

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD  
BEFORE ADMINISTRATIVE JUDGES

James L. Kelley, Chairman  
Dr. Cadet H. Hand, Jr.  
Mrs. Elizabeth B. Johnson

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In the Matter of

SOUTHERN CALIFORNIA EDISON COMPANY,  
ET AL.

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

Docket Nos. 50-361-OL  
50-362-OL

October 1, 1982

MEMORANDUM AND ORDER

(Setting Medical Arrangements Question for Hearing)

Introduction.

The Board has reviewed the submissions of the parties in response to our Memorandum and Order of August 6, 1982. The primary purpose of that Order was to determine whether further proceedings might produce a better evidentiary record on the need, if any, for advance medical arrangements for the offsite public in the San Onofre plume EPZ. Your submissions indicate that a further hearing would produce additional relevant information and provide an opportunity to explore points of disagreement on that question.

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We suggested the possibility of further proceedings based on affidavits, without a hearing. Your submissions did not support that approach. We also believe that a hearing, with an opportunity for cross-examination, is the best way to probe these rather complex issues.

The Board's General Approach.

We have chosen to approach this problem initially from the perspective of available medical resources in the San Onofre area. We assume a serious accident at San Onofre, beyond design basis, and a release of radioactivity to the atmosphere. We further assume cases among the public in the plume EPZ of severe contamination and of radiation injuries involving whole body doses in excess of 150 rems. We then ask the following questions:

(1) What kinds of emergency medical services would be needed for the contaminated and/or irradiated accident victims?

(2) To what extent would those medical services be readily available in the local area without advance planning?

(3) At what point would local area resources be overwhelmed by numbers of accident victims?

(4) How serious an accident would be required to overwhelm local resources?

(5) What is the probability that a comparable accident might occur at San Onofre?

(6) How can ready availability of local area resources be augmented by advance planning?

(7) What medical resources would be available from greater distances, but with longer delays?

We refine these questions below after first discussing two factors that limit this inquiry.

Emergency Medical Services.

We are concerned with whether there is a need for advance arrangements for emergency, medical services for members of the offsite public. The underscored words are limiting factors.

First, by "emergency" services we mean services that must be provided or administered immediately or soon after the accident in order to be effective. This would rule out, for example, psychiatric treatment. As a bounding time, we would regard as an "emergency" service one that must be available within 48 hours after an accident victim is contaminated or irradiated. Conversely, we assume that any medical service which would be equally effective if administered 48 hours or more following the injury could be provided on an ad hoc basis under virtually any accident scenario; no advance arrangements would be necessary.

Second, by "medical" services we mean the term in its customary clinical sense. We make a separate point of this because of the Intervenors' desire to include planning for health education, screening and counseling services, and similar non-clinical services of a community health nature. Comments at p. 2. It may well be that such services are important in the overall scheme of things, but we think they fit more logically under the heading of public education -- a topic we have already covered and which is now pending on appeal -- than under medical services.

Questions for the Parties.

All Parties should answer the following questions, providing expert testimony where the subject matter requires it.

1. Kinds of Medical Services. Describe in appropriate detail the kinds of emergency medical services that would be required for cases of severe contamination and of radiation doses involving upwards of 150 rems, whole body dose. In some cases, the same person may be both contaminated and irradiated. Consider requirements for the following types of personnel, equipment and medicine:

- a. Doctors
- b. Nurses and other health personnel
- c. Decontamination facilities, including monitoring equipment
- d. Hospital beds
- e. Testing facilities
- f. Potassium iodide; other medicines
- g. Ambulances or other transportation
- h. Other items

2. Local Resources. Some, most, or all of the required emergency medical services might be provided on an ad hoc basis -- i.e., without any advance arrangements by offsite planning authorities -- because the proof may show that resources are readily available in the local area and that time is not of the essence. By "local area" we mean the Southern California coastal area, including Los Angeles and San Diego. For example, the Applicants offered some data in their submission concerning the number of hospitals having nuclear medicine services (with numbers of beds and

associated oncologists) in the area. State in appropriate detail the extent to which the required services you listed in response to paragraph 1 could be provided on an ad hoc basis within about 48 hours or less following contamination or irradiation.

3. Maximum Capabilities of Local Resources. What are the approximate maximum numbers of accident victims local resources could cope with, assuming they are being strained temporarily to handle an emergency. For example, a doctor could increase his normal patient load and a hospital might add some temporary beds. At what numerical point would local resources, resource by resource, be not merely strained, but overwhelmed?

4. Accident Magnitude. Taking into account relevant variables, including quantity of the release, wind directions, and the like, how serious an accident would be required to produce the number of accident victims that would overwhelm local resources? Assume that evacuation and sheltering plans work substantially as expected, but bear in mind that evacuation will probably take three to seven hours in differing circumstances, and that sheltering does not afford complete protection.

5. Accident Probability. What is the approximate probability -- per reactor year and over the life of the facility -- that the accident described in response to question 4 might occur at San Onofre? Consider that there are three operating reactors there.

6. Advance Arrangements. How could the rapid availability of local area resources be augmented by advance arrangements by offsite emergency officials? "Arrangements" is used here in a broad sense to include not only determining the location of existing facilities and trained personnel, but also, for example, provision of additional training to health

personnel. As we have made clear previously, however, these arrangements would not include large new capital expenditures for new facilities. Be specific as to each category of medical service.

Has it been determined whether local hospitals will accept low income accident victims who cannot meet usual credit standards? Presumably their expenses will be paid later under the Price-Anderson Act mechanism.

7. Availability of Distant Medical Services. Would it be possible to draw upon more distant medical services -- beyond the Los Angeles and San Diego areas -- if local resources were overwhelmed? Could this be done in a timely manner for radiation patients in need of hospitalization? What advance arrangements are necessary or desirable with respect to distant medical services?

Other Questions.

1. All parties. Is the phrase "contaminated injured individuals" as used in 10 CFR 50.47(b)(12) a term of art with a clearly defined meaning? If so, state that meaning and cite scholarly treatises or articles illustrating term of art status. If this phrase is not a term of art, does it have any clear meaning derivable from the rulemaking record or elsewhere?

2. For the Applicant. What kinds of accidents was Dr. Linnemann assuming might occur when he expressed doubt at the prior hearing that "anyone offsite would receive anywhere near a dose of radiation resulting in symptoms of radiation sickness, much less a hospitalization dose?" (Tr. 7086-87) Did any of his assumed accidents exceed the design bases for San Onofre?

3. For the NRC Staff. In Supplement 6 to the SER at p. 13-3, you state that -- "in worst case accidents, if one postulates large numbers of high radiation exposures, the effects are such that a number of days are available before treatment is needed and ... during this time ad hoc plans for transportation to hospital beds anywhere in the U.S. could be carried out."

Provide the technical medical basis for your statement that "a number of days are available before treatment is needed."

If an ad hoc response might require transporting victims "anywhere in the U.S.," might not advance planning be preferable if that could keep people closer to home?

On the basis of the latest submissions, the Staff and FEMA appear to disagree about many aspects of this question. The Staff, in cooperation with FEMA, should isolate the separate elements of disagreement in terms of services involved and whether they are available ad hoc. The technical basis for any points of disagreement should be identified.

We expect the staff to present technical witnesses at this hearing, including a medical witness. FEMA indicates in its September 3, 1982 memorandum that it could present experts to clarify or reaffirm its positions. We hope it will do so.

#### Filing Dates and Hearing Location.

The Applicants and the Intervenors shall have their testimony in the Board's hands (note our separate addresses) by November 10, 1982. The

NRC Staff, in cooperation with FEMA, will have an opportunity to review and comment on the Applicants' and Intervenors' testimony. The Staff shall have its testimony in the Board's hands by November 19, 1982.

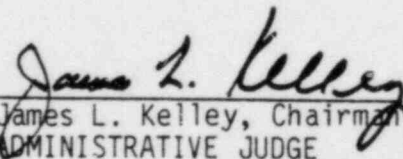
The hearing will be conducted somewhere in Southern California beginning on November 30, 1982. The exact time and place will be determined in consultation with the parties at a later date. We expect the hearing to last two to four days.

We will discuss further arrangements for the hearing with the parties by telephone during October.

Certification to the Commission.

As you know, the Commission has recently directed the Appeal Board to certify to it two questions concerning the interpretation of 10 CFR 50.47(b)(12), without making reference to the related issues pending before this Board. That development indicates that the Commission might decide those questions before these further proceedings can be concluded and therefore without taking their results into account. In order to avoid a possible substantial waste of resources, we will shortly certify to the Commission the question whether it wishes us to terminate or continue these proceedings.

FOR THE ATOMIC SAFETY AND  
LICENSING BOARD

  
James L. Kelley, Chairman  
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland,  
this 1st day of October, 1982.