

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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COMMISSIONERS:

Nunzio J. Palladino, Chairman
Victor Gilinsky
John F. Ahearne
Thomas M. Roberts
James K. Asselstine

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In the Matter of

SOUTHERN CALIFORNIA EDISON
COMPANY, et al.

(San Onofre Nuclear Generating
Station, Units 2 & 3)

Dockets Nos. 50-361 OL
50-362 OL

MEMORANDUM AND ORDER

CLI-83-10

I. INTRODUCTION

On September 24, 1982, the Commission (CLI-82-27) directed certification of two issues concerning the scope of emergency planning for medical services for members of the general public required pursuant to 10 CFR § 50.47(b)(12). This regulation requires that emergency planning include "[a]rrangements . . . for medical services for contaminated injured individuals." Specifically, the issues directed to be certified were:

- (1) Does the phrase "contaminated injured individuals" as used in 10 CFR § 50.47(b)(12) require applicants for nuclear power plants to provide arrangements for medical services only for members of the public who have suffered traumatic injury and are also contaminated with radiation?

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- (2) If the answer to Question 1 is no, to what extent does 10 CFR § 50.47(b)(12) require advance, specific arrangements and commitments for medical services for the general public as opposed to the general knowledge that facilities and resources exist and could be used on an ad hoc basis?

For the reasons discussed fully below, the Commission has determined that the emergency planning required to meet the provisions of 10 CFR § 50.47(b)(12) should be decided through a clarification not only of the phrase "contaminated injured individuals," but also more importantly of the scope of "arrangements . . . for medical services" to be provided for the public in the event of a nuclear plant accident. Accordingly, we have concluded that emergency response efforts should include consideration of: (1) those who become injured and are also contaminated, and (2) those who may be exposed to dangerous levels of radiation. With respect to individuals who become injured and are also contaminated, the arrangements that are currently required for onsite personnel and emergency workers provide emergency capabilities which should be adequate for treatment of members of the general public. Therefore, no additional medical facilities or capabilities are required for the general public. However, facilities with which prior arrangements are made and those local or regional facilities which have the capability to treat contaminated injured individuals should be identified. Additionally, emergency service organizations within the plume exposure pathway emergency planning zone (EPZ) should be provided with information concerning the capability of medical facilities to handle individuals who are contaminated and injured. With respect to individuals who may be exposed to dangerous levels of radiation, treatment requires a lesser degree of advance planning and can be arranged for on an as-needed basis

during an emergency. Emergency plans should, however, identify those local or regional medical facilities which have the capabilities to provide appropriate medical treatment for radiation exposure. No contractual agreements are necessary and no additional hospitals or other facilities need be constructed.

II. BACKGROUND

The Commission directed certification of the above questions because it had noted that the Appeal Board and the Atomic Safety and Licensing Board (Licensing Board) had interpreted the requirements of 10 CFR § 50.47(b)(12) differently in this proceeding. In addition, the interpretation of this regulation involves a significant issue of policy that affects other plants and proceedings. In its Initial Decision of May 14, 1982, the Licensing Board concluded, inter alia, that 10 CFR § 50.47(b)(12) "requires applicants and offsite jurisdictions to develop and stand ready to implement arrangements for medical services for members of the offsite public who may be injured in a serious accident." LBP-82-39, 15 NRC 1163, 1199 (hereinafter "I.D. at ___," referring to pages in 15 NRC). The Licensing Board reached this conclusion after a review of (a) the applicable regulations and legislative history,^{1/} (b) pertinent Commission guidance documents,^{2/} (c) the Federal Emergency Management Agency (FEMA) position, (d) prior NRC decisions, and (e) the

1/ 10 CFR § 50.47(b)(12); 10 CFR Part 50, Appendix E § IV(E).

2/ NUREG-0396, EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans In Support of Light Water Nuclear Power Plants" (December 1978); NUREG-0654, FEMA-REP-1, REV. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," (November 1980).

evidentiary record. I.D. at 1186-1200. However, the Licensing Board's conclusion was based mainly on what it felt was "clear language" in 10 CFR § 50.47(b)(12) which requires that "offsite" plans include arrangements for medical services for contaminated injured individuals, and that members of the general public were the intended beneficiaries of the offsite plans. I.D. at 1187, 1199. The Licensing Board then concluded that the offsite emergency response plans for San Onofre did not satisfy this interpretation of 10 CFR § 50.47(b)(12). Notwithstanding this defect in the plan, the Licensing Board authorized the NRC staff to issue the operating licenses for a limited time within which the defect was to be remedied. The Board reasoned that given the low probability of a serious accident, adequate availability of hospital facilities and trained personnel, and good coordination and cooperation between applicants and local officials, the defect in the emergency plan was not significant within the meaning of 10 CFR § 50.47(c)(1), and allowed full-power operation for no more than six months. I.D. at 1999-2000.^{3/}

^{3/} On July 16, 1982, the Commission, acting pursuant to 10 CFR § 2.764(f), decided that the Licensing Board's decisions resolving contested issues in favor of the issuance of full-power operating licenses for San Onofre Units 2 and 3 may go into effect pending appellate review. (CLI-82-14, 16 NRC ____). The Commission's decision did not authorize issuance of the requested full-power licenses until the NRC staff briefed the Commission on certain uncontested issues. The staff briefed the Commission and on July 28, 1982 the Commission later authorized the staff to issue a full-power license for Unit 2 with specified conditions. This license was issued on September 7, 1982. A low-power license was issued for Unit 3 on November 15, 1982. In addition, the Commission decided that it would later conduct an "immediate effectiveness" review of any future decision by the Licensing Board regarding the medical arrangements question. The Licensing Board, in an October 1, 1982 prehearing order, scheduled the medical arrangements issues for hearing and further clarified the issues in an order dated October 29, 1982. However, in response to a certified question from the Licensing Board dated October 5, 1982, the Commission suspended all further evidentiary hearings on these matters in a Memorandum and Order dated November 19, 1982.

On February 1, 1983, based on a review of a stipulation by the parties and other considerations, the Licensing Board amended its Initial Decision of May 14, 1982 to allow full power operation, pending resolution of the medical services issue, for a period extending six months from March 17, 1982, or six months from the date the Commission issues its determination of the certified medical services question, whichever is the shorter period of time.

In denying intervenors' application for a stay of the Initial Decision, the Appeal Board stated that it had "serious doubts that the Board's reading [of 10 CFR § 50.47(b)(12)] is accurate." ALAB-680, 16 NRC ___, slip op. at 15-16 (July 16, 1982). In the Appeal Board's opinion there is a clear and deliberate distinction between "contaminated injured individuals" and members of the general public who may have suffered radiation exposure or injury in a nuclear accident. According to the Appeal Board, "contaminated injured" encompasses "potential patients whose traumatic (i.e., physical) injuries are complicated by radioactive contamination." Id. at 17. The Appeal Board found that contaminated injured patients require emergency care for their physical injuries and special medical services and facilities to ensure that the traumatic injury is treated without contaminating the persons or facilities providing it. The Appeal Board concluded that the "record is clear that relatively few people [one to 25] are expected to be both contaminated and traumatically injured in a nuclear accident . . . [and] the applicants' present emergency plan is fully adequate to

cope with these eventualities." Id. at 18.^{4/} In general, applicants and NRC staff support the Appeal Board's view, while intervenors support the Licensing Board's view.^{5/} These positions have been considered in our resolution of these matters.

III. DISCUSSION

A. NRC Regulations

In accordance with 10 CFR § 50.47(b)(12), onsite and offsite emergency response plans must include "[a]rrangements . . . for medical services for contaminated injured individuals." In its simplest terms, the first certified question seeks a definition of the phrase "contaminated injured" in order to initially establish the metes and bounds of the required planning. We have examined the regulation at issue and its

^{4/} The Appeal Board's conclusion on this matter was in the context of making a legal decision on the stay motion. It concluded that the intervenors had failed to make a strong showing that they were likely to prevail on their claim that San Onofre should not operate at full power for six months until plans are in place for medical arrangements for those members of the general public who may suffer radiation exposure in a serious nuclear accident.

^{5/} The parties' positions are reflected in the following documents: NRC Staff's Brief Regarding Medical Services Issues Certified by Commission Order, dated October 14, 1982; Applicants' Brief Regarding Certified Questions on Definition and Implementation of 10 C.F.R. 50.47(b)(12), Medical Services, dated October 13, 1982; Intervenors' Brief Regarding Required Medical Services for the General Public in Response to Commission Order CLI-82-27, dated October 14, 1982; NRC Staff's Reply Brief Regarding Medical Services Issues Certified by Commission Order, dated October 29, 1982; and Applicants' Reply Brief Re Certified Questions on Definition and Implementation of 10 CFR 50.47(b)(12), Medical Services, dated October 28, 1982.

legislative history, the related regulation in 10 CFR Part 50, Appendix E and its legislative history, and pertinent background guidance documents (NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," and NUREG-0654, FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants"). We find that none of these materials provides an explicit and conclusive definition of the term "contaminated injured individuals." Particularly, these materials provide no insight as to whether individuals exposed to severe doses of radiation would be encompassed within the term for purposes of offsite emergency planning. Basically, the Commission never explicitly addressed this issue. Accordingly, the Commission must now determine the scope of "arrangements . . . for medical services" that are needed for members of the public in the event of a nuclear plant accident in accordance with 10 CFR § 50.47(b)(12).

The underlying assumption of the NRC's emergency planning regulations in 10 CFR § 50.47 is that, despite application of stringent safety measures, a serious nuclear accident may occur. This presumes that offsite individuals may become contaminated with radioactive material or may be exposed to dangerous levels of radiation or perhaps both. Planning for emergencies is required as a prudent risk reduction measure for these individuals. Since a range of accidents with widely differing offsite consequences can be postulated, the regulation does not depend on the assumption that a particular type of accident may or will occur. In fact, no specific accident sequences should be specified because each accident could have different consequences both in nature

and degree. Although the emergency planning basis is independent of specific accident sequences, a number of accident descriptions were considered in development of the Commission's regulations, including the core melt accident release categories of the Reactor Safety Study (WASH-1400).^{6/}

It was never the intent of the regulation to require directly or indirectly that state and local governments adopt extraordinary measures, such as construction of additional hospitals or recruitment of substantial additional medical personnel, just to deal with nuclear plant accidents. The emphasis is on prudent risk reduction measures. The regulation does not require dedication of resources to handle every possible accident that can be imagined. The concept of the regulation is that there should be core planning with sufficient planning flexibility to develop a reasonable "ad hoc" response to those very serious low probability accidents which could affect the general public.

As a matter of practice, the Commission gives great weight to FEMA's views on the need for and adequacy of specific offsite protective planning measures. See 45 Fed. Reg. 55402, 55406 (August 19, 1980), Matter of Final Rules on Emergency Planning (PR-50 (44 FR 75167)), CLI-80-40, 12 NRC 636, 638, 642 (1980). In this proceeding, FEMA provided its views for inclusion in the Licensing Board's deliberations.

FEMA has stated it "believes that special arrangements for medical services need to be made for persons within the 10-mile EPZ who may

^{6/} See NUREG-0654/FEMA-REP-1, REV. 1, supra at 2.

suffer from radiation exposure, radiological contamination, or both."^{7/} It reasoned that "despite the application of protective response measures, persons within the 10-mile EPZ may be exposed to dangerous levels of radiation . . . [and], therefore, require appropriate medical services." Id. at 2. FEMA has also indicated that the medical arrangements needed should be consistent with Planning Standard L and other related planning standards in NUREG-0654. It has concluded that in the event of a serious accident which "resulted in a large number of persons being contaminated by excessive levels of radiation, State and local governments would have to rely upon identified medical support organizations in an area beyond the EPZs for the plant where the accident occurred and even other States with facilities that have the required capabilities and resources." Id. at 3.

FEMA further clarified its position regarding advance medical arrangements for members of the public in a letter to the NRC, dated September 3, 1982.^{8/} With respect to the need for medical arrangements for offsite individuals who might be classified as contaminated or radiologically exposed, it stated:

The justification for [making advance arrangements for medical services] is, in part, the difficulty of predicting additional and concurrent medical needs. Advance arrangements are justified because of the need to initiate a medical history for those exposed individuals whose future health could be affected and

^{7/} Letter from Marshall E. Sanders, Acting Chief, Technological Hazards Division, Office of Natural and Technological Hazards, FEMA, to Judge James L. Kelley, Atomic Safety and Licensing Board Panel, NRC, dated October 15, 1981.

^{8/} Letter from Richard W. Krimm, Assistant Associate Director, Office of Natural and Technological Hazards, FEMA, to Brian Grimes, Director, Division of Emergency Preparedness, NRC, dated September 3, 1982. Intervenor's Brief, Ex. B.

to reduce organizational demands on hospital emergency staff. The medical services being called for here are those predominately of medical staff knowledge and capability to handle the additional factor of radiological contamination or exposure.

* * *

Decontamination facilities and monitoring equipment would be necessary along with trained and knowledgeable staff. Planning, training and pre-established procedures are clearly a need. The arrangements for beds, special medicines, if any, and perhaps the need for isolation could be handled on an ad hoc basis. FEMA letter at p. 2.

B. Analysis and Conclusion

The Commission presumes as does FEMA that offsite individuals in the EPZ may, as a result of a nuclear plant accident, either become externally contaminated with radioactive materials or become exposed to dangerous levels of radiation, or both.

With this underlying assumption in mind, we now focus on the scope of "arrangements . . . for medical services for contaminated injured individuals" needed as a result of a nuclear plant accident which is fundamental to the certified questions. Initially, we think it fair to read the regulation to refer here to immediate or near term care. Advance planning would be most useful for immediate or near term care while long term care can be handled on an ad hoc basis and should not require advance planning. Thus, we must decide what medical services or arrangements must be provided in emergency plans to reasonably assure immediate or near term care for members of the public in the event of a nuclear plant accident.

The scope of "medical services" to be provided must focus on the special hazards from radiation which, we think, fall into two categories. The first category addresses individuals who may become trau-

matically injured (non-radiation injury for which emergency medical care is needed) and are also externally contaminated with radiation. To meet the emergency planning regulation, it has been the general practice for licensees or offsite authorities to make special arrangements for emergency treatment of contaminated injured onsite personnel and emergency workers.^{9/} The issue here is whether there should be additional specific arrangements for the general public. While some immediate action may be required, the number of individuals both onsite and offsite who may become contaminated and injured is expected to be very few.^{10/} The Commission believes it is prudent to identify local or regional medical service facilities considered capable of providing support for contaminated injured individuals. Additionally, emergency service organizations within the EPZ should be provided with information concerning the capability of medical facilities to handle individuals who are contaminated and injured. This information, in conjunction with the core services to deal with onsite personnel and emergency workers, should be sufficient to accommodate members of the general public and could be expanded as necessary on an ad hoc basis.

The second category addresses individuals who have been subjected to dangerous levels of radiation and who need medical treatment for that

^{9/} These special arrangements would include (a) local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals, (b) onsite first aid capability, and (c) transportation capability. See NUREG-0654, Planning Standard L; 10 CFR § 50.47(b)(12); 10 CFR Part 50, App. E § IV(E).

^{10/} The Appeal Board referred to an "estimate" of "from one to perhaps 25 or so" individuals would be both contaminated and injured. ALAB-680, slip op. at 18.

reason. Here, the special hazard is posed by the radiation exposure to the patient. The nature of radiation injury is that, while medical treatment may be eventually required in cases of extreme exposure, the patients are unlikely to need emergency medical care.^{11/} The non-immediacy of the treatment required for radiation-exposed individuals provides onsite and offsite authorities with an additional period of time to arrange for the required medical service. Thus, any treatment required could be arranged for on an ad hoc basis. Accordingly, emergency plans should include a listing of those local and regional medical facilities which have the capabilities to provide appropriate diagnosis and treatment for radiation exposure. No contractual arrangements or special training programs are necessary and no additional hospitals or other facilities need be constructed. No extraordinary measures are required of state and local governments. Diagnosis and treatment could take place at most existing medical facilities.^{12/}

The scope and timing of medical treatment required and the underlying assumptions and structure of 10 CFR § 50.47 lead us to conclude that adequate medical services could be provided by using existing local or regional facilities including arrangements made specifically for

^{11/} ALAB-680, slip op. at 17-20. The Licensing Board determined that "time is not of the essence" in this case. 15 NRC at 1163, 1245.

^{12/} FEMA has stressed that medical arrangements should include decontamination facilities, monitoring equipment, training, and procedures. In this regard, NUREG-0654, which is relied upon by both the NRC and FEMA, requires relocation centers capable of registering and monitoring all residents and transients in the plume exposure EPZ (Planning Standard J.12), criteria for administration of radioprotective drugs to the general public (Planning Standard J.10), and a list of medical facilities capable of providing monitoring and treatment for contaminated injured individuals (Planning Standard L.3). These provisions should ensure that adequate capability exists to handle radiological contamination or exposure.

onsite personnel and emergency workers. We believe that this is consistent with the above-stated FEMA position and the recommendations set forth in NUREG-0654.^{12a/}

IV. CONCLUSION

For the reasons discussed above, this Memorandum and Order focuses on the scope of "arrangements . . . for medical services" to be provided for members of the public in the event of a nuclear plant accident. Accordingly, we have concluded that emergency response efforts should include consideration of: (1) those who become injured and are also contaminated, and (2) those who may be exposed to dangerous levels of radiation. With respect to individuals who become injured and are also contaminated, the arrangements that are currently required for onsite personnel and emergency workers provide emergency capabilities which should be adequate for treatment of members of the general public. Therefore, no additional medical facilities or capabilities are required for the general public. However, facilities with which prior arrangements are made or which have the capability to treat contaminated injured individuals should be identified. With respect to individuals who may be exposed to dangerous levels of radiation, treatment requires a lesser degree of advance planning and can be arranged for on an as-needed basis during an emergency. Emergency plans should, however, identify those local or regional medical facilities which have the capabilities to provide appropriate medical treatment for radia-

^{12a/} We recognize that FEMA's position is not entirely clear. See e.g., 15 NRC at 1195 n. 21.

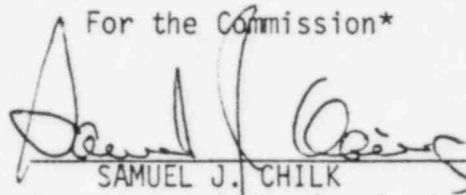
tion exposure.^{13/} No contractual agreements are necessary and no additional hospitals or other facilities need be constructed.

The Licensing Board should take any further action it deems necessary to comply with this decision.

Commissioners Gilinsky and Asselstine dissent from this Order.

The additional views of Commissioner Ahearne and dissenting views of Commissioner Asselstine are attached.

For the Commission*


 SAMUEL J. CHILK
 Secretary of the Commission



Dated at Washington, D. C.
 this 4th day of April, 1983.

13/ This is consistent with Planning Standard L.3 of NUREG-0654 which recommends that each state:

[D]evelop lists indicating the location of public, private and military hospitals and other emergency medical services facilities within the State or contiguous States considered capable of providing medical support for any contaminated injured individual. The listing shall include the name, location, type of facility and capacity and any special radiological capabilities. These medical services should be able to radiologically monitor contaminated personnel, and have facilities and trained personnel able to care for contaminated injured persons.

* Commissioners Gilinsky and Ahearne were not present when this Order was approved. Had Commissioners Gilinsky and Ahearne been present at the meeting they would have voted to, respectively, disapprove and approve the Order.

Additional Views of Commissioner Ahearne

Emergency planning has been a difficult concept to get accepted, both inside and outside the NRC. As the original sponsor of the NRC's emergency planning rule, I have seen many attempts to mischaracterize it by opponents and supporters of emergency planning. Commissioner Asselstine's views fit the latter. It is this type of expanding requirement that has driven the search for a revised source term, and increased the pressures to reduce the real requirements of the emergency planning rule.

We do recognize the radiation affects from a nuclear accident and we and FEMA do require some levels of additional facilities, special training, and substantial planning. The Commission decision endorses a balanced approach that I believe is consistent with FEMA's (at the moment somewhat ambiguous) position.

DISSENTING OPINION OF COMMISSIONER ASSELSTINE* ON SECY 83-81
SAN ONOFRE MEMORANDUM AND ORDER ON THE CERTIFIED ISSUES
REGARDING SCOPE OF ARRANGEMENTS FOR MEDICAL SERVICES

The fundamental reason for emergency planning is to prepare for the possibility of a nuclear accident involving substantial releases of radioactivity to the surrounding environs. Should such an accident occur, it is possible that large numbers of people offsite will receive significant, though not life threatening, radiation doses. It is unrealistic to assume that those individuals will not seek immediate medical opinion regarding the significance of the radiation dose. The majority decision refuses to require advanced planning, training, or procedures for handling this situation. I not only believe it prudent to have such a requirement, but I believe FEMA guidance calls for it. (Letter from Richard W. Krimm, Assistant Associate Director, Office of Natural and Technological Hazards, FEMA, to Brian Grimes, Director, Division of Emergency Preparedness, NRC, dated September 3, 1982).

Further, I believe that such planning, training and procedures can be provided without constructing new facilities or hiring new personnel. Therefore, these elements of emergency planning should be attainable without

*Commissioner Gilinsky agrees with Commissioner Asselsteine's views.

incurring a significant expense. The Commission has recently been pressing for additional emphasis on cost/benefit analyses in reaching regulatory decisions. This is a case where I believe the benefits to be gained clearly outweigh the costs. Finally, the majority's decision in this case represents, in my view, an unfortunate step back from the strong commitment to improve radiological emergency planning and preparedness that was made by this Agency and by others following the TMI-2 accident.