Governor at 8-12.

Commission's emergency planning requirements throughout the entire state designated zones.

Contrary to the argument of the joint intervenors and the Governor, the Licensing Board's focus on emergency planning within the EPZs set forth in 10 CFR 50.47(c)(2) was correct. That regulation evidences the Commission's considered expert judgment as to the necessary size of the plume exposure pathway EPZ and the ingestion pathway EPZ for light water commercial nuclear power plants.[40] Although the regulations provide that the exact size and configuration of a particular EPZ is to be determined with reference to site specific factors,[41] the wholesale enlargement of the Commission prescribed EPZs by the State cannot preclude a licensing decision based upon the requirements of the NRC regulations. As the Licensing Board concluded in considering the same type of expanded state EPZs in Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-82-39, 15 NRC 1163, 1181

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[40] See Statement of Considerations accompanying promulgation of Final Emergency Planning Regulations, 45 Fed. Reg. 55,402, 55,406 (1980); NRC Policy Statement, "Planning Basis for Emergency Responses to Nuclear Power Reactor Accidents," 44 Fed. Reg. 61,123 (1979). See also "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," NUREG-0396-EPA 520/1-78-016 (December 1978) at 15-17, I-6 to I-7, and I-20.

[41] See n.33, supra.

(1982), aff'd, ALAB-717, 17 NRC 346 (1983), the Commission's regulations "clearly allow leeway for a mile or two in either direction, based on local factors. But it . . . clearly precludes a plume EPZ radius of, say, 20 or more miles." The same Board then correctly determined that a party seeking to impose such a radical departure from the Commission's prescribed EPZs should seek an exception to the rule pursuant to 10 CFR 2.758.[42]

Before the Licensing Board neither the joint intervenors nor the Governor sought an exception or waiver (pursuant to 10 CFR 2.758) of the Commission's 10 and 50 mile emergency planning zones. Nor did they present evidence that the plume exposure pathway EPZ and the ingestion pathway EPZ established pursuant to the Commission's regulations should be altered to accommodate particular local conditions.[43] Rather, they now argue that

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[42] See LBP-82-39, supra, 15 NRC at 1181 n.14.

[43] In their briefs, both the joint intervenors and the Governor cite Governor's Exhibit 8 and suggest that it provides the most appropriate basis for determining the size of the EPZs for Diablo Canyon. See Joint Intervenors' Brief at 34; Brief of Governor at 8. This exhibit, published by the California Office of Emergency Services and entitled "Emergency Planning Zones For Serious Nuclear Power Plant Accidents" (November 1980), delineates enlarged EPZs for all nuclear power plants in the state. In the hearing below, the Licensing Board admitted this exhibit into evidence for the sole purpose of identifying the boundaries of the three state EPZs. It was specifically not admitted to provide the

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as a matter of federal-state comity the Licensing Board should have deferred to the state zones. This argument, however, simply misses the point. Although section 274 of the Atomic Energy Act provides a framework for cooperation with, and transfers of authority to, the states for the regulation of certain byproduct, source, and special nuclear materials, that section also requires the Commission to retain all authority and responsibility for the regulation of nuclear power plants and prohibits any delegation of that authority.[44] It should hardly need be stated that the Commission's emergency response requirements are an integral part of the agency's regulation of nuclear power plants, and compliance with those rules determines whether an applicant receives an operating license, not obedience to additional requirements that may have been adopted by state or local authorities. Even though offsite emergency planning depends upon state and local resources, the applicant cannot be denied an operating license, if, as in this case, planning

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basis for, or to justify, the state EPZs. See Tr. 12522-23, 12545-48. Neither the joint intervenors nor the Governor have appealed the Licensing Board's evidentiary ruling on this exhibit. Moreover, because the exhibit was offered by the Governor without any sponsoring expert witnesses, the Board's ruling was manifestly correct. See San Onofre, supra, 17 NRC at 366-68; Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 477 (1982).

[44] See 42 U.S.C. §2021(c).

within the NRC prescribed EPZs complies with the Commission's emergency response requirements. Accordingly, the Licensing Board did not err in refusing to adopt the enlarged state EPZs and, correspondingly, in refusing to require compliance with the Commission's emergency response requirements in the areas outside the federal EPZs.

E. Additionally, the joint intervenors argue that the Licensing Board abused its discretion in authorizing a full power license for Diablo Canyon even though at the time of the hearing on emergency planning several defects in the county's response plans existed.[45] Principally, they complain, with little elaboration, that the county's planning is inadequate because its public information program had not been implemented and its communications system had uncorrected deficiencies. Further, the joint intervenors, joined by the Governor, claim that the county's

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[45] The joint intervenors also claim that, at the time of the hearing, state emergency planning was inadequate because evacuation plans for special state jurisdictions within San Luis Obispo County (i.e., California Men's Colony and California Polytechnic Institute) were incomplete. See Joint Intervenors' Brief at 38. In ALAB-776, supra, 19 NRC at ___, we reviewed the evidence underlying the Licensing Board's conclusion that state planning was adequate and upheld that finding. Moreover, as found by the Licensing Board, both of the joint intervenors' examples of inadequacies in state preparedness are in areas that lie outside the federally prescribed plume exposure pathway where evacuation would be needed. See LBP-82-70, supra, 16 NRC at 766 n.8.

emergency response planning is generally deficient because sociological and psychological profiles of the population in the evacuation zone have not been conducted to gauge the public response to a radiological emergency at Diablo Canyon.[46]

1. In addressing emergency response information programs for Diablo Canyon,[47] the Licensing Board concluded that the applicant had developed an adequate program. That program included a page of appropriate information in the San Luis Obispo County telephone directory and the periodic dissemination of newsletters to the residents within the California Basic EPZ informing them about the plant, general nuclear issues, emergency planning and instructions on how residents will be notified and what they should do in the event of a radiological emergency. The Board found that the

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[46] See Joint Intervenors' Brief at 40-47; Brief of Governor at 15-17.

[47] The Commission's planning standard on public information, 10 CFR 50.47(b)(7), provides that:

> Information is [to be] made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are [to be] established in advance, and procedures for coordinated dissemination of information to the public are [to be] established.

applicant had prepared various sites for the news media in the event of a radiological emergency and had established procedures for the coordinated release of information to the general public and the media.[48] With respect to the county program, the Board indicated that the county planned to publish and distribute throughout the California Basic EPZ an information booklet containing emergency response instructions but, at the time of the hearing, the document was only in draft form. The Licensing Board, like FEMA in its review of the county plan and preparedness, found that the county publication was a necessary element of the public information program. It therefore placed a condition upon its license authorization that the county information booklet be published and distributed to the public well in advance of full power operation of Diablo Canyon.[49]

The Licensing Board also fully canvassed the question of the adequacy of the onsite and offsite communications systems necessary to respond to a radiological emergency.[50] The Board concluded that there were no serious deficiencies

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[48] See LBP-82-70, supra, 16 NRC at 777, 820-822.

[49] Id. at 778, 823.

[50] The Commission's emergency communications planning standard, 10 CFR 50.47(b)(6), provides that: "Provisions [must] exist for prompt communications among principal response organizations to emergency personnel and to the public."

with the applicant's onsite emergency communications systems but, with respect to offsite communications, it identified several defects in essential components of the county system. The Licensing Board found, however, that such defects were temporary in nature because the applicant had committed to replace or add necessary equipment to the county system thereby eliminating the cited difficulties.[51] Thus, the Board concluded "that the critical requirements of the communication system for offsite communications in San Luis Obispo County are or will be met" and the county system met the requirements of 10 CFR 50.47(b)(6).[52]

The Board's findings on the adequacy of the county's public information program and emergency communications system fully discuss each issue and thoroughly and accurately detail the record evidence. No useful purpose would be served by repeating all of those particulars here. Suffice it to say that the Board's findings are supported by the record and our examination of the evidence does not convince us that the record compels a different result -- the standard applicable to our review of the Licensing

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[51] LBP-82-70, supra, 16 NRC at 775-77, 816-20.

[52] Id. at 776.

Board's factual findings.[53] Moreover, the joint intervenors' complaints stem from the predictive nature of the Board's findings (i.e., that actions taken in the future will rectify deficiencies) and the condition placed by the Board on its authorization to ensure certain actions are taken. The gist of the joint intervenors' position is that all corrective actions must be taken before the adjudicatory hearing, not after it, with the result that all licensing details must await the hearing process.

The Commission's emergency response regulations, however, contemplate, in appropriate circumstances, predictive findings on emergency response planning so that

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[53] See Northern States Power Co. (Monticello Nuclear Generating Plant, Unit 1), ALAB-611, 12 NRC 301, 304 (1980); Niagara Mohawk Power Corp. (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 357 (1975).

We note that in the staff response to our April 10, 1984 order inquiring whether the appeals of the applicant and the staff from the Licensing Board's initial decision were moot, the staff attached an April 2, 1984 FEMA memorandum on the current status of offsite emergency planning at Diablo Canyon. The FEMA memorandum indicates that the county emergency response information booklet has been published and distributed and that a second distribution is already planned. The memorandum also states that the deficient items in the county communications system (i.e., those identified by FEMA as critical for emergency planning) have been corrected and that the reliability of the county's microwave and VHF systems has been very good during the last year. See Memorandum for Edward L. Jordan, NRC, from Richard W. Krimm, FEMA (April 2, 1984), attached to NRC Staff Response to the Appeal Board's Order of April 10, 1984 (April 18, 1984) [hereinafter FEMA memorandum].

operation of a facility need not be delayed unnecessarily by the hearing process.[54] Emergency planning need not be complete at the time of the hearing as long as the evidence permits the Licensing Board to find that "there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency."[55] Indeed, prior to 1982, the agency's regulations required a finding that "the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken."[56] In 1982, the Commission deleted the reference to the "state" of emergency preparedness "to clarify that the findings on emergency planning required prior to license issuance are predictive in nature and need not reflect the actual state of preparedness at the time the finding is made."[57] Thus, as here, the Licensing Board's findings can properly be

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[54] See San Onofre, supra, 17 NRC at 380 n.57. See generally Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-730, 17 NRC 1057, 1067 (1983).

[55] 10 CFR 50.47(a)(1).

[56] 10 CFR 50.47(a)(1) (1982).

[57] 47 Fed. Reg. 30,232 (1982). At the same time the Commission removed the reference in 10 CFR 50.47(a)(1) to the "state" of emergency preparedness, it also added a last sentence to the section providing that emergency preparedness exercises need not be held before any initial licensing decision. See 47 Fed. Reg. 30,232, 30,236 (1982).
(Footnote Continued)

predictive in nature.[58] Similarly, the Board's licensing authorization may be appropriately conditioned on the completion of items found deficient at the time of the hearing.[59]

(Footnote Continued)
This new provision was invalidated in Union of Concerned Scientists v. United States Nuclear Regulatory Commission, 735 F.2d 1437 (D.C. Cir. 1984) on the ground that it denied the right to a hearing on a material licensing factor required by 10 CFR Part 50, Appendix E, in contravention of Section 189(a)(1) of the Atomic Energy Act, 42 U.S.C. § 2239(a)(1). That holding is inapposite to the type of predictive findings and conditions involved here.

[58] No unfairness results from such a system for just as one party can demonstrate that a planned course of action will resolve an identified deficiency, an opposing party can establish that the deficiency cannot be resolved by that planned action. Supervision of a party's compliance with a commitment or a licensing board condition is left to the staff. If one party is dissatisfied with the way another party has fulfilled a commitment or met a condition, the matter may, in appropriate circumstances, be brought back to the licensing board or become the subject of a petition under 10 CFR 2.206.

[59] The joint intervenors also claim that, at the time of the hearing, county preparedness was deficient because not all of the standard operating procedures (SOPs) for implementing the county plan had been finished, approved and adopted, and that no letters of agreement between the county and other private and public organizations for supporting services had been secured. See Joint Intervenors' Brief at 39-40. The Licensing Board found that all the SOPs for actions within the federally prescribed plume exposure pathway were complete, and that no difficulties stood in the way of completing the remainder. See LBP-82-70, supra, 16 NRC at 764-65, 803. The Board also found that the critical elements for implementing the county plan were contained in SOPs and that letters of agreement were used only for noncritical elements of emergency support. Moreover, the Board found that no obstacles stood in the way of the county obtaining such letters of agreement. See id. at 767, 804.
(Footnote Continued)

2. The joint intervenors and the Governor also assert that, contrary to 10 CFR 50.47(a)(1), there is no assurance that the emergency plans for Diablo Canyon can be implemented because sociological and psychological profiles of the affected populations in the evacuation zone have not been conducted to assess the public response to a radiological emergency at Diablo Canyon. In rejecting the need for local surveys, the Licensing Board found that such studies are not required by the agency's regulations and would not improve public information planning.[60] It concluded that "[h]owever interesting such data might be, it is irrelevant to the task of informing the public about the necessity to travel a limited distance from Diablo Canyon in an emergency."[61]

In addressing the testimony of the joint intervenors' expert witnesses (i.e., that surveys were necessary because people behave differently in radiological emergencies than

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(Footnote Continued)
The Board's findings accurately reflect the hearing evidence and are fully supported by the record. We are not convinced the evidence compels any different result. Further, we note that the FEMA memorandum on the current status of offsite emergency planning at Diablo Canyon (see n.53, supra) indicates that the county SOPs for the areas outside the federally prescribed plume exposure pathway EPZ are substantially complete and that the county has obtained substantially all the letters of agreement.

[60] LBP-82-70, supra, 16 NRC at 778-80, 823-25.

[61] Id. at 780.

in other disasters and either overreact by doing more than is required, or underreact by becoming immobilized), the Board found that

> there is no apparent hazard to public health and safety if overreaction occurs. Assuming overreaction was likely, we have no remedy beyond that which is already planned, which is to broadcast accurate, consistent information.
>
> . . . Some people require repeated warnings and repeated information bulletins in order to become convinced that a hazard is real and that they should react. We see little value in a social survey in counteracting this phenomenon, however. The phenomenon of underreaction is already known. The remedy is repeated consistent warnings and information bulletins. The public will receive these through the emergency broadcast system.[62]

The Board also found the testimony of the applicant's expert, who indicated that studies of human behavior in other types of disasters provides a sufficient basis to establish workable emergency plans, "more credible as regards the public information program."[63]

Contrary to the suggestion of the joint intervenors and the Governor, the Licensing Board adequately confronted the conflicting viewpoints of the expert witnesses and resolved

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[62] Id. at 779.

[63] Id. at 780.

each issue before it.[64] Its findings are amply supported and our examination of the evidence does not convince us that the record compels a different result.[65]

II.

Finally, the joint intervenors challenge the Licensing Board's finding that the power operated relief valves (PORVs) at Diablo Canyon have been adequately designed, constructed and tested.[66] They do not contest the Board's findings on the basis of the underlying hearing record. Rather, the joint intervenors argue that information revealed by the applicant subsequent to the hearing on the PORV issue removes the evidentiary support for the Board's findings. They point out that the Licensing Board received

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[64] See generally Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-442, 6 NRC 33, 41 (1977).

[65] In his brief (at 16), the Governor also argues that the Licensing Board erred in refusing to order a survey to assess the magnitude of role conflict among emergency workers who might evacuate with their families in an emergency instead of reporting for duty. The Licensing Board found that role conflict would not cause professionally trained emergency workers, including plant operators, to abandon their duties. LBP-82-70, supra, 16 NRC at 770, 807-08. Further, it found there was no "dichotomy between operators performing their duties and seeing to their family's safety. Reasonable individuals would do both." Id. at 770. These findings are also fully supported by the record and we are not convinced that the evidence demands a different result.

[66] See LBP-82-70, supra, 16 NRC at 761, 795-97, 850-854.

notification from the applicant after the evidentiary hearing, but before the issuance of the initial decision, that the initial piping design reviews conducted as part of the Commission ordered independent design verification program (IDVP) revealed that some piping analyses potentially affecting the PORVs may not have been conservative.[67] Subsequent events, however, have made joint intervenors' argument academic.

While the joint intervenors' appeal of the initial decision was pending, they filed a motion with us to reopen the record on the issue of the adequacy of the applicant's design quality assurance program. We granted that motion, along with a similar one filed by the Governor. The reopened proceeding focused on the adequacy of the independent design verification program and the joint intervenors had the opportunity to litigate the same matter they claim on appeal undermines the Licensing Board's findings. The joint intervenors chose not to contest the adequacy of the PORVs although the issue was fairly encompassed by one of the Governor's issues concerning the verification of Westinghouse supplied equipment. In

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[67] See Joint Intervenors' Brief at 53-56 and Exhibit B.

ALAB-763, 19 NRC 571, 586, 609 n.193 (1984), we found verification of the design of that equipment adequate.

For the foregoing reasons, the initial decision of the Licensing Board authorizing the issuance of a full power license for Diablo Canyon, Unit 1, is affirmed. As we explained in ALAB-763,[68] however, the Board's license authorization for Unit 2 shall not be effective until we have made our findings with respect to the adequacy of the applicant's design verification program for that unit.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the
Appeal Board

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[68] 19 NRC at 582.