

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD



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

8/24/81
Docket Nos. 50-275 O.L.
50-323 O.L.

JOINT INTERVENORS' RESPONSE TO
PACIFIC GAS AND ELECTRIC COMPANY'S
FIRST SET OF INTERROGATORIES



Joint Intervenors hereby respond to Pacific Gas and Electric Company's ("Applicant") August 7, 1981 First Set of Interrogatories to Joint Intervenors, as follows:

Response to Interrogatory No. 1

It is the Applicant's burden to demonstrate compliance with all applicable provisions of the Commission's emergency planning requirements. Until such compliance has been demonstrated by the Applicant, Joint Intervenors do not concede that any of the provisions of the Commission's emergency planning regulations has been met, either by the Applicant or by offsite agencies, and this applies to 10 C.F.R. §50.33(g).

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Joint Intervenors are informed and believe and on the basis of such information and belief respond that at the present time, all of the relevant emergency plans -- Applicant, State, and local -- are being substantially revised in an attempt to achieve compliance with the Commission's revised regulations, effective November 3, 1980. Therefore, neither the NRC nor FEMA has issued its findings regarding the adequacy of the various plans. Until each has been submitted, approved, and adopted by the responsible authorities, the requirements of 10 C.F.R. §50.33(g) clearly cannot be met. Moreover, until Joint Intervenors have had an opportunity to examine the revised plans for sufficiency, no definitive determination can be made regarding compliance with that section.

Response to Interrogatory No. 2

See Response to Interrogatory No. 1.

Response to Interrogatory No. 3

See Response to Interrogatory No. 1.

Response to Interrogatory No. 4

It is the Applicant's burden to demonstrate compliance with all applicable provisions of the Commission's emergency planning requirements. Until such compliance has been demonstrated by the Applicant, Joint Intervenors do not concede that any of the provisions of the Commission's emergency planning regulations has been met, either by the Applicant or by offsite agencies, and this applies to 10 C.F.R. §50.47.

The Applicant has failed to demonstrate the existence of onsite or offsite preparedness either within the LPZ or to the full extent of the 10 mile EPZ and 50 mile ingestion pathway planning zone. During the low power test hearing, held May 19-22 in San Luis Obispo, California, the evidence demonstrated -- and the Applicant conceded -- that the combined Applicant, State, and local plans for Diablo Canyon fail to meet even one of the emergency planning standards set forth in 10 C.F.R. §50.47(b) and addressed by specific criteria in NUREG-0654. In addition, all parties conceded that the relevant plans fail to consider and allow for the effects of a major earthquake occurring simultaneously with a radiological emergency at the site. In their Proposed Findings of Fact and Conclusions of Law, filed June 16, 1981, Joint Intervenor submitted a detailed analysis (including citations) of the numerous deficiencies of the various plans in compliance with the regulations. That discussion -- set forth at pp. 11-38 -- is hereby incorporated by reference in partial response to this interrogatory. (See Appendix A hereto.)

Also at that hearing, the Applicant indicated through testimony that Revision 3 of its onsite emergency plan was being prepared and that it was expected to be completed by mid-June 1981. Similarly, the Staff stated through testimony that an analysis of the effects of earthquakes on emergency preparedness, being prepared by PGandE pursuant to Staff directive, could be completed in mid-May 1980. Neither document has been completed or, if completed, neither has been served on Joint Intervenor. Thorough examination of each is critical to a determination of the adequacy of emergency preparedness at Diablo Canyon.

Joint Intervenors are informed that on August 19, 1981 a "full scale exercise" was held to test the adequacy of the Diablo Canyon emergency plans. Despite repeated attempts to gain access to that exercise as observers, Joint Intervenors and their counsel were excluded and, therefore, have no way of judging at the present time either the adequacy of the drill or the level of preparedness demonstrated by it. Further discovery is essential to obtain such information. Joint Intervenors are informed and believe, however, that the exercise failed to provide a true test of response capability in that the scenario upon which it was based did not even remotely resemble circumstances likely to exist in the event of a real emergency, especially if initiated or accompanied by a major seismic event.

Because Joint intervenors have only recently initiated discovery in this proceeding and no responses have yet been received, this response is submitted without prejudice to their right to raise legal or factual issues regarding any information subsequently discovered by them.

Response to Interrogatory No. 5

See Response to Interrogatory 4.

Response to Interrogatory No. 6

See Response to Interrogatory 4.

Response to Interrogatory No. 7

It is the Applicant's burden to demonstrate compliance with all applicable provisions of the Commission's emergency

planning requirements. Until such compliance has been demonstrated by the Applicant, Joint Intervenor do not concede that any of the provisions of the Commission's emergency planning regulations has been met, either by the Applicant or by offsite agencies, and this applies to 10 C.F.R. Part 50, Appendix E.

The Applicant has yet even to address -- much less demonstrate compliance with -- Appendix E to 10 C.F.R. Part 50. None of the relevant plans as they currently exist -- Applicant, State, or local -- contains the requisite information needed to demonstrate compliance with the criteria for organization, assessment action, activation of emergency organization, notification procedures, emergency facilities and equipment, training, maintaining emergency preparedness, and response. Moreover, as stated in response to Interrogatory Nos. 4-6, the plans fail to meet the criteria set forth in 10 C.F.R. §50.47(b). Because that is also a requirement of Appendix E, all of the deficiencies discussed in Joint Intervenor's Response to Interrogatory Nos. 4-6 (including the incorporated sections of the Proposed Findings) apply equally to the Applicant's failure to demonstrate compliance with Appendix E.

Appendix E explicitly requires a full-scale exercise "which tests as much of the licensee, State, and local emergency plan as is reasonably achievable" Although an "exercise" was apparently held in San Luis Obispo on August 19, 1981, Joint Intervenor are informed and believe that its limited scope was clearly insufficient to meet the cited requirement.

See also Response to Interrogatory Nos. 4-6.

Response to Interrogatory No. 8

See Response to Interrogatory No. 7.

Response to Interrogatory No. 9

See Response to Interrogatory No. 7.

Response to Interrogatory No. 10

These responses were prepared by Joint Intervenors with the assistance of counsel. Without exception, they are based on documents of public record and testimony previously offered in this proceeding.

Response to Interrogatory No. 11

The requisite information is a matter of record on this docket. See Response to Interrogatory No. 10.

Response to Interrogatory No. 12

The documents relied upon include, but are not necessarily limited to, those documents attached as exhibits to Joint Intervenors' April 27, 1981 Response in Opposition to NRC Staff and PGandE Motions for Summary Disposition (and those incorporated therein by reference); all documents marked for identification or offered into evidence by Joint Intervenors during the low power test hearing; and all documents cited by Joint Intervenors in their June 16, 1981 Proposed Findings of Fact and Conclusions of Law, filed in the low power test proceeding. This response is given without prejudice to Joint Intervenors' right to rely upon any documents subsequently discovered by them.

Response to Interrogatory 13

At this time, Joint Intervenors have not decided what persons, if any, they may call or subpoena as witnesses at the hearing to be held on the admitted emergency preparedness contention.

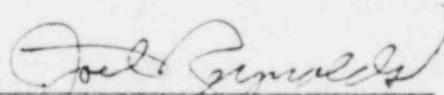
Dated: August 26, 1981

Respectfully submitted,

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requirements, it has the burden of proof to demonstrate that the exemption criteria set forth at 10 C.F.R. §50.47(c) have been satisfied.

B. Adequacy of Diablo Canyon Emergency Plans

15. The board finds that the existing applicant, State, and local emergency response plans are inadequate to assure protection of the health and safety of the public in the event of a radiological emergency at Diablo Canyon during low power testing.

16. It is undisputed that existing applicant, State, and local emergency plans for Diablo Canyon do not meet the Commission's revised regulations or the NUREG-0654 criteria. (Joint Intervenors' Exh. 111; Shiffer, Tr. 10614; Buckley, Tr. 11056; Sears, Tr. 11062.) Indeed, in response to the promulgation of new regulations, significant revision of the relevant Diablo Canyon plans has become necessary and is currently in progress. None of these revisions is expected to be completed prior to fuel loading for low power testing. (SER Supplement 12, at III-3; Shiffer, Tr. 10660; Jorgensen, at 3.)^{14/}

^{14/} By letter to the NRC Staff dated February 27, 1981, PGandE requested "relief" from the Commission's revised emergency planning requirements for purposes of loading fuel and conducting low power tests. However, PGandE cited no authority for such relief in the regulations themselves; indeed, the Commission's emergency planning regulations contain no exemption for operation of a facility at less than full power. Accordingly, this board rejects any requests by PGandE for relief from the Commission's emergency planning regulations. See note 46 *infra*.

17. Primary legal responsibility for evacuation and other offsite emergency response measures rests with the local jurisdiction, the County of San Luis Obispo. (Shiffer, Tr. 10746.) The principal testimony offered regarding local emergency planning was that of Jeffrey Jorgensen, a member of the San Luis Obispo County Board of Supervisors. With respect to the general adequacy of the local plans, he testified that although they have never been formally rescinded, they are in essence nothing more than paper plans; because they have not been implemented, they would not provide substantial protection to the public in the event of a radiological emergency. (Jorgensen, at 1-2; Tr. 10917.) Supervisor Jorgensen testified that prior to the TMI-2 accident, emergency planning was not perceived to be a high level priority for the county government; after the accident, however, it became extremely clear that the county's plans would have to be substantially changed. Consequently, the County in effect shelved the existing plans and embarked on a new planning effort to devise plans which comply with the Commission's revised regulations. (Tr. 10918.) Since the TMI-2 accident, no action has been taken to implement the existing plans in any way. (Tr. 10917.) The draft revised plan is not scheduled for formal adoption by the Board of Supervisors until December 1981. (Tr. 10921.) In short, Supervisor Jorgensen testified that

[t]o date, no actual preparedness has been developed and will not be until the County's

current planning effort is completed.
(Jorgensen, at 3.) 15/

18. More specifically, the board finds that the extent of noncompliance with 10 C.F.R. §50.47(b) is substantial. Through interrogatory responses offered into evidence by Joint Intervenors and received by the board, PGandE admitted that the existing combined applicant, State, and local emergency plans fail to comply with any of the sixteen planning standards contained in that subsection. (Joint Intervenors' Exh. 111.) 16/ This fact is not attributable to the inadequacy of any single plan; on the contrary, PGandE's onsite plan fails to comply with thirteen of the regulatory standards, the State plan with fifteen, and the local plans with fourteen. PGandE did not even attempt to demonstrate specifically the insignificance of any but a very few of the deficiencies. Nevertheless, as is evident from the discussion below of the individual standards, numerous deficiencies relate to critical aspects of the emergency

15/ This testimony of Supervisor Jorgensen was virtually uncontradicted by PGandE and the Staff. Although PGandE offered testimony of County Sheriff George Whiting in rebuttal to Jorgensen's testimony, the board notes that the response plan produced by the Sheriff and received in evidence as Board Exh. 5 has not been revised since 1977, two years prior to the TMI-2 accident. Rather than contradicting Supervisor Jorgensen's testimony, this is consistent with his statement that no action has been taken to implement the existing county plans since March 1979.

16/ The Staff repeatedly stated its view that the combined Applicant, State and local emergency plans do not comply with the Commission's revised emergency planning regulations. (Buckley, Tr. 11056; Sears, Tr. 11062; Olmstead, Tr. 10697.) The Staff did not challenge or contradict PGandE's admissions in Joint Intervenors' Exh. 111.

response capability, regardless of whether the facility is operating at low rather than full power.

19. Further deficiencies in compliance with 10 C.F.R. § 50.47(b) were revealed on cross-examination of the PGandE and Staff witnesses and through the direct testimony of Supervisor Jorgensen, County Health Director Howard Mitchell, and California Department of Forestry official Robert Paulus. Most significant of these deficiencies, together with those admitted by PGandE in Joint Intervenors' Exhibit 111 ("J. I. Exh. 111"), are summarized briefly as follows:

(A) Assignment of Responsibility (Organization Control)^{17/}

(1) Interfaces between onsite and offsite emergency response organizations are not sufficiently defined or diagrammed in applicant, State, or local plans. (J.I. Exh. 111; Shiffer, Tr. 10667.)

(2) Letters of agreement with offsite emergency response organizations, set forth in Appendix 7 to PGandE's onsite plan, are out-of-date and insufficiently specific, contain no criteria for implementation, include unverified information (e.g., phone numbers), and do not comply with NUREG-0654 criteria. They are not set forth in the State or local plans. (J.I. Exh. 111; Shiffer, 10668-73,

^{17/} Titles for each of the standards are drawn from NUREG-0654.

Paulus, at 4.)

(3) PGandE onsite plan doesn't require 24-hour manning of communication links (Shiffer, Tr. 10682), and State plan contains no commitment to 24-hour per day response or manning of communication links with local officials and applicant. (J.I. Exh. 111.)

(4) Title of persons to be contacted at the State and local levels in the event of an emergency is not specified in the onsite plan nor does plan contain phone numbers of persons to contact. (J.I. Exh. 111; Shiffer, Tr. 10680-82.)

(5) The relationship of FEMA to the emergency response effort is not specified. (J. I. Exh. 111.)

(B) Onsite Emergency Organization

(1) Responsibilities and authority of Site Emergency Coordinator are not sufficiently defined, particularly with regard to delegation of duties and the critical ultimate decisionmaking authority in the control room during an emergency. (J. I. Exh. 111; Shiffer, Tr. 10662.)

(2) Staffing requirements set forth in NUREG-0654 are not sufficiently addressed in PGandE's onsite plan, including the fact that on weekends and off-hours a fire brigade of five members will be drawn from the minimum fourteen persons onsite. (J. I. Exh. 111; Patterson, Tr. 10802-03.)

(3) Interfaces between onsite and offsite emergency response organizations and personnel are not outlined as

required by NUREG-0654. (J. I. Exh. 111; Shiffer, Tr. 10667.)

(4) PGandE's onsite plan fails to discuss adequately the long-term augmentation of the emergency organization.

(J. I. Exh. 111.)

(5) PGandE's onsite plan fails to identify in sufficient detail the services to be provided by local and/or State agencies in the event of a radiological emergency at the facility. Letters of agreement to provide such services fail to detail the authorities, responsibilities, and limitations on actions of contractors, private organizations, and local support groups. The onsite plan provides inadequate assurance of necessary ambulance service, does not provide for a means to transport injured persons to St. Francis Hospital in San Francisco, and fails to describe adequately the capacity, trained personnel, and facilities available at St. Francis Hospital. (J. I. Exh. 111; Shiffer, Tr. 10668-73, 10800, 10864-65.)

(C) Emergency Response Support and Resources

(1) The applicant, State, and local plans do not specify the federal resources expected in the event of an emergency, the time of arrival of resources, or the persons responsible for requesting federal assistance. (J. I. Exh. 111.)

(2) The applicant and State plans do not specify all available radiological laboratories which might be utilized in the event of an emergency. (J. I. Exh. 111.)

(3) Agreements which exist are out-of-date and insufficiently specific regarding authority, responsibilities, and limitations of assisting organizations. (J. I. Exh. 111; Shiffer, Tr. 10668-73; Paulus, at 4.)

(4) There has been no adequate coordination of County personnel who would be required to implement the plans. (Jorgensen, at 2.)

(D) Emergency Classification System

(1) The relevant applicant, State, and local plans do not contain a standardized emergency classification system to determine, implement, and coordinate response measures.^{18/} None of the plans complies with the classification scheme set forth in Appendix I of NUREG-0654. While PGandE's onsite plan may require additional quantification of parametric values, neither the State nor local classification scheme is consistent with NUREG-0654. (J. I. Exh. 111.)

(2) Neither the State nor local plans contain procedures providing for emergency action which take into account local offsite conditions at the time of the emergency. (J. I. Exh. 111.) None of the plans considers and allows for the occurrence of an earthquake simultaneously with a radio-

^{18/} The Kemeny Commission noted the absence of coordinated emergency plans and accident classification systems as a contributor to the inadequacy of emergency preparedness at TMI. (J. I. Exh. 114A, at 38.)

logical emergency.^{19/} (Jorgensen, at 2; Sears, at 3; Sears, Tr. 11060.)

(E) Notification Methods and Procedures

(1) The early warning system described in Appendix III of NUREG-0654 is not projected for completion prior to fuel load. (Shiffer, Tr. 10696.)

(2) None of the relevant plans contain the actual wording of emergency measures or the standard format for detailed initial and follow-up communications. (J. I. Exh. 111; Shiffer, Tr. 10699.)^{20/}

(3) Although PGandE and the Staff rely on the ability of the County Sheriff to notify all persons in the LPZ in the event of an accident at low power, the Sheriff has never attempted to notify all residents and visitors in that area nor is there any estimate based on actual experience of the time such notification would take. The Sheriff has not prepared a written statement to give to persons in the LPZ upon notification in explanation of what actions to take,

^{19/} See discussion infra at 29-31 regarding the failure of existing plans to allow for a radiological emergency occurring simultaneously with an earthquake.

^{20/} The Kemeny Commission criticized the NRC Commissioners' role in the TMI-2 accident response in part because they were preoccupied with the drafting of a press release. (J. I. Exh. 114A, at 40.) The Kemeny Commission recognized that during a radiological emergency such things as the wording of notification messages should not require significant attention.

how much time is available, and what is actually occurring. Adverse weather conditions could preclude the use of helicopters for notification purposes. The feasibility of notification by helicopter in remote areas of Montana de Oro State Park has not been demonstrated. (Shiffer, Tr. 10866, 10871; Sears, Tr. 11068, 11252.)^{21/}

(4) The State plan contains no information on procedures or systems for notification, alerting, or mobilizing emergency personnel and no detailed discussion of the time required to instruct the public. (J. I. Exh. 111.)

(5) Neither the State nor local plans incorporate an Early Warning System which satisfies Appendix III of NUREG-0654. (J. I. Exh. 111.)

(F) Emergency Communications

(1) Applicant, State, and local plans contain insufficient description of communication plans, including NUREG-0654 criteria. Neither the State nor local plans discuss communication capability with State, local, and federal emergency response organizations. (J. I. Exh. 111.)

(2) None of the relevant plans discusses a periodic communications testing program. (J. I. Exh. 111.)

(3) The County does not have adequate communications equipment to reach headquarters and other personnel. In fact, during a drill in 1979, County Health Department

^{21/} See discussion infra at 32-34.

personnel were forced to use a pay telephone to communicate the results of their findings. (Mitchell, at 1; Mitchell, Tr. 10916, 10958, 10960; Jorgensen, at 2.)

(G) Public Education and Information^{22/}

(1) PGandE has not implemented a public information program. PGandE has taken no action to inform the LPZ residents what medical facilities to contact in the event of radiation-related injury, what actions to take in the event of a radiological emergency, what the risks of low power testing are, and, aside from publishing its emergency plan, what the evacuation routes are. (Sears, at 5; Sears, Tr. 11064; Shiffer, Tr. 10874-75.)

(2) The State and local plans contain no discussion of a public information program. (J. I. Exh. 111.)

(3) At the local level, there has been no systematic public information program designed to educate the public on necessary actions, including evacuation and shelter, to be taken in the event of a radiological emergency. (Jorgensen, at 2.)

(H) Emergency Facilities and Equipment

(1) At the time of fuel loading for low power testing, the three principal emergency facilities will not comply with all criteria set forth in NUREG-0696, entitled

^{22/} See discussion infra at 32-34.

"Functional Criteria for Emergency Response Facilities, Final Report." (Shiffer, Tr. 10674.)

(2) The interim offsite emergency operations facility is a trailer, and the permanent facility is not projected for completion prior to fuel load. The interim facility is not a seismic Class I structure. (Shiffer, at 10; Shiffer, Tr. 10680, 10698.)^{23/}

(3) Although the operational support center ("OSC") is the staging area for emergency support personnel, PGandE does not intend to comply with the NUREG-0654 requirement that certain specified supplies be stored there, including respiratory protection, protective clothing, portable lighting, monitoring equipment, cameras, and communications equipment. (Shiffer, at 10; Shiffer, Tr. 10676.) The OSC is not a seismic Class I structure. (Shiffer, Tr. 11306.)

(4) The State plan contains no discussion of an emergency operations center, the timely activation of staffing for such a facility, or identification of emergency equipment. (J. I. Exh. 111.)

(5) None of the plans addresses the periods of inspection, replacement, and calibration of emergency

^{23/} The board notes the importance of the Emergency Operations Facility to the overall emergency response capability of the combined organizations. The purpose of the facility is to provide overall direction of the offsite activities from PGandE's standpoint, and it is intended to serve as a conduit to offsite agencies for information regarding activities onsite. (Shiffer, Tr. 10753.) The particular vulnerability of the interim facility to inclement weather conditions and to seismic activity is not an insignificant factor.

equipment. The State plan provides no indication of the location of radiological monitoring equipment. PGandE's onsite plan contains an inadequately detailed discussion of meteorological instrumentation. (J. I. Exh. 111.)

(I) Accident Assessment

(1) The County has inadequate monitoring equipment beyond the site boundaries. (Mitchell, at 1.)

(2) The onsite and state plans contain insufficiently detailed discussion of methods, equipment, and expertise for rapid assessment of the actual or potential magnitude and locations of radiological hazards. (J. I. Exh. 111.)

(3) Monitoring instruments installed by PGandE are located away from where the problem is -- few, if any, are located in the area of concern for low power. (Mitchell, Tr. 10910; PGandE Exhs. 67, 69.)

(4) The County has an inadequate and overly dispersed staff to conduct monitoring. (Mitchell, Tr. 10910.)

(5) The maps included in the onsite plan do not constitute accurate and up-to-date descriptions of the number and location of monitoring instruments. (Shiffer, Tr. 10780.)

(6) None of the monitoring instruments can be interrogated by radio; therefore, the data must be obtained by vehicle and, for all but the few real time instruments, further analysis must then be performed, either in the field or at the facility. (Shiffer, Tr. 10780.)

(J) Protective Response

(1) The local plans have not been implemented, and they provide no substantial protection to the general public in the event of a radiological emergency. For the foreseeable future, the County will not be able to respond effectively to a radiological emergency at Diablo Canyon. (Jorgensen, at 1-3.)

(2) The onsite plan does not address the times necessary to warn the public and take protective actions. (J. I. Exh. 111.)

(3) The County plans don't discuss the effects on emergency response of inclement weather, high traffic density, and specific radiological conditions, nor do such plans address the means for protecting those persons whose mobility may be impaired due to such factors as institutional or other confinement. Maps attached to the State and local plans do not indicate relocation centers and shelter areas. (J. I. Exh. 111; Mitchell, at 2.)

(4) The State and local plan fails to discuss projected traffic capacities of evacuation routes under emergency conditions, identification of and means for dealing with potential impediments (i.e., seasonal impassibility of roads) to evacuation routes, and time estimates for evacuation of various areas based on a dynamic analysis. (J. I. Exh. 111.)

(5) An ability to notify promptly all segments of the transient and resident population of the LPZ has not

been demonstrated, nor has the County Sheriff or PGandE attempted to do so. (Shiffer, Tr. 10867; Sears, Tr. 11068-69.)

(6) The onsite plan should be revised to include new maps, population distribution information, and the bases for choice of recommended protective actions. (J. I. Exh. 111.)

(7) The local plan does not provide for use, quantities, storage or distribution of radioprotective drugs. (J. I. Exh. 111.)^{24/}

(8) The letter of understanding between PGandE and the California Department of Forestry for fire fighting support onsite has been rescinded by CDF. (Paulus, at 4.)

(9) None of the relevant plans considers and allows for a Diablo Canyon emergency occurring in conjunction with a major earthquake on the Hosgri Fault. (Jorgensen, at 2; Sears, at 3; Sears, at 11060; J. I. Exh. 117.)

(K) Radiological Exposure Control

(1) PGandE's onsite plan contains an insufficiently specific discussion of (a) EPA Protective Action Guides (PAG's) for actions specified in NUPEG-0654, (b) application of any existing radiation protection measures to emergency situations, (c) an onsite dosimetry program, (d) radiation control procedures, contamination control measures, and (e) decontamination capability for onsite personnel. (J. I. Exh. 111.)

^{24/} See discussion of radioprotective drugs by Kemery Commission in its Report, J. I. Exh. 114A, at 41-42.

(2) State and local plans contain no detailed discussion, if any, of means for decontamination of personnel and equipment and for waste disposal.

(L) Medical and Public Health Support

(1) The County has inadequate medical facilities to transport and treat persons in the event of a radiological emergency. (Jorgensen, at 2; Mitchell, at 2.)

(2) The County Health Office is inadequately staffed to respond to a radiological emergency at Diablo Canyon. (Mitchell, at 1.)

(3) The County Division of Environmental Health's Standard Operating Procedures for Nuclear Power Plant Emergency Response can't be implemented. (Mitchell, at 2.)

(4) The County is inadequately informed about and has never attempted to evacuate persons requiring ambulances from the LPZ and immediately surrounding area. Limited ingress and egress presents difficulty in removing persons with special needs. (Mitchell, at 2.)

(5) Despite the absence from the letter of agreement between PGandE and the San Luis Ambulance Service of any pledge to treat radiation-related injuries, PGandE's onsite plan improperly states, in reliance upon that letter, that the Ambulance Service has committed to handle personal injury cases involving radioactive contamination. (Shiffer, Tr. 10670-71.)

(6) The State plan cites reliance upon local authorities for medical services. No further discussion is provided. (J. I. Exh. 111.)

(7) The discussion of medical provisions in the local plan is insufficiently specific. (J. I. Exh 111.)

(8) Regarding PGandE's onsite medical preparedness, there is no doctor onsite; no assurance of getting an ambulance promptly; no estimate of ambulance time or previous drill on the Field Ranch Road (main alternate route to and from the site);^{25/} no plan for transport of injured persons to St. Francis Hospital in San Francisco; no specification of the capacity of or numbers of doctors available at St. Francis Hospital; only one NuCon contaminated personnel carrier onsite; and no record of which ambulance personnel have actually been trained. (Shiffer, Tr. 10695, 10865, 10686, 10693, 10673, 10800, 10688, 10692.)

(9) Because the County is short on ambulances, PGandE and local officials cannot be certain at any particular moment that any of the ambulances will be available to respond to injuries other than, for example, automobile accidents and heart attacks. (Shiffer, Tr. 10865; Mitchell, Tr. 10912.)

^{25/} PGandE witness Shiffer stated on cross-examination that the Field Ranch Road is slippery and muddy in adverse weather conditions. (Tr. 10799.) He also admitted that a member of the Field family had recently informed him that the road is "impassible in wet weather and during the winter for as much as two weeks at a time." (Tr. 10870.)

(M) Recovery and Reentry Planning and Post-Accident Operations

(1) Applicant, State, and local plans are insufficiently specific. The State plan contains no description of plans or procedures, and the local plan, while providing general guidance, contains no specific procedures on reentry and recovery. (J. I. Exh. 111.)

(N) Exercises and Drills

(1) Beyond reference to an annual exercise, the State plan contains no discussion of drills. The plan does not describe how the exercise is to be carried out, whether observers are to be present, or whether it is consistent with NUREG-0654. (J. I. Exh. 111.)

(2) The local plan contains no specific exercise requirement. (J. I. Exh. 111.)

(3) The existing onsite plan does not provide for drills and exercises consistent with NUREG-0654. (J. I. Exh. 111.)

(4) No general exercise or drill has been held involving applicant, State, and local officials with the public participating. (Shiffer, Tr. 10700.)

(5) There have been no full scale exercises to demonstrate the effectiveness of the local plans. (Jorgensen, at 2.)

(6) The County Sheriff has never conducted a drill involving notification of all areas of the LPZ.

According to Dr. Mitchell, the Sheriff's personnel did not even go to See Canyon during the 1977 drill. (Shiffer, Tr. 10866-67; Mitchell, Tr. 10916.)

(7) The 1977 and 1979 local drills did not demonstrate adequate preparedness. Moreover, neither simulated a real-life emergency in that persons involved were not dispersed throughout the County as they would be in the event of an actual emergency. (Mitchell, Tr. 10916.)

(8) PGandE's onsite plan does not require communications drills. (Shiffer, Tr. 10701.)

(9) No full scale exercise is planned prior to fuel load. (Shiffer, at 32.)

(C) Radiological Emergency Response Training

(1) California Department of Forestry employees have not received the radiation training which PGandE agreed to provide. (Paulus, at 203; Paulus, Tr. 10986.)

(2) PGandE's onsite plan contains an insufficiently detailed discussion to determine whether requisite training is provided. (J. I. Exh. 111.)

(3) State and local plans contain no specific training requirements. (J. I. Exh. 111.)

(4) There is no adequate training or coordination of local personnel. (Jorgensen, at 2.)

(5) Relatively few physicians in San Luis Obispo County have the training or equipment necessary to handle and treat radiation-related injuries. (Mitchell, Tr. 10911.)

(6) State and local plans do not provide for training specified in NUREG-0654, including training of coordinators of response organizations, accident assessment personnel, radiological monitoring personnel, police, security personnel, firefighters, maintenance personnel, first aid and rescue personnel, local support services personnel (i.e., Civil Defense), medical support personnel, license headquarters personnel, and communications personnel. (J. I. Exh. 111.)

(P) Responsibility for Planning Effort:
Development and Periodic Review and
Distribution of Emergency Plans

(1) The State plan contains no discussion of this standard. (J. I. Exh. 111.)

(2) The County plan is insufficiently specific and hasn't been revised since its issuance. Neither the State nor local plan is cross-referenced to NUREG-0654. (J. I. Exh. 111.)

(3) The phone numbers in the applicant, State, and local plans have not been updated. (J. I. Exh. 111; Shiffer, Tr. 10669.)

(4) The applicant and State plans do not contain Standard Operating Procedures as required by NUREG-0654. (J. I. Exh. 111.)

20. The board finds further that none of the relevant onsite or offsite emergency plans considers and allows for

the effects of a major earthquake on the Hosgri Fault occurring simultaneously with a radiological emergency at Diablo Canyon.^{26/} On December 16, 1980, the NRC requested that PGandE evaluate "the potential complicating factors which might be caused by earthquakes which either initiate or follow the initiation of accidents." (J. I. Exh. 117, at 1.) Specifically, the evaluation must consider two general cases:

First, a severe earthquake at the site which could disrupt normal and auxiliary services and thereby cause the plant to be in a degraded mode should be considered. * * * The facility plan should be capable of functioning under such conditions. Of principal importance under such conditions would be augmentation of the facility staff and supporting resources to assure that a more severe accident did not develop. Factors to be considered for your facility plans should include the impacts due to potential disruption of communications networks and transportation routes. Your concern should be the availability of resources and personnel to augment onsite staff, transit to and among emergency response facilities and communications with offsite organizations. * * *

The second case which should be considered is an earthquake offsite which disrupts communications networks and transportation routes in particular locales. In California, such occurrences appear to be frequent enough to warrant consideration in your emergency plans. The procedures to be used to determine the protective actions recommended to offsite authorities should be revised to incorporate consideration of earthquake effects offsite. Evacuation time estimates should incorporate consideration of local transportation route disruption. (Id.)

^{26/} See Jorgensen, at 2; Sears, at 7; Sears, Tr. 11060, 11283; Shiffer, Tr. 10878-79.

In addition, the NRC requested FEMA to review the adequacy of State and local capabilities with respect to response during earthquakes.^{27/}

21. The earthquake analysis requirement is based on the Commission's appreciation of the greater seismic risk associated with nuclear plants located in California relative to facilities in other areas. (Sears, Tr. 11060.) The NRC has not received such an analysis from PGandE, nor has FEMA reviewed the adequacy of the State and local capabilities with respect to earthquake effects. Although both PGandE and the Staff urge that the seismic evaluations are not required prior to low power operation, no logical justification for such a view was offered at the hearing, and there is no factual basis to conclude that the effects of an earthquake on emergency response capability will be reduced at power levels below Diablo Canyon's full capacity. Particularly in light of the continued importance of seismic safety in this proceeding (Sears, Tr. 11060), the board considers the absence of any analysis of and preparation for earthquake effects on emergency planning on and offsite to be a critical deficiency in emergency preparedness at Diablo Canyon.^{28/}

27/ Memorandum from Grimes to McConnell, "Request for FEMA Assistance to Review Effects of Earthquake and Volcanic Eruption on State/Local Emergency Plans" (Nov. 3, 1980) (J. I. Exh. 117).

28/ The board notes the recent licensing board decision in In the Matter of Southern California Edison Co. (San Onofre Nuclear Generating Station, Memorandum and Order, at 2 (April 8, 1981), where the board recognized that "[a]pplicants, particularly applicants in a seismically active area like California, should be prepared to demonstrate that their emergency plans can function in a major earthquake situation."

22. Of the numerous emergency planning deficiencies cited above, PGandE and the Staff focussed specifically on the absence of an early warning system and a public information program. In an attempt to minimize the significance of this conceded noncompliance with the Commission's regulations, both parties cited (1) increased time to respond which might permit "house-to-house" notification of LPZ residents by the County Sheriff and (2) PGandE's intention to circulate a public information brochure just prior to fuel loading for low power testing. (Shiffer, Tr. 10840, 10872, 10874; Sears, at 4-5; Sears, Tr. 11067, 11251.) This board disputes such testimony for several reasons. First, the Sheriff's capability for prompt notification of all segments of the resident and transient population in the LPZ has never been demonstrated. Although some of his deputies may have been dispatched to See Canyon during a drill in 1977, there is no evidence as to what precisely occurred nor does that action provide any assurance that notification of all persons throughout the LPZ, including Montana de Oro State Park, can be promptly accomplished by the Sheriff. (Shiffer, Tr. 10866-7; but see Mitchell, Tr. 10916.)^{29/}

^{29/} In addition, although plant operators may have more time during low power operations to prevent a routine transient from developing into a serious accident, there is no evidence or assurance that such additional time will also be available once it becomes apparent that protective actions offsite will be necessary. It is indeed a possibility that, regardless of whether the plant is operating at low or full power, public notification of the need to evacuate would be delayed as long as possible in order to avoid needless public panic or evacuation. The Kemeny Commission noted that one of the reasons emergency planning had a low priority with the NRC was the desire to avoid raising public concern about the safety of nuclear power. (J. I. Exh. 114A, at 38.)

23. Second, the public understanding -- at least within the LPZ -- of essential emergency response information is virtually nonexistent. On cross-examination, James Shiffer, on behalf of PGandE, conceded that PGandE had taken no actions to inform the residents of the LPZ regarding (1) the risks to them of low power operations, (2) the available medical facilities equipped and staffed to treat radiation-related injuries resulting from an accident at the plant, and (3) the most appropriate actions to take in the event of such an emergency. (Shiffer, Tr. 10874-75.) Similarly, John Sears, on behalf of the Staff, testified in effect that apart from inclusion of the local plans in its onsite plan, PGandE has not demonstrated that the public knows what the evacuation routes are. (Sears, Tr. 11064.) Although PGandE has apparently been preparing a public information brochure, it is only in draft form. (Sears, at 5.)

24. In light of such testimony, the board cannot agree with the view expressed by PGandE and the Staff that at the present time there is no real purpose for a public information program. (Shiffer, Tr. 10872; Sears, at 5.) We find that increased public understanding and awareness of the kinds of information mentioned above would greatly facilitate implementation of emergency protective actions when necessary and that dissemination of such information at the earliest possible date would increase the likelihood that all segments of the resident

and transient population of the LPZ will be adequately informed.^{30/}
Had the Commission intended that a public information and education program regarding emergency response need be instituted only weeks prior to actual operation of a nuclear facility, its regulations certainly would reflect such a view. In order to assure the best possible response by the public this board believes that PGandE should have instituted a public information program long ago. The absence of a final determination as to method of notification is no excuse.

26. To demonstrate the adequacy of the Diablo Canyon offsite plans, the Staff, through the Sears testimony, cites an alleged FEMA "finding" documented in (1) a Memorandum for Harold R. Denton and John W. McConnell from FEMA/NRC Steering Committee and (2) a FEMA/NRC Interim Agreement on Criteria for

^{30/} The Kemeny Commission recognized the direct connection between an adequate public information program and effective emergency preparedness. In its Report, the Commission recommended the following:

If emergency planning and response to a radiation-related emergency is to be effective, the public must be better informed about nuclear power. The Commission recommends a program to educate the public on how nuclear power plants operate, on radiation and its health effects, and on protective actions against radiation. Those who would be affected by such emergency planning must have clear information on actions they would be required to take in an emergency.

J. I. Exh. 114B, at 17.

Low Power Testing at New Commercial Facilities. (Sears, at 6.)^{31/}
On cross-examination of Sears, however, a number of significant facts were revealed. First, regarding the extent of Sears' personal knowledge of the basis for the documents, (a) he was not a member of the FEMA/NRC Steering Committee at the time the documents were issued (Sears, Tr. 11016); (b) he was not present at the Steering Committee meetings at which they were discussed (Sears, Tr. 11069-70); (c) he did not personally know whether FEMA actually reviewed the specific Diablo Canyon offsite plans for adequacy prior to the issuance of those documents (id.); and (d) he had no personal knowledge of the Denton-McConnell correspondence cited in the FEMA/NRC Interim Agreement nor could he recall whether such correspondence contained any reference to an evaluation by FEMA of the specific Diablo Canyon offsite plans. (Sears, Tr. 11081, 11270.) In fact, such correspondence contains no reference to Diablo Canyon or its emergency plans. (Gov. Brown Exhs. 4 and 5.)

27. Second, regarding the content of such documents, (a) there is no indication that FEMA evaluated the Diablo Canyon site-specific offsite plans (Sears, Tr. 11079); (b) the word "finding" does not appear in either of the two documents (Sears, Tr. 11264); and (c) they form the basis not only for Sears' conclusion but also for the Staff's statement in SER Supp. 12,

^{31/} In its Proposed Findings of Fact and Conclusions of Law, PGandE also relies on FEMA/NRC documents in support of its claim that the Diablo Canyon offsite plans are adequate. PGandE's Proposed Findings of Fact and Conclusions of Law, at 5-6, 34 (June 1, 1981).

at III-3, that FEMA had "previously specifically approved the emergency preparedness at Diablo Canyon for low power testing on an interim basis." (Sears, Tr. 11277.)^{32/}

28. In light of this evidence, the board can only conclude that FEMA, which is the federal agency responsible for review of offsite plans prior to plant licensing by the NRC,^{33/} has neither

^{32/} The parties stipulated that the FEMA/NRC Steering Committee documents relied upon by Sears were issued on March 12, 1980. (Tr. 11084.) Thus, any "finding" by FEMA approving emergency preparedness for low power operations at Diablo Canyon would have to have been made at least eight months prior to the effective date of the Commission's revised emergency planning regulations and four months before PG&E even applied for a low power license. Sears was apparently unaware of this, and, similarly, he did not know whether the proposed Diablo Canyon low power test program had ever been routed either to FEMA or the FEMA/NRC Steering Committee. (Sears, Tr. 11071, 11091.)

^{33/} See "Memorandum of Understanding Between NRC and FEMA to Accomplish a Prompt Improvement in Radiological Emergency Planning and Preparedness" ("MOU") (January 11, 1980) (Gov. Brown Exh. 3). This memorandum was entered into in response to the President's December 7, 1979 decision "that FEMA will take the lead in off-site planning and response. . . ." MOU, at D-3. Under section II of the agreement, FEMA's responsibilities include the following:

1. To take the lead in off-site emergency planning and review and assess State and local emergency plans for adequacy.

* * *

3. To complete, as soon as possible, the review of State and local plans in those states affected by plants scheduled for operation in the near future.

4. To make findings and determinations as to whether State and local emergency plans are adequate and capable of implementation (e.g., adequacy and maintenance of procedures, training, resources, staffing levels, and qualifications and equipment adequacy).

* * *

MOU, at D-4.

reviewed the specific Diablo Canyon offsite plans nor found them adequate for low power testing. The FEMA/NRC Steering Committee documents relied upon by the Staff give no indication whatsoever of any substantive finding by FEMA with respect to either the State or local plans.^{34/} Moreover, the testimony by Sears at the hearing indicated clearly his lack of personal knowledge concerning the basis for the documents cited by him, thereby undercutting as well the support for his own conclusion that the Diablo Canyon offsite preparedness is adequate. His lack of personal familiarity with the basis for the FEMA/NRC documents effectively prevented other parties from enquiring into that issue on cross-

^{34/} The Interim Agreement notes that Diablo Canyon is located in a state with an emergency plan which has received an NRC concurrence. This clearly does not, however, relieve FEMA of its obligation to review the specific offsite plans prior to licensing by the NRC. As the Director of FEMA stated in the June 24, 1980 Notice of Proposed Rulemaking entitled "Review and Approval of State and Local Radiological Emergency Plans and Preparedness":

[T]he lead for review of the adequacy of offsite emergency plans and their capability of implementation has been placed in FEMA and there is no longer an NRC voluntary concurrence program for State emergency plans. * * * The previous NRC "concurrences" do not satisfy all the requirements for FEMA approval of State and local plans under this regulation.

45 Fed. Reg. 42341, 43242 (emphasis added).

Moreover, Mr. Shiffer (PGandE) acknowledged on cross-examination that the State plan is only a "back-up" plan, while the primary legal responsibility for offsite response rests with the local jurisdiction, the County of San Luis Obispo. (Shiffer, Tr. 10746-47.) For obvious reasons, therefore, review of the local plans is essential to a true understanding of the state of emergency preparedness at Diablo Canyon.

examination, an issue which the board considers critical in this proceeding.^{35/} Accordingly, in the absence of any evidence of a substantive review by FEMA of the Diablo Canyon offsite plans, we cannot afford any substantive weight to the so-called FEMA "finding" referred to by the Staff in the Sears testimony and embodied in the FEMA/NRC documents cited therein.

~~C. Risk of Low Power Operation~~

29. In essence, both PGandE and the Staff contend that any deficiencies in the existing Diablo Canyon emergency plans are insignificant in view of the reduced level of risk during low, in comparison to full, power operation. While PGandE concedes that even at low power offsite preparedness is necessary to the outer edge of the low population zone (six

^{35/} This board cannot rely upon testimony of a witness unable to provide the basis for his conclusions. In the Matter of Virginia Electric and Power Company (North Anna Power Station, Units 1 and 2), ALAB-555, CCH.Nucl.Reg.Rep. ¶ 30,407, at 29,042 (1979). In Virginia Electric, the Appeal Board stated this principle in unmistakable terms:

Manifestly, it will not do for an expert witness to state his ultimate conclusions on a crucial aspect of the issue being tried and then to profess an inability -- for whatever reason -- to provide the foundation for them to the decision-maker as well as the other litigants. Indeed, a trier of fact would be derelict in the discharge of its responsibilities were it to rest significant findings on expressions of expert opinion not susceptible of being tested on examination of the witness. A licensing board decision suffering from such informity would be a fit candidate for reversal.

Id. at 29,043 (emphasis added).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
)

PACIFIC GAS AND ELECTRIC COMPANY)

(Diablo Canyon Nuclear Power)
Plant, Units 1 and 2))
)
_____)

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

(Low Power Test
Proceeding)

CERTIFICATE OF SERVICE

I hereby certify that on this 26th day of August, 1981, I have served copies of the foregoing JOINT INTERVENORS' RESPONSE TO PACIFIC GAS AND ELECTRIC COMPANY'S FILED SET OF INTERROGATORIES, JOINT INTERVENORS NOTICE OF OBJECTIONS TO THE ATOMIC SAFETY AND LICENSING BOARD'S ORDER OF AUGUST 4, 1981, mailing them through the U. S. mails, first class, postage prepaid.

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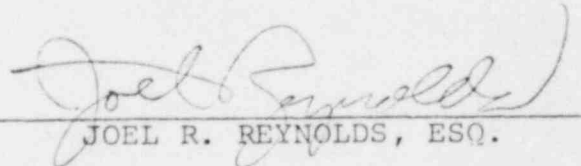
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