

ORIGINAL

NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

SOUTHERN CALIFORNIA EDISON COMPANY)	DOCKET NOS. 50-361, OL
ET AL.,)	and 50-362 OL
(SAN ONOFRE NUCLEAR GENERATING)	
STATION, UNITS 2 AND 3)	

DATE: SEPTEMBER 24, 1981 PAGES: 10,096-10,313

AT: Anaheim, California

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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
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5 In the Matter of: :
6 SOUTHERN CALIFORNIA EDISON COMPANY, et al. : Docket Nos.
7 (San Onofre Nuclear Generating Station, : 50-361 OL
8 Units 2 and 3) : 50-362 OL
9 -----X

10 Marina del Rey Room
11 Marriott Hotel
12 700 W. Convention Way
13 Anaheim, California

14 Thursday,
15 September 24, 1981

16 Evidentiary hearing in the above-entitled
17 matter was resumed, pursuant to adjournment, at 9:10 a.m.

18 BEFORE:

19 JAMES L. KELLEY, Chairman
20 Atomic Safety and Licensing Board

21 DR. CADET H. HAND, JR., Member

22 MRS. ELIZABETH B. JOHNSON, Member
23
24
25

1 APPEARANCES:

2 On behalf of the Applicants, Southern California
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12 Southern California Edison Company

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1					10,098
		<u>C O N T E N T S</u>			
2	<u>WITNESSES</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u> <u>VOIR DIRE</u>
3	Charles Fleming				
	By Mr. McClung	10,107			
4	By Mr. Casey		10,122		
5	John Kearns				
	By Mr. McClung	10,127			
6	By Mr. Pigott		10,187		
	By Mr. Hoefli.g		10,189		
7					
8	Mary Frances Reed				
	By Mr. McClung	10,198		10,278	
	By Mr. Pigott		10,263		10,204
9					
10	Norma Ruth Bloom				
	By Ms. Gallagher	10,280			
	By Mr. Rogin		10,306		
11					
12					
13	<u>EXHIBITS</u>				
14	<u>Intervenors'</u>	<u>IDENTIFIED</u>			<u>IN EVIDENCE</u>
15	13 through 20	10,106			
16	21	10,106			10,113
17	22	10,106			10,111
18	23	10,106			10,134
19	16,16(a) through				
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20	(amended)	10,211			10,211
21	25, 25(a)	10,212			10,213
22					
23	(Written Testimony of				
	Sheldon C. Plotkin,				
24	bound in following page				
	10,313				
25					

P R O C E E D I N G S

(9:16 a.m.)

1
2
3 JUDGE KELLEY: Good morning. We would like to
4 start this morning with our ruling on the proposed
5 contention by the Intervenor GUARD concerning fission product
6 releases from Units 1 and 2, referred to in some of the
7 pleadings as the interconnection issue.

8 Our decision is that we are not going to allow
9 this contention. It is an emergency planning contention
10 unlike the TMI contentions, and it does have, it seems to us,
11 some relationship to GUARD's admitted contentions, in the
12 respects in which they challenge the full power plans, but we
13 do see it as a new contention. It does inject into the case
14 the notion of fission product releases from both 1 and 2, and
15 a contention of this nature could have been raised earlier.

16 The low power motion context is not a free
17 opportunity to bring in new contentions. Rather, parties have
18 to satisfy the requirements of contentions generally. I guess
19 that speaks for itself. And in addition, certain other
20 requirements that apply to late-file contentions.

21 We think it important to note in this connection
22 that some of these requirements, in our view, become more
23 stringent as the case progresses. Otherwise, admission of
24 contentions under looser standards would, we think, delay
25 cases and unduly prejudice the Applicants. Specifically,

1 10 CFR 2.714(a) requires that a proposed contention be set
2 forth with particularity. We think this is a requirement
3 that becomes more stringent with the passage of time and the
4 progress of the case.

5 Because you at this late stage don't have the
6 discovery process in which to develop information and refine
7 a contention, nor do you have the pre-trial negotiation
8 phase to refine contentions, so that when you come in at the
9 eleventh hour, and this is at least the eleventh hour in
10 this hearing, we think you need a very clear and very
11 specific contention in order to satisfy particularity
12 requirements.

13 The contention in question reads as follows:

14 Whether the Applicants have sufficiently
15 demonstrated that a radiological emergency at SONGS 2 and 3
16 could not cause the radiological emergency at SONGS 1, and
17 we read that to mean SONGS 2 and SONGS 1, since no low
18 power license is being sought for three, and three isn't
19 yet constructed.

20 Now, earlier, when we discussed this contention
21 and in some of the pleadings there were references to
22 interconnection, or not, of 1 and 2, if this were just a
23 straight allegation of interconnection of safety systems, that
24 possibly might be specific enough, but it is not. It is
25 broader than that, and indeed as to physical interconnection

1 of safety systems, we have at least some reason to think that
2 they are just not interconnected. Apart from Mr. Rood's
3 affidavit earlier, and this, we had established an exclusion
4 in low population zones based on, among other things, whether
5 or not these plants were interconnected, and those zones
6 reflect a lack of interconnection.

7 So we don't understand that to be the exclusive
8 focus and we think that if it were, there is a serious
9 question of whether it is worth taking any time to look into
10 it.

11 Beyond that, though, we really don't know what
12 the contention does envision, and we think that it is there-
13 fore unfair to the Applicant to admit it, because there
14 isn't any very clear indication of what it is they are
15 supposed to respond to.

16 Another basis for late contentions is whether or
17 not it would cause delay. I think the very lack of
18 particularity here does at least raise a question there. We
19 just don't know whether this would cause some delay or not,
20 don't have any idea how long it would take to try it, an hour,
21 a day, three days, so we think that also is a factor, but we
22 base our ruling primarily on what we see as a lack of
23 sufficient particularity, including, I will just note one
24 thing, we have a list of contentions in this case involving
25 various aspects of the adequacy of the emergency plans,

1 contention number 2, and then a long list of subparts, and
2 it is perfectly fair to observe, they aren't very particular
3 either, but they were stipulated to, and the parties came in
4 and said in effect this is what we want to litigate, and we
5 see this particularity requirement as largely for the
6 protection of Applicants in preparing their cases, and when an
7 Applicant comes in and says, that is okay with us, then we are
8 inclined to approve it as well.

9 Here we have resistance to a proffered contention,
10 and we think we are required to apply a rather stringent
11 particularity standard. That is, we have said we don't think
12 is met here. So we are not allowing this contention.

13 Which brings us, I guess, to the next witness.
14 We have four witnesses today?

15 MR. MC CLUNG: Yes.

16 JUDGE KELLEY: All right. Where does the
17 witness sit?

18 MR. MC CLUNG: At this point, I would like to
19 distribute the Exhibits that I have brought today to the
20 various people.

21 JUDGE KELLEY: Fine. Right.

22 MR. MC CLUNG: At this point, I think it would be
23 useful to give these particular Exhibits, just for the record,
24 a Board Exhibit Number, and I would ask the Applicants if
25 they know what number we are at, because I do not. I got

1 confused.

2 JUDGE KELLEY: Just a minute. We will check on
3 it. Let us go off the record for a minute.

4 (Discussion off the record)

5 JUDGE KELLEY: Back on the record.

6 Mr. McClung will read his exhibit titles, and we
7 will assign a number, beginning with 13.

8 MR. MC CLUNG: Exhibit 13 for the Intervenors
9 will be the regional assistance committee, RAC, review of the
10 Onofre offsite emergency response plans, dated April 27,
11 1981.

12 Exhibit Number 14 for the Intervenors will be
13 evaluation findings, San Onofre Nuclear Generating Station,
14 offsite emergency response plans exercise, dated May 13, 1981.

15 Intervenors Exhibit Number 15 will be the interim
16 findings and determination relating to the status of state
17 and local emergency preparedness for the San Onofre nuclear
18 generation station, Units 2 and 3, dated June 3, 1981.

19 Intervenors Exhibit Number 16 will be evaluation
20 of Orange County Nuclear Power Plant emergency response plan.

21 MR. PIGOTT: Could I ask for a slight
22 clarification in the -- or modification in the title, Mr.
23 McClung, and if you don't want to, it is your determination,
24 but I believe the next four exhibits are evaluations by State
25 OES, otherwise not to be confused by FEMA evaluations, or NRC

1 evaluations, if we could insert that in the title, I think it
2 would probably be helpful in the long run.

3 MR. MC CLUNG: Okay. I think that is a good idea,
4 Mr. Pigott, and I will try to do that. Let us go back to
5 number 16, which is now going to be called the evaluation by
6 the State Office of Emergency Services, of Orange County
7 Nuclear Power Plant Emergency Response plan, using NUREG 0654
8 criteria.

9 Exhibit Number 17 will be evaluation by the
10 State Office of Emergency Services of San Diego County
11 Nuclear Power Plant emergency response plan, a response plan
12 using NUREG 0654 criteria.

13 Exhibit Number 18 will now also be titled
14 Evaluation by State Office of Emergency Services of San
15 Clemente Nuclear Power Plant emergency response plan, using
16 NUREG 0654 criteria.

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1 Intervenor's No. 19 will be called Evaluation
2 by State Office of Emergency Services of San Juan Capistrano
3 Nuclear Power Plant Emergency Response Plan Using NUREG 0654
4 Criteria.

5 No. 20 should read Evaluation by State Office of
6 Emergency Services of the Interagency Agreement and Evacua-
7 tion Procedure, IAEP, Emergency Response Plan Using NUREG
8 0654 Criteria.

9 Exhibit No. 21 of the Intervenor's will be the
10 Executive Summary for the California Disability Survey,
11 dated in the Winter of 1980. It will also be referred to as
12 Sponsored Exhibit CF-1, Mr. Fleming.

13 Exhibit No. 22 for the Intervenor's is entitled
14 a Memorandum Concerning Disabled Individuals and Emergency
15 Preparedness, dated January 15, 1981, which will also be
16 entitled Sponsored Exhibit No. CF-2 of Mr. Fleming.

17 Exhibit No. 23 is entitled State of California
18 Nuclear Power Plant Emergency Response Plan, dated July,
19 1975, revised March, 1981. It will also be noted as
20 Sponsored Exhibit No. JK-1, of Mr. Kearns.

21 Exhibit No. 24 will be the Emergency Planning
22 Zones for Serious Nuclear Power Plant Accidents, dated
23 November, 1980, which will also be known by Sponsored
24 Exhibit No. JK-2, from Mr. Kearns.

25 Let me correct the record on Exhibits 16 through

2
1 20 to clarify that they may also be referred to by their
2 sponsors' exhibit numbers. No. 16 may be referred to as
3 MFR-1, for the sponsor Dr. Reed. Intervenors Exhibit No.
4 17 may also be referred to as MFR-2, for the sponsor Dr. Reed.
5 Exhibit No. 18 of the Intervenors may also be referred to
6 as MFR-3 for the sponsor of the exhibit, Dr. Reed. And
7 Exhibit No. 19 may also be referred to as MFR-4, as the
8 sponsor of that exhibit is Dr. Reed. And finally, Exhibit
9 No. 20 may be referred to as MFR-5, denoting the sponsorship
10 of that exhibit as being Dr. Reed.

11 (The above documents were marked
12 for identification as Intervenor
13 Exhibits 13 through 24.)

14 MR. MC CLUNG: Are we ready to proceed?

15 JUDGE KELLEY: Except there's too much flame
16 under the coffee. Boil away. Otherwise, I think we are
17 ready.

18 MR. MC CLUNG: Intervenors would like to call
19 their first witness of the day, Mr. Fleming, from the State
20 Department of Rehabilitation.

21 Whereupon,

22 CHARLES FLEMING

23 was called as a witness herein and, after being first duly
24 sworn by the Chairman, was examined and testified as follows:

25 WITNESS FLEMING: I would like to make a clarifying

3
1 point that I'm actually not a doctor. I appreciate the
2 promotion, but it is a little premature.

3 JUDGE KELLEY: Thank you.

4 DIRECT EXAMINATION

5 BY MR. MC CLUNG:

6 Q Thank you. Good morning, Mr. Fleming.

7 A Good morning.

8 MR. MC CLUNG: Mr. Fleming is here today to
9 speak for the Intervenors with respect to Contention No. 1
10 and various subparts of Contention No. 2, with respect to the
11 special population groups of the physically handicapped and
12 the special needs that they may require.

13 BY MR. MC CLUNG:

14 Q Could you please state your name and address for
15 the record?

16 A My name is Charles Fleming. My address is
17 8907 Gulfport Way, Sacramento.

18 Q And are you appearing today in response to a
19 subpoena?

20 A Yes, I am.

21 Q Could you tell us what your organization -- your
22 organization you work for and what your position is with
23 that organization?

24 A I am Chief of the Mobility and Communications
25 Barrier Section of the California Department of Rehabilita-

1 tion. My section is mandated the responsibility of advising,
2 consulting, possibly bringing compliance actions in situa-
3 tions that involve a violation of the California Handicapped
4 Access Codes. What this actually means is that we confer
5 with building officials who are working on plans requiring
6 physical access to the handicapped in buildings. We are
7 involved with transportation issues with Caltrans. We
8 consult, we answer something like 200 telephone calls a month
9 from architects and building officials concerned with pro-
10 blems of access, of entrance and egress of the handicapped
11 into buildings.

12 Q Could you describe briefly your educational
13 background?

14 A I have a masters degree in public administration
15 from USC which I just received in January, a BA in psychology
16 from Cal State Fullerton, 1963. I have been a rehabilitation
17 counsellor working with the disabled, I've done numerous
18 jobs for the department in the regional office, surveyed
19 schools used for the handicapped until I obtained my current
20 position. I also for two years was program manager for the
21 drinking driver program for the Office of Alcohol and Drug
22 Abuse.

23 Q Could you describe in a little bit more detail
24 the positions you have had or the experience that you have
25 with respect to problems of disabled people in general with

1 getting services and things like that?

2 A Well, the first major area, of course, was my
3 job as a rehabilitation counsellor for 3 years. I was
4 involved with employment of the handicapped, training them,
5 assisting their vocational skills, placing them, counselling
6 them, helping them with employment problems. The responsib-
7 ility that I have now has to do more with access to public
8 accomodations. I think what is relevant here is the fact
9 that I was involved with the Governor's task force on seismic
10 safety and in that capacity became concerned about providing
11 input to the Governor's committee regarding the needs of the
12 handicapped in an evacuation situation.

13 Q I think you have already described your general
14 duties and responsibilities with respect to your job. Could
15 you tell us a little bit more detail of what that entails?

16 A I'm not exactly sure which area you would like
17 to know about. The evacuation concerns, the mobility problems,
18 or what?

19 Q Okay. That's a fair question. Could you describe
20 your participation in the task force that you described?

21 A Well, about six or eight months ago the governor
22 asked for a task force on seismic safety, I guess in response
23 to the information he received from state seismologists that
24 seismic activity is increasing and we may be due for a very
25 large quake in an urban area. So each department sent some-

1 one to represent that department on the governor's task
2 force. Since I was involved with barriers and architecture,
3 site surveys and that sort of thing, I got elected. I
4 attended the governor's committee, got put on the physical
5 subcommittee and it occurred to me at that time that since
6 I was representing an organization which has a disabled
7 constituency I should give some thought to the needs of the
8 handicapped in this sort of a situation.

9 As a result of that, I got my staff together
10 for a brainstorming session. They have had a lot of exper-
11 ience with site surveys, with architectural problems -- two
12 of them are in wheelchairs. They are involved with the
13 handicapped community. And we put together what we thought
14 were basic ideas or areas of concern that would have to be
15 considered in working out an evacuation strategy. We then
16 submitted that to the state medical consultant in a memo
17 and proceeded to begin to work with our local independent
18 living project to work out some of the needs we thought
19 should be addressed in evacuation.

20 I'm not sure how far you want me to elaborate,

21 so --

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1 Q That is fine. The memo that you described --
2 would that be the memorandum to William R. Nesbit, Chief,
3 Disaster Medical Services section --

4 A Yes, it would.

5 Q -- that is referred to in this proceeding as the
6 memorandum concerning disabled individuals and emergency
7 preparedness which is dated January 15th, 1981?

8 A Yes.

9 Q And referred to as Intervenors Exhibit Number 22?
10 You prepared that memorandum?

11 A M-hmm. (Positive response.)

12 MR. MC CLUNG: I would move at this time for
13 the admission of Exhibit Number 22 into evidence.

14 MR. CASEY: No objection from Applicants.

15 MR. HASSELL: Staff has no objections.

16 JUDGE KELLEY: So ordered.

17 (Whereupon, the document previ-
18 ously marked for identification
19 as Intervenors' Exhibit Number
20 22 was received in evidence.)

21 BY MR. MC CLUNG:

22 Q Could you describe for us briefly where the
23 California -- what the California Disability Survey is?

24 A That was a survey conducted by our department to
25 determine the number of handicapped individuals at the

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1 working age, between the ages of 16 and 65 in this state,
2 undertaken last year, completed last year. It was essential-
3 ly a telephone survey.

4 Q Was that -- is that survey the survey that is
5 referred to as executive summary -- is this the executive
6 summary of the survey which is referred to as executive
7 summary for the California Disability Survey, winter 1980,
8 and the cover letter thereto, which is described in here
9 as Intervenors' Exhibit 21?

10 A Yes, it is.

11 Q Now is that survey -- what basic facts and
12 information are contained -- without going into specific
13 numbers -- what basic facts and information are contained
14 in that survey?

15 A I think the facts most relevant to your concerns
16 are the number of disabled throughout the state, or t.
17 percent of disabled, and as I recall, I haven't looked at
18 that recently, but it was 10.5, which is fairly consistent
19 with the numbers of other types of studies, for example,
20 the U.S. census is pretty much at that figure.

21 Important also was the fact that seven percent
22 of the population -- not seven percent of the 10.5, but
23 seven percent were found to be seriously disabled. What that
24 means is that there are a significant number of people in
25 the population with serious sensory or motor disabilities,

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1 blind, deaf, mobility impaired, what have you, which have
2 difficulty functioning or communicating and would be impacted
3 by an evacuation plan.

4 Q Is that report the executive summary of which is
5 Intervenors' Exhibit Number 21 a public document that is
6 relied upon by state governmental and other agencies?

7 A Yes, it is.

8 MP. MC CLUNG: I would move at this time for
9 the admission of Intervenors' Exhibit 21.

10 MR. CASEY: Applicants have no objection.

11 MR. HASSELL: Staff has no objection.

12 JUDGE KELLEY: So ordered.

13 (Whereupon, the document previ-
14 ously marked for identification
15 as Intervenors' Exhibit Number
16 21 was received in evidence.)

17 BY MR. MC CLUNG:

18 Q Do you have a copy of the summary, by any chance?

19 A Not with me, no.

20 Q When we have been speaking about physically
21 handicapped individuals in general terms, would you outline
22 briefly the general categories which you are talking about
23 when you are talking about physically disabled individuals?

24 A Okay. I was --

25 Q I might refer you to table ES-3. It doesn't

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1 have a page number, but it follows after page seven in the
2 Exhibit Number 21.

3 A Okay, would you like me to enumerate the break-
4 down we used, or simply talk a bit about the conditions?

5 Q Without -- you know, you don't have to repeat
6 what is written on that page, but I would like you to just
7 generally discuss the various categories.

8 A Okay, just looking at these breakdowns, for
9 example, the first category, respiratory conditions -- you
10 have individuals who are usually -- people with those con-
11 ditions are mobility -- frequently mobility impaired, not
12 usually. You have individuals who need respirators. You
13 have individuals who have emphysema and need certain types
14 of medications or inhalers or what have you, who have
15 problems with a great deal of physical exertion. You can
16 have a situation of neurological conditions, of course. You
17 can have people with epilepsy who need medication for that,
18 who have MS, again mobility problems. You have people with
19 certain kinds of mental disabilities or cognitive disabili-
20 ties resulting from that, and the problem with kidneys, for
21 example. You have people who need dialysis, kidney machines,
22 and within a 24 hour period have to have access to those
23 kinds of medical services, and so on and so forth.

24 And what we are showing here, there are numerous
25 people in the population who have these conditions who need

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1 certain kinds of medical services or the services to func-
2 tion in evacuation or otherwise.

3 Q Okay, turning your attention to table ES-1 which
4 follows the preface -- is that a general breakdown of the
5 total number of disabled in all the various categories?

6 A Yes, it is.

7 Q What is meant by seriously or severe disabled,
8 which is one of the numbers in that -- on that table? What
9 is -- is that a technical term or what --

10 A Yeah, our department has a specific definition
11 of that which I didn't -- wasn't prepared to bring, but
12 basically what that means is people who are severely impaired
13 in terms of their mobility, in terms of their sensory percep-
14 tion, for example, the legally blind -- people who are
15 totally deaf, not simply impaired hearing -- people who have
16 marked limitations in their functioning, in their everyday
17 life activities.

18 Q With respect to the seven percent of the popula-
19 tion that is listed in that table ES-1, 7.7 percent that are
20 severely disabled, would they have special problems with
21 regard to transportation?

22 A I would say a majority of them would. Don't
23 forget that also includes the deaf, which would not have a
24 transportation problem per se. Even those with serious
25 psychosis, since they don't function very well, would have a

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1 transportation problem. The blind obviously would. The
2 mobility impaired would.

3 Q So -- in this survey, talking about working age
4 disabled individuals, is generally taken as a separate group
5 from people who may be older and also have many of these
6 same disabilities, is that correct?

7 A Right. The primary concern of our department is
8 of course employment of the handicapped, so we are concerned
9 with employment age. This doesn't take into account the
10 elderly, which I would expect would have a higher rate of
11 disability as they get older, or disabled children.

12 Q So if there were disabled people that were el-
13 derly, they wouldn't be contained within the numbers in this
14 chart?

15 A Right.

16 Q Correct. Are you familiar enough to tell us
17 what rehabilitation district -- you have things called
18 rehabilitation districts, do you not, for your purposes?

19 A M-hmm. We have 26 districts throughout the
20 state.

21 Q Do you know what district the Orange County area
22 is in?

23 A Yeah, we have an Anaheim district and that would
24 be within that area.

25 Q So if we were then to refer to the table number

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1 five, ES-5, which falls after page eight, at the bottom of
2 that column there is some numbers, some numbers listed for
3 the Anaheim district --

4 A M-hmm.

5 Q Now, would Orange County be included in that?

6 A Yes, it would.

7 Q And there the percent disabled is listed as 8.2
8 percent, and the severely disabled is 5.6 percent, is that
9 correct?

10 A That is correct.

11 Q Would that be -- would that number be generally
12 applicable to a distribution -- a random distribution of the
13 population within the geographic area within Orange County?

14 A I would suspect it would underrepresent that
15 population a bit, because the Anaheim district is of course
16 involved with vocational rehabilitation, so they tend to see
17 people who are looking for employment or who feel with
18 training or services they can become employed. I would ex-
19 pect you would have a number of severely disabled who would
20 not be considering employment, wouldn't apply to the district
21 for services. These services are voluntary. They aren't
22 mandatory.

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25

1 Q Turning now to the Exhibit Number 22, which con-
2 tains your conclusions of your task force that you had with
3 respect to planning for evacuation of physically disabled
4 people, could you generally -- without referring directly,
5 I just want you to summarize the specific problems which
6 you found that would be specific to disabled individuals
7 which would have to be addressed in an evacuation response.

8 A In taking a look at this whole concept, we came
9 up with four major areas of concern. They would be educa-
10 tion, communication, transportation and medical maintenance,
11 and to break those down a little bit -- for example, with
12 education, there would have to be an educational effort made
13 with the handicapped to teach them what to do in preparation
14 for an evacuation or for an emergency -- to identify, for
15 example, people on their block, a buddy system sort of thing,
16 to determine ways to get out or where to get transportation.
17 To make sure that they put in extra batteries for their
18 respirator, or extra supplies of medicines, or whatever. So
19 there would have to be that.

20 Secondly, there is the concern for communication
21 which ties in. How are the deaf going to know there is an
22 evacuation since they don't listen to the radio or watch TV
23 very much. There would have to be some system worked out
24 where they would be advised. Then there is communication.
25 People in chairs can't really function when they are out of

1 the area if they don't have their wheelchair, and that means
2 you have got to have some kind of transportation for them.
3 There are numerous agencies that have vans with lifts that
4 could be called upon to meet at some particular place --
5 rendezvous, and perhaps these people could get there, the
6 County could get them there and they could somehow evacuate
7 them, or they could make plans for someone in their family
8 to get them out if that happened. In other words, work out
9 some way to transport these people in an evacuation.

10 Okay, in terms of medical maintenance, then you
11 have concerns about once they are evacuated, what do they
12 do? If you have somebody on a respirator, he has got to have
13 power. If he is a diabetic, he has got to have insulin. If
14 he is on a kidney machine, he has got to have some kind of
15 access to that. Preparation has to be made for all these
16 concerns if they are going to survive a catastrophic situa-
17 tion and/or an evacuation.

18 So that is generally speaking what we came up
19 with.

20 Q With respect to a -- if a survey were taken by
21 mailing out information to the general public to attempt to
22 elicit a -- or to create a support structure for the evacua-
23 tion response wherein the various physically handicapped
24 people would send a card into a local government agency and
25 request this type of service, would that be sufficient in

1 your mind to protect the interest of the disabled individuals?

2 A Well, if I were going to go about it that way,
3 I think it would be necessary to provide an educational ef-
4 fort also. If they don't know what the card means, what
5 happens when I send the card in? Is my name put in some kind
6 of computer? Am I identified as disabled, will someone come
7 for me if there is a problem? What does this card have to
8 do with? And I think to do that -- I think you would have
9 to make an educational effort with them too, and they would
10 have to have some understanding of what the card really --
11 what results are going to flow from their returning it.

12 This ties into some solutions we came up with,
13 by the way, in brainstorming this problem. I don't know -- if
14 it is appropriate I can discuss those.

15 Q Please do.

16 A Well, in thinking about it we determined that
17 there already is a system in existence right now for educat-
18 ing and alerting the handicapped. There are, for example,
19 a number of organizations -- the California Association for
20 the Physically Handicapped, there is the American Associa-
21 tion for the Blind, there are all the independent living
22 projects, for example in Orange County you have Dale
23 Mackintosh. They have advocacy and they have lists of at-
24 tendants and they do housing advocacy.

25 So you have these groups in place now, and we

1 thought that actually the way it is going to have to happen --
2 no one is going to have the staff to go out and round up all
3 these handicapped folks if something happens, so give them a
4 part in working out their own evacuation system. Work with
5 these primary centers, put together perhaps a handicapped
6 advisory committee, and put an educational effort on with
7 them and let them designate their own buddy systems, their
8 own transportation, their own informational systems, and let
9 them put that in place and consult with you on it so that
10 they start to take some ownership, some responsibility for
11 their own efforts, and that I think would be very helpful
12 in getting them organized to get their own system in place.

13 Also, I think there would be more of a tendency
14 for many handicapped to trust their own organization and their
15 own folks.

16 Q Do you think that groups of handicapped people
17 could also aid in specification of the needs for the reloca-
18 tion centers where they might have to go after the evacuation?

19 A Right. They could survey them for access. They
20 have contacts with other independent living projects. For
21 example, one of the ideas we came up with with a sister city
22 where people could be relocated to housing where there are
23 other handicapped people who understand their needs, who
24 could work with them.

25 Q In your opinion, without -- strike that.

1 MR. MC CLUNG: I have no further questions.

2 JUDGE KELLEY: Fine. Mr. Casey?

3 MR. PIGOTT: Can we take a break now?

4 JUDGE KELLEY: Yeah, ten minutes. Off the
5 record.

6 (Whereupon, a brief recess was taken.)

7 JUDGE KELLEY: Back on the record. Cross examina-
8 tion by the Applicants.

CROSS EXAMINATION

9 BY MR. CASEY:

10 Q Just a few questions, Mr. Fleming. To your
11 knowledge, which are the principal community groups repre-
12 senting the physically handicapped community in the area of
13 San Clemente, San Juan Capistrano, which I assume is in what
14 you call your Anaheim district?

15 A M-hmm. Okay. I am not real familiar with what
16 is in that area. I know that the Community Services Center
17 of San Diego is a major independent living center in the
18 San Diego area. Orange County has the Dale Mackintosh Center
19 to provide those same services. Now, where the dividing line
20 would be for those services, I don't know.

21 I know that the California Association for the
22 Physically Handicapped is a state-wide organization, and
23 has, I am sure, major divisions in Orange County and San
24 Diego, and they could help you to contact the other groups.
25 You have area boards for mentally disabled -- there is one

1 in the San Diego area and there is also one in Orange County.
2 And I think the important thing here is that all of those
3 would have the other resource -- they could tell you where
4 the other groups are -- you know, Easter Seals, the blind,
5 all that.

6 Q And would your office have the specific details
7 for making these contacts?

8 A We could do that for you. We certainly could
9 contact our Anaheim district and get the information for you.

10 Q To your knowledge, do these groups generally
11 cooperate with the Orange County Chapter of the Red Cross in
12 planning for and responding to public emergencies?

13 A My understanding in talking to them is that they
14 would be happy to do so. I don't think they have been called
15 on a lot -- from what I know, to do that.

16 Q But they would be willing to cooperate?

17 A I think they are a good resource that a lot of
18 agencies haven't realized yet.

19 Q And do you believe that working with these
20 community groups, the Southern California Edison Company and
21 local government would be able to formulate community meet-
22 ings geared to the needs of the handicapped community?

23 A I believe you could. They could do the work as
24 far as organizing the meetings, and they have got numerous
25 volunteers who could spread the word, so you would get a lot

1 of free manpower, actually.

2 Q Well, on behalf of the Applicants, we thank you
3 for what is very helpful information about a particular popu-
4 lation group which of course is of concern in an evacuation,
5 and we will be working with those groups.

6 A Fine, if I can provide any information, just
7 give me a call.

8 Q Thank you very much.

9 A Thank you.

10 MR. HASSELL: The Staff has no questions.

11 JUDGE KELLEY: Okay. I wanted to ask you about
12 one thing, Mr. Fleming. Right toward the end of your direct
13 testimony you indicated if I understood you correctly that
14 you felt that the handicapped were a special class of people
15 who tended to trust one another more than some other organiza-
16 tion, and that it might be wise for the handicapped to be
17 encouraged to get together and work out their own plan for
18 evacuating. And it concerned me because reading about and
19 listening to witnesses about the plan -- the plan, if any-
20 thing, is a very regimented, carefully proscribed -- every-
21 body marches in the same direction kind of plan. And if you
22 had sort of a discreet group doing it their own way, one --
23 they just wouldn't have the benefit of the planning that has
24 been put into this whole thing by the local authorities, the
25 Applicants, and so I suppose if everybody is driving north

1 and they are driving south, they could disrupt things, and
2 so I wondered what your thoughts were in terms of reconciling
3 perhaps a desire to let them get together and work out them-
4 selves in some way -- on the one hand, and on the other hand
5 the possibility that it might have a net minus effect.

6 WITNESS FLEMING: No, I wasn't suggesting -- I
7 don't see anything being to reconcile. I was surely suggest-
8 ing that if there is a plan, everybody drives north, the
9 handicapped should know that so they won't drive south, and
10 I am suggesting that they should have some ownership and in-
11 put on the plan that exists, so that they understand it, so
12 they can make sure that their own groups are educated in how
13 to comply with it, how to work within the parameters that
14 are established so the plan will be successful. If you got
15 a good plan and nobody knows about it, and you have no in-
16 put from the people you are supposed to be helping, your
17 plan may not be effective, and no one would know that.

18 JUDGE KELLEY: Okay, but when this process is
19 complete, assuming they had that kind of input, you would
20 agree that there ought to be one plan?

21 WITNESS FLEMING: There is going to have to be.

22 JUDGE KELLEY: Okay. Thank you. Redirect?

23 MR. MC CLUNG: No. That will be all.

24 JUDGE KELLEY: Okay, Mr. Fleming, thank you very
25 much. We appreciate your coming. You are excused.

1 | (Whereupon, the witness was excused.)

2 | MR. PIGOTT: Before the -- before Intervenors
3 | call their next witness, during Ms. Logue's testimony yester-
4 | day, she referred to a fact that neither her particular
5 | school nor some of the other schools that she had contacted
6 | had received the emergency brochures or other flier type in-
7 | formation that had been mailed out. I have investigated
8 | that and determined that perhaps we haven't been as clear on
9 | the mailing program as we should have in the earlier portion.
10 | The mailings that have been done to date have gone to resi-
11 | dences. There still is left to be mailed distribution to
12 | schools, hospitals, and businesses, as well, for that matter,
13 | as the information to get down to the marinas, the boating
14 | population, and for that matter, I think those in the agri-
15 | culture sector also get a special mailing, and it is our
16 | intent that the community meetings for education purposes
17 | will start in the first part of November, and that these
18 | mailings will be completed prior to that time, and the anti-
19 | cipation was that the mailing should be just slightly before,
20 | so that it isn't a stale document that we are trying to
21 | direct attention to. But I felt perhaps that clarification
22 | might be helpful.

23 | JUDGE KELLEY: That is a helpful clarification.
24 | Thank you. Next witness.

25 | MR. MC CLUNG: Yes, I would like to call

1 Mr. Kearns.

2 Whereupon,

3 JOHN KEARNS

4 having been first duly sworn by the Chairman, was called as
5 a witness herein and was examined and testified as follows:

6 DIRECT EXAMINATION

7 BY MR. MC CLUNG:

8 Q Mr. Kearns, could you state your full name and
9 address for the record, please?

10 A My name is John Kearns. My address is 4508
11 Elizabeth Avenue, Sacramento.

12 Q Are you appearing today in response to a subpoena?

13 A Yes, I am.

14 Q Can you tell us what organization you work for
15 and what is your title with that organization?

16 A I am the Deputy Director of the California Office
17 of Emergency Services, commonly referred to as OES.

18 Q Could you briefly tell us a little bit about
19 your educational background?

20 A I have a Bachelors degree from Duquesne Universi-
21 ty with a mathematics major. I have also attended various
22 colleges and universities taking courses appropriate for
23 advancement in the job I was holding at that particular time.
24 These include the University of Pittsburgh, American River
25 College, Sacramento State, Golden Gate University.

1 MR. MC CLUNG: Your Honor, at this time I would
2 like to request that the resume of Mr. Kearns be bound into
3 the transcript at this point.

4 MR. CASEY: Applicants have no objection.

5 MR. HOEFLING: No objection.

6 JUDGE KELLEY: So ordered.

7 (Whereupon, the resume of John Kearns was bound
8 into the record following this transcript page.)

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RESUME

JOHN J. KEARNS
4508 Elizabeth Avenue
Sacramento, California 95821

Personal

Born January 30, 1928; Greensburg, Pennsylvania. Married, 4 children--
Michael, age 25; John, age 22; Timothy, age 19; Kathleen, age 17.

Education

Duquesne University, graduated in 1951, BS in Mathematics and Physics.
Additional schooling: 1952-53, University of Pittsburgh, Geology/Geophysics;
1962-63, 1965-66, Cal State University at Sacramento, Statistics and Nuclear
Chemistry; 1963-65, 1973-74, American River College, Electronics and Accounting;
1976, Golden Gate University, Public Budgeting and Finance.

Employment Background

Assistant Director, Office of Emergency Services, May 22, 1978 to present.

Duties: As the Assistant Director (Operations), I report directly to
Alex R. Cunningham, Director of OES, regarding the Planning/Training,
Radiological, and Nuclear Civil Protection programs, as well as all emer-
gency operations associated with our response to the myriad of disasters
encountered in California. The duties of this position include, but are
not limited to the following:

- Development of emergency response plans and standard operating procedures
to mitigate the effects of natural or man-made disasters (earthquakes,
flood, oil spills, hazardous materials incidents, medical mutual aid).
- Overall coordination of statewide training program for emergency coordi-
nators and OES staff members.
- Development and conduct of simulated tests to exercise state and local
government response plans.
- Development of statewide systems for response to peacetime accidents
involving radioactive material and war-caused emergency involving nuclear
weapons.
- Develop criteria for planning at state and local government levels to
respond to an accident at the nuclear power plants.
- Develop and conduct training for state and local government employees
responsible for responding to nuclear power plant accidents.
- Conduct test exercises to ensure all involved parties are prepared for
any type of accident at a nuclear power plant.

- Develop plans for the movement of people at risk from a nuclear attack to areas of lesser risk. This includes the associated planning for traffic analysis, law enforcement, fire protection, medical, congregate care and feeding, as well as protection from nuclear fallout.
- Serve as primary response person in the event of any type of disaster situation in California.
- In coordination with the Director, OES activate the State and Regional Emergency Centers to respond to all types of emergencies.
- Provide input to the Director in preparation of the OES budget and participate in the budget hearing process.
- Under direction of Director, work with members of California Legislature in the preparation of bills related to emergency preparedness. Includes wording of the bills; analysis of bill consequences; and represent OES at bill hearings.

Senior Health Physicist
Department of Health Services
January 1, 1977 to May 22, 1978

Duties: As Chief of the Certification Unit of the Radiologic Health Section, I was responsible for the program for certification of persons to administer x-rays on humans in California. The duties associated with this position included, but were not limited to the following:

- Development and implementation of standards of education and training for schools teaching diagnostic radiologic technology.
- Evaluation of health physics hazards associated with the administration of x-rays from specialized equipment such as fluoroscopes and computerized tomographic units.
- Preparation of reports outlining programs goals and accomplishments; quarterly for Department of Health Services and periodically for reports to the legislature.

Chief, Fiscal and Administration Division
Office of Emergency Services
December 30, 1975 to January 1, 1977

Duties: As Chief of this division, I have personally been involved in the following activities:

- Preparation of the line item budget to meet the base line figure of the Department of Finance.
- Development of the BCP's to the original budget.
- Preparation of the program budget.
- Participation in the budget hearing process.
- Work with the Director in developing alternate staffing patterns to

- Implementing the final budget.
- Supervision of personnel procedures.

Radiological Program
Office of Emergency Services
August 13, 1962 to December 30, 1975

Duties: During this period I served in various capacities within the OES Radiological Division; positions and typical duties include:

- Radiological Officer - My primary function as State Radiological Officer was related to the development of a statewide system for the handling of a war-caused emergency involving nuclear weapons.
- Chief author of the State Nuclear Power Plant Emergency Response Plan. The plan outlines the responsibility of the various state agencies in responding to an emergency at any commercial power facility in the State.
- In coordination with the FBI and ERDA (now Department of Energy (DOE) developed an emergency response plan in the event of a nuclear blackmail threat. The plan has been published and unfortunately has been put into action several times in the past few years.
- Under my direct supervision we developed a series of courses to provide basic radiological information which can be utilized to handle war-caused emergencies. However, of special significance in a course we developed specifically directed toward peacetime radiological incidents.

In conjunction with the DOE (then AEC), the State Radiologic Health Section and special consultants, a 5-day course was formulated.

- Developed the State Radiological Defense Plan.
- Coordinate with State agency personnel (Department of Transportation, CHP, etc.) in developing a program to provide rapid gathering and analysis of data relative to radiological hazards associated with nuclear fallout from a war-caused disaster.

Radiological Defense Service Officer and Radiological Maintenance Officer - directing statewide radiological instrument program, including procurement, distribution, maintenance and calibration.

- Responsibility for personnel safety and confinement of contamination.
- Development of safety procedures and operating manual for the care and use of the high-intensity calibrators at the shop.
- Schedule inspection and calibration for civil defense radiological instruments in monitor stations and shelters throughout the State.

Project Officer - direct the work of a research and development section engaged in a study of radiological instrument maintenance costs and calibration stability.

- Designed a calibration device to speed up the calibration process. The procedure involved electronic simulation of observed radiation response and a rapid method of adjusting the sensitivity.
- Compiled and analyzed data on instrument stability, failure patterns, repair time and repair costs.

Research Geophysicist
Gulf Oil Corporation
July 1951 to August 13, 1962

Duties: Responsible for the analysis of geophysical data and its relation to exploration for gas and oil. Integrated all pertinent facts into technical reports outlining recommendations and conclusions which led directly toward the leasing of lands and eventual drilling of wells in search of oil and natural gas.

Military Service

During World War II served in the U.S. Coast Guard; enlisted January 30, 1945, honorably discharged July 1946.

Other

Active in church (President of Mens' Club, CYO Basketball Coach) and community affairs (Blood Bank, Little League, Babe Ruth League, Girl Scouts).

1 BY MR. MC CLUNG:

2 Q Can you tell us briefly what your duties and
3 responsibilities are in your position with the Office of
4 Emergency Services?

5 A As the Deputy Director I supervise the day to day
6 activities of the Office of Emergency Services with direct
7 involvement in the Nuclear Power Plant project and the
8 Governor's task force on earthquakes. I also act as director
9 in his absence.

10 Q Are you an official representative and spokes-
11 person of the OES with respect to nuclear power issues?

12 A I suppose I am one of the spokespersons from the
13 Office of Emergency Services regarding that issue, yes.

14 Q Have you testified before governmental bodies
15 such as the legislature and Federal Emergency Management
16 Agency with respect to the State Officer of Emergency Ser-
17 vices' position regarding nuclear power plant planning?

18 A Regarding nuclear power plant planning, yes, I
19 have.

20 Q In your view as Deputy Director, then, can you
21 state for -- the position of the OES on matters regarding
22 emergency planning for nuclear power plants as it exists to-
23 day?

24 A Yes, I believe I can.

25 Q Could you briefly set forth your qualifications

1 and background with respect to the emergency planning, speci-
2 fically?

3 MR. PIGOTT: Excuse me. The Applicants would
4 be willing to stipulate that Mr. Kearns is an expert in the
5 area of emergency planning preparedness. The only question
6 I would ask is a very simple one, whether Mr. Kearns speaks
7 for himself or his department.

8 JUDGE KELLEY: I thought -- that is what the
9 prior question was --

10 MR. MC CLUNG: That is what --

11 JUDGE KELLEY: -- that he spoke for the depart-
12 ment.

13 MR. PIGOTT: He said he could. I am not sure if
14 he is.

15 JUDGE KELLEY: Okay.

16 WITNESS KEARNS: I indicated I was certainly
17 one of the spokespersons dealing with emergency planning
18 around nuclear power plants in California, yes.

19 MR. PIGOTT: And you are today speaking on be-
20 half of your department or agency?

21 WITNESS KEARNS: Yes, sir, I am.

22 MR. PIGOTT: Okay.

23 MR. MC CLUNG: Thank you, Mr. Pigott.

24 BY MR. MC CLUNG:

25 Q Now turning for a second to the Intervenors'

1 Exhibit Number 23 which is entitled the State of California
2 Nuclear Power Plan Emergency Response Plan dated July, 1975,
3 revised March, 1981. Did you bring a copy of that document
4 with you today?

5 A Yes, sir, I did.

6 Q And was that document prepared by your department?

7 A That is correct.

8 Q Was it prepared under your supervision and guid-
9 ance?

10 A My general supervision and guidance, yes.
11 Dr. Reed, the director of the Nuclear Power Plant Planning
12 Project had direct involvement with it. I provided overall
13 guidance and supervision.

14 Q Is this plan -- has this plan been formally
15 adopted by the State of California?

16 A No, the plan has not been formally adopted by
17 the State of California. In fact, I think it was just
18 finalized in March of this year. We are now preparing the
19 operating procedures that make the document workable.

20 Q If there were an emergency of a nuclear nature
21 would this document be the document that your department
22 relied on?

23 A The overall guidance in this document certainly
24 would be relied upon.

25 Q Has this document been provided to the various

1 local jurisdictions in the state surrounding nuclear power
2 plant sites?

3 A Yes, it has.

4 Q And has it been provided to the Applicants in
5 this proceeding, the Southern California Edison Company and
6 the San Diego Gas and Electric Company?

7 A Yes, it has.

8 MR. MC CLUNG: Your Honor, I would move at this
9 time for admission of the Intervenors' Exhibit Number 23
10 into evidence.

11 JUDGE KELLEY: Any objection?

12 MR. PIGOTT: No objection.

13 MR. HOEFLING: The Staff would comment that it
14 doesn't see the relevance of the draft plan to the issues
15 before the Board and this ties in somewhat to the situation
16 we had yesterday with Mr. Mecham and whether we had before
17 the Board a plan approved by the San Clemente City Council.
18 In the Staff's view the relevant consideration to the Board
19 are plans that are going to be implemented, plans that were
20 tested in the May 13th exercise, the plans that would be
21 followed if there were an emergency today, not necessarily
22 a final plan or an approved plan, and certainly not a draft
23 plan which is not yet in place.

24 With that comment with respect to relevance, we
25 don't have any objection to this coming into the record. We

1 don't know what it adds to the record.

2 MR. MC CLUNG: Can I respond to that? I don't
3 like to just leave it lie like that.

4 JUDGE KELLEY: Can I ask -- you said that the
5 plan was finalized some months ago, is that correct?

6 WITNESS KEARNS: That is correct.

7 JUDGE KELLEY: And then why are we bringing a
8 draft if there is a final --

9 WITNESS KEARNS: I might -- may I respond?

10 MR. MC CLUNG: Okay. I think the Witness could
11 respond to that.

12 JUDGE KELLEY: All right. Fine. Please do.

13 BY MR. MC CLUNG:

14 Q What is this plan?

15 A The plan basically is an administrative document
16 that outlines who is responsible for doing what. The how
17 is described in the procedures that will be developed, are
18 being developed, or have been developed. Once we have the
19 procedures developed from all of the agencies identified in
20 the plan, it will be submitted to the Governor's Emergency
21 Council, which has authority to approve plans developed by
22 our office.

23 JUDGE KELLEY: All right, but maybe you can help
24 me be clear on this. This is a 1975 draft -- oh, it says
25 revised March, '81.

1 WITNESS KEARNS: That is correct.
2 JUDGE KELLEY: This is the March version?
3 WITNESS KEARNS: That is correct.
4 JUDGE KELLEY: All right. I understand.
5 MR. MC CLUNG: This is an --
6 JUDGE KELLEY: All right.
7 MR. MC CLUNG: -- update of the plan that --
8 JUDGE KELLEY: Okay.
9 MR. MC CLUNG: -- is in evidence --
10 JUDGE KELLEY: I understand that.
11 MR. MC CLUNG: Applicants' Exhibit Number 52.
12 JUDGE KELLEY: Well, no objection, we will allow
13 it in.
14 (Whereupon, the document
15 previously marked for
16 identification as Inter-
17 venors' Exhibit Number 23
18 was received in evidence.)
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1 BY MR. MC CLUNG:

2 Q There is an exhibit in evidence, Mr. Kearns,
3 which is Applicants' Exhibit 52, which is the State of
4 California Nuclear Power Plant Emergency Response Plan,
5 1975, of July, but the revision in 1978. Now is that plan
6 currently in effect in your department?

7 A I'm not sure what you mean currently in effect.
8 That was the plan that was adopted by the California
9 Governor's Emergency Council. The plan has been revised and
10 is reflected in the draft of March, 1981. Certainly if an
11 emergency were to occur today we would not utilize a plan that
12 was developed in 1975, consistent with low population zone
13 planning, whereas this reflects later guidance.

14 Q Could you describe the major changes that exist
15 in the new document, Exhibit No. 23, as opposed to the earlier
16 revision?

17 A Again, the same agencies basically are identified,
18 with only one or two new agencies being added, by virtue of
19 going from a low population zone which, at San Clemente I
20 believe was -- or at San Onofre -- was three miles, out to the
21 approximately 10 to 15 miles around nuclear power plants in
22 California, was to bring to the attention of each of the
23 specific agencies their added responsibilities by virtue
24 of the increased area that they are now required to cover.
25 In some instances in the division of Caltrans we had to go

2 1 into new districts, so therefore the new districts had to
2 now be aware of the fact that they were involved in the
3 nuclear power plant response. But essentially the basic
4 responsibilities have not changed.

5 Q Was this document prepared -- this document,
6 Exhibit No. 23, the latest revision -- prepared pursuant to
7 the guidelines in NUREG 0654 and the various regulations
8 that have been set down since the Three Mile Island accident?

9 MR. PIGOTT: Could we find out what various
10 regulations? Are you asking whether or not it was prepared
11 pursuant to NRC guidance? I'm just asking for a clarifica-
12 tion. You used the word "other guidance" and I don't know
13 what it is.

14 MR. MC CLUNG: Oh, okay. Other NRC regulations
15 concerning emergency planning which were issued since the
16 Three Mile Island accident.

17 WITNESS KEARNS: That's correct. It was prepared
18 in accordance with NUREG 0654 and one major change that I
19 did not bring to the attention was the ingestion pathway,
20 which was not addressed in our previous plan to any extent.
21 That has now been assigned to the Department of Health
22 Services Radiologic Health Section.

23 BY MR. MC CLUNG:

24 Q Okay. I'd like to now turn your attention to
25 Exhibit No. 24 of the Intervenors, which is referred to as

3
1 the Emergency Planning Zone for Serious Nuclear Power Plant
2 Accidents, dated November, 1980. Could you describe, please,
3 the genesis of that particular document? Why was that docu-
4 ment -- was that document produced by your office?

5 A The document was produced by our office, yes.

6 Q And why was it produced?

7 A It was produced pursuant to the provisions of
8 Senate Bill 11.83, which directed the Office of Emergency
9 Services to conduct a study of serious nuclear power plant
10 accidents, to define emergency planning zones necessary to
11 protect public health and safety, and basically that's the
12 genesis of it.

13 Q How was this document used by your office?

14 MR. PIGOTT: I'm going to have to object at this
15 time. I believe that the question is beyond the scope of
16 any of the issues in this proceeding and is getting into an
17 area that was well briefed by all the parties earlier, having
18 to do with the scope of the EPZ to be discussed in this
19 proceeding. It was determined that is not a part of this
20 proceeding and I believe the questions are now into that
21 previously-determined-to-be-irrelevant area.

22 JUDGE KELLEY: Mr. McClung, comment?

23 MR. MC CLUNG: Well, I am attempting to lay a
24 foundation. I don't believe the questions have gotten
25 irrelevant yet. I am trying to lay a foundation for the

4
1 relevance of the document with respect to both the emergency
2 planning zone, Contention No. 3, and the consideration --

3 JUDGE KELLEY: Let's do it one at a time. With
4 respect to which contention?

5 MR. MC CLUNG: That's what I was starting to
6 say. With respect to Contention No. 3, relating to the
7 emergency planning zone, and factors of --

8 JUDGE KELLEY: Oh, you mean the way in which it
9 was arrived at in this case? Is that --

10 MR. MC CLUNG: There is in this proceeding
11 Contention No. 3. It refers to the --

12 JUDGE KELLEY: Yes. I know what you are referring
13 to. But it refers to the way in which, as I recall it, the
14 configuration of the zone was arrived at by the local
15 authorities.

16 MR. MC CLUNG: That's right. And the state is
17 one of the authorities and I want to show how they arrived
18 at their particular drawing of the zone.

19 JUDGE KELLEY: Just a moment.

20 (Pause)

21 JUDGE KELLEY: Well, I don't mean to cut you
22 off prematurely, but I think we should bear in mind that
23 we did consider a contention concerning a much enlarged EPZ
24 which I believe if not identical was very similar to the
25 EPZ that is in the state plan. What is the state's proposed

5

1 EPZ for San Onofre? Is it in here?

2 MR. MC CLUNG: Well, we've been cut off long
3 before -- I was hoping to get all that out before I offered
4 the exhibit into evidence. The witness can probably respond
5 better than I to describe the state emergency planning zones.
6 There are more than one.

7 JUDGE KELLEY: My concern is getting into an
8 emergency planning zone, that is, debating it, that is beyond
9 a distance from the facility of about 10 miles. If we are
10 headed in that direction, I think that is the wrong direction
11 to go.

12 MR. MC CLUNG: I agree with you.

13 JUDGE KELLEY: Another direction then -- we'll
14 take it a step at a time. Go ahead for the time being.

15 MR. MC CLUNG: I would like to clarify what I
16 was starting to say before. I was starting to say that this
17 particular document is going to be offered -- and I think
18 it is appropriate to say now -- for more than just Contention
19 No. 3. I want to start out by saying there is much in this
20 document that is relevant, the Intervenor believe, to
21 Contention No. 3 and how the size of the emergency planning
22 zone was arrived at. It is not the Intervenor's contention
23 any longer in this proceeding that the evacuation zone should
24 be greater than about 10 miles and we don't intend to assert
25 that.

6

1 JUDGE KELLEY: All right. Well, that helps.

2 MR. MC CLUNG: There are -- we think the
3 description of how the state arrived at their particular
4 zone, one, which is almost identical with the emergency
5 planning evacuation zone, will be very helpful in determining
6 whether or not the boundary was arbitrarily drawn with
7 respect to Contention No. 3.

8 Now there is also other information in this study
9 which contains information about the health effects of
10 serious nuclear accidents in a much more coherent and digest-
11 ible form, site-specific related to the San Onofre nuclear
12 plant and we would be offering that as a better proffer of
13 evidence with respect to Contention No. 2(d).

14 JUDGE KELLEY: Let me ask you one thing before
15 you go on. I am having a little trouble with this document.

16 MR. MC CLUNG: I don't think you are looking at
17 the right one.

18 JUDGE KELLEY: Well, I'm looking at --

19 MR. MC CLUNG: The problem is, both documents
20 bear the same title, same cover page.

21 JUDGE KELLEY: You mean I've got two different
22 documents?

23 MR. PIGOTT: Under the same --

24 MR. MC CLUNG: You see one and two on that
25 particular thing?

7

1 JUDGE KELLEY: Right.

2 MR. MC CLUNG: There's another one that is thick
3 that has --

4 JUDGE KELLEY: Which has 2 or 1?

5 MR. MC CLUNG: It says 1 and 2 on the front, too.
6 I'm sorry. I should have clarified that for the record.

7 JUDGE KELLEY: Now which is which?

8 MR. MC CLUNG: Okay. The first one that you got,
9 the skinny one, is No. 1 on the front sheet, and that has
10 been admitted as Exhibit 23. But 2 is the fat one, is
11 24. I'm sorry. I should have clarified that for the record.

12 JUDGE KELLEY: Okay.

13 MR. MC CLUNG: There's a number of -- my title
14 pages leave something to be desired and I'll try to make it
15 clear which documents I am referring to.

16 JUDGE KELLEY: All right.

17 MR. PIGOTT: Are we starting with a new question?

18 MR. MC CLUNG: Yes. We are going to start with
19 a new question, hopefully. I don't remember what my old
20 question was.

21 BY MR. MC CLUNG:

22 Q Could you describe for the Board and various
23 parties in the proceeding what the current State of California
24 emergency planning zones are?

25 MR. PIGOTT: Objection. I'd like to know under

1 what document. Are we referring to the final form, the
2 formally approved document, latest revised in 1978, or are
3 you attempting to move towards some other document? I
4 believe the question was vague.

5 JUDGE KELLEY: That was revised in '81.

6 MR. PIGOTT: Well, perhaps I can back up and
7 take a little bit of a run at these documents and Mr. Kearns
8 can certainly point out any inaccuracies. But at the current
9 time there is but one formally approved in all its splendor
10 document, and that is the 1978 revision of the California
11 plan. Now the plan that is put in as Exhibit 23 has been
12 finalized and approved by Mr. Kearns' department. It has
13 not been approved -- and I believe Mr. Kearns is going to
14 explain this as we move along -- by the State Legislature,
15 which is a requirement under California law. So what we
16 have is a document that is final as far as his department is
17 concerned but has another hurdle to pass before it reaches
18 the finalized in its full meaning form, as does the 1978
19 revision, which is the current formal approved document.

20 So when Mr. McClung asks questions concerning
21 what EPZ's are in the state plan I have to ask for some
22 particularity. Is he referring to the 1978 or is he referring
23 to the finalized draft, if I might call it that?

24 JUDGE KELLEY: Mr. Kearns, is Mr. Pigott's
25 description of the situation accurate?

1 WITNESS KEARNS: Yes, sir. It is.

2 JUDGE KELLEY: So the formal finalized plan is
3 the '78 plan, which we don't have in front of us, right?

4 MR. PIGOTT: It is Exhibit 52. We put that
5 into evidence very early.

6 JUDGE KELLEY: Okay. Go ahead. I think we
7 should tie it down.

8 MR. MC CLUNG: Yes, I agree with you.

9 MR. PIGOTT: It is also, I believe, in your blue
10 binder there.

11 JUDGE KELLEY: Okay.

12 MR. PIGOTT: The first one.

13 JUDGE KELLEY: Okay.

14 BY MR. MC CLUNG:

15 Q Let me back up for a second and ask a question
16 that I asked earlier to clarify it for myself a little. Is
17 it correct to say that the emergency planning process is a
18 dynamic process and that plans are constantly being revised
19 and changed?

20 A Certainly.

21 Q And that if an emergency were to take place today
22 you would use the most current plan, is that correct?

23 A That's correct.

24 Q So if an emergency were to take place today you
25 would make reference to the Exhibit No. 23, which is the 1981

1 revision, even though it hasn't been formally approved by
2 the state legislature, isn't that correct?

3 A That's correct.

4 Q Now referring then to that document, to the 1981
5 revision, which is Exhibit No. 23, could you describe for
6 the Board and the parties what emergency planning zones are
7 in that document?

8 JUDGE KELLEY: I'm sorry. Did I hear this
9 correctly? Did you say that if something happened tomorrow
10 and you needed a plan you would follow the plan dated July,
11 '75 and revised or that you would follow the '78 formal
12 plan?

13 WITNESS KEARNS: We would follow the 1981 plan,
14 since it addresses the present situation that we are dealing
15 with.

16 JUDGE KELLEY: But the '78 plan has been duly
17 approved by the California Legislature, correct?

18 WITNESS KEARNS: No, sir. There was not a
19 requirement for approval by the legislature in 1978. The
20 approval process at that time is through the Governor's
21 Emergency Council for approval of our plans. Senate Bill
22 11.83, which is now Section 8610.5, I believe, of the Govern-
23 ment Code, requires that we go through the legislature for
24 formal approval of the plans, consistent with SB 11.83.

25 JUDGE KELLEY: But as of now, then, the lead

1 plan, the governing plan is this July '75 plan revised as
2 of March '81, in your view?

3 WITNESS KEARNS: I would ask for clarification of
4 what you mean by "governing plan".

5 JUDGE KELLEY: If there were an inconsistency
6 between the '78 plan on the one hand and this revised March
7 '81 plan on the other hand, which one would you follow?

8 WITNESS KEARNS: We would follow the 1981 plan
9 because we're looking at a revised scope.

10 JUDGE KELLEY: Thank you. Go ahead.

11 BY MR. MC CLUNG:

12 Q The question that was pending is I would like for
13 you to briefly set forth for the Board and the parties the
14 emergency planning zones that are set forth in the 1981
15 plan.

16 MR. PIGOTT: I'm going to object on the grounds
17 of relevance. I don't believe that those zones have been
18 shown to be any part of the EPZ that is presently before
19 this Board and a discussion of conflicting zones is clearly
20 beyond the scope of this proceeding.

21 MR. MC CLUNG: How do we know until we find out.

22 JUDGE KELLEY: Why don't we do it this way. Why
23 don't we look at them and then we'll see what the questions
24 are after that. Could you give us a page reference?

25 WITNESS KEARNS: Could I have the question

1 again, please?

2 BY MR. MC CLUNG:

3 Q Yes. I would like you to briefly describe the
4 emergency planning zones that are set forth in the current
5 revision of the California Radiological Emergency Response
6 Plan. Could you briefly describe them?

7 JUDGE KELLEY: Just for San Onofre?

8 MR. MC CLUNG: Yes. Well, I think it would help
9 for clarification to describe the terms, get the terms down.
10 But he can talk --

11 BY MR. MC CLUNG:

12 Q You don't have to do the boundaries now. I want
13 you to describe the plan. The plan contains the zones for
14 everyone, all the different plans.

15 JUDGE KELLEY: I understand that.

16 MR. MC CLUNG: At this point I want him just to
17 describe what the planning, what the zones are, what is in
18 the plan. And then we will get specific to San Onofre after
19 he gets through explaining the concepts.

20 JUDGE KELLEY: You mean the concept of an EPZ
21 under the California plan, is that what we are after?

22 MR. MC CLUNG: That's right.

23 JUDGE KELLEY: Well, all right. Go ahead.

24 WITNESS KEARNS: Again, may I ask you to repeat
25 the question?

1 BY MR. MC CLUNG:

2 Q What I'd like you to do is briefly describe the
3 emergency response zones or the emergency planning zones as
4 set forth in the current revision of the state plan.

5 A The planning zones in the California plan include
6 two areas, one which we identify as the basic planning zone,
7 in which we feel evacuation is the most viable countermeasure
8 that would be employed. We, on the basis of a study done for
9 us by Science Application Incorporated, felt that there was
10 a need for an extended zone and the basic countermeasure that
11 would be developed there would be developed in consultation
12 with the counties. Now should I go beyond that?

13 Q Well, there's one other zone, is there not,
14 with respect to ingestion pathway?

15 A Excuse me, yes. The ingestion pathway is cer-
16 tainly included in the plan.

17 JUDGE KELLEY: So are there three zones?

18 WITNESS KEARNS: Well, in the Nuclear Regulatory
19 Commission criteria they talk about a ten mile and a fifty
20 mile planning zone.

21 JUDGE KELLEY: Yes.

22 WITNESS KEARNS: All we are saying is there is an
23 extended zone with respect to the ten mile zone.

24 JUDGE KELLEY: I'm not sure I understand that.
25

1 BY MR. MC CLUNG:

2 Q Let's refer to the picture on page 10 of Exhibit
3 No. 23, which is the diagram of the San Onofre plant.

4 A Which page?

5 Q Page 10.

6 A Okay.

7 Q Now could you describe with reference to the
8 figure on page 10, forgetting for a moment the ingestion
9 pathway zone, but could you explain the two other zones that
10 you discussed?

11 A As indicated, the basic emergency planning zone,
12 although it meanders, it takes into consideration geographi-
13 cal boundaries and is approximately 10 miles in radius. The
14 extended planning zone took into consideration the conse-
15 quences of the more serious accidents and, as I indicated and
16 as was indicated I believe in the plan itself, in the extended
17 emergency planning zone we will work in consultation with
18 the counties to develop the proper procedures and counter-
19 measures to be utilized.

20 In the basic emergency planning zone we expect
21 to meet the criteria of NUREG 0654, which includes evacuation
22 planning for that zone. Now I don't know how much more
23 detail you wish me to go into.

24 MR. MC CLUNG: Do you want to ask a question,
25 Mr. Chairman?

1 MR. PIGOTT: Could I ask one very brief one?

2 JUDGE KELLEY: Yes.

3 MR. PIGOTT: Is the basic emergency planning zone
4 as set forth on page 10 of Exhibit 3 typographically or
5 graphically accurate with respect to its inclusion of a
6 portion of the City of Oceanside?

7 WITNESS KEARNS: That is incorrect. The City
8 of Oceanside was not included and was subsequently corrected
9 in a letter to San Diego County.

10 MR. PIGOTT: Okay. So for purposes of this Board
11 in looking at it, the basic emergency planning zone on the
12 southern portion of it would appear to and I believe it does
13 follow the outlines of Camp Pendleton, including its southern
14 boundary there against the city line of Oceanside. Is that
15 correct?

16 WITNESS KEARNS: That is correct.

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1 JUDGE KELLEY: Is the extended zone roughly
2 comparable to the 50 mile --

3 WITNESS KEARNS: No, sir. But it is not related
4 to the ingestion pathway plan.

5 JUDGE KELLEY: And this is -- what does the State
6 think ought to be done in that zone? Is that an evacuation
7 zone?

8 WITNESS KEARNS: Okay. The extended planning
9 zone took into consideration the more serious accidents. In
10 our discussion with the counties, consistent with Senate
11 Bill 1183, it said we would consult with the counties to
12 develop the most effective procedures for implementation in
13 that area. In NUREG 0396 and as reflected in 0694, the
14 indication is that extension beyond the 10 miles would be done
15 on an ad hoc basis.

16 It is our feeling that some action should be
17 taken now, rather than on an ad hoc basis. We work out
18 with the counties the procedures that they deem most appro-
19 priate for that planning zone.

20 JUDGE KELLEY: Let me ask you this, just for
21 perspective on these questions. Is it the position of your
22 office that the state can impose emergency planning require-
23 ments on a licensee -- a nuclear licensee above and beyond
24 those imposed by the NRC?

25 WITNESS KEARNS: It was the judgment of the

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1 legislature that they could require local government to
2 development plans in accordance with the criteria that we
3 have specified here on page 10.

4 JUDGE KELLEY: Which may be over and above the
5 criteria specified by the NRC?

6 WITNESS KEARNS: In the judgment of the legisla-
7 ture they deem that they could do that, yes, sir.

8 JUDGE KELLEY: Okay. Now, and this is a some-
9 what different question, I suppose one might have a situation
10 where the NRC said evacuate 10 miles and the state said
11 evacuate 15, and perhaps they wouldn't conflict. Perhaps
12 you would just go to 15. That is more than 10. But on the
13 other hand, if there is a conflict, and the NRC says drive
14 north and the state says drive south, does the state have
15 the --

16 WITNESS KEARNS: The NRC --

17 JUDGE KELLEY: -- authority to override the
18 NRC's determination?

19 WITNESS KEARNS: I believe the NRC has no juris-
20 diction beyond the fence line of the Applicants' facility.
21 They cannot direct operations in local or state government.

22 JUDGE KELLEY: Well, we don't need to debate it.
23 I am just trying to get a feeling for what your position is.
24 Now, Mr. McClung, we have gone a little way down this road.
25 We have got a contention here about the proper drawing of

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1 the 10 mile EPZ for this facility. And we have a witness
2 who has expertise in emergency planning, and I would assume
3 that he could -- might have something to say about the 10
4 mile EPZ line that has been drawn in this case. He may have
5 some criticisms to offer.

6 That is one direction you might go. Apart from
7 that, where do you want to go?

8 WITNESS KEARNS: I might add, we have no conflict
9 with the zone that has been drawn by Orange and San Diego
10 Counties. The only difficulty we have is with the Marine
11 Corps base where we felt that the full Marine Corps base
12 should be included. However, we have no jurisdiction with
13 regard to the Marine Corps base. But we have no conflict
14 whatsoever with the zone that has been drawn by Orange County.

15 JUDGE KELLEY: I put a question to you. Where
16 do you want to go?

17 MR. MC CLUNG: I don't -- with respect to what?
18 I don't --

19 JUDGE KELLEY: With respect to the EPZ. What do
20 you want this witness to testify to about the EPZ line --
21 10 miles. That is the issue in the case that he is now
22 talking to, I take it. And what is it that you want to do?

23 MR. MC CLUNG: I think I said earlier that there
24 are more reasons for his discussion of these various issues
25 than the EPZ contention. I wanted to bring to light first of

1 all, the existence of the various other zone, which we have
2 done. I would like to explore the drawing of the State in
3 their plan of the basic emergency planning zone, which I
4 think is relevant to the consideration of how one might
5 draw the NRC's plume exposure emergency pathway --

6 JUDGE KELLEY: Okay.

7 MR. MC CLUNG: -- because they are one of the
8 local agencies who did in fact draw the line and --

9 JUDGE KELLEY: All right.

10 MR. MC CLUNG: -- their line was not arbitrarily
11 drawn at all. It was drawn with -- it wasn't a concentric
12 circle.

13 JUDGE KELLEY: I understand.

14 MR. MC CLUNG: That is one aspect.

15 JUDGE KELLEY: Fine.

16 MR. MC CLUNG: But there are other aspects as
17 well.

18 JUDGE KELLEY: What other aspects relating to
19 the configuration of the EPZ do you want to get into?

20 MR. MC CLUNG: I am going to also want to get
21 into whether or not the existence of the extended planning
22 zone in the state presents some sort of conflict which might
23 increase the evacuation times that are provided by the Appli-
24 cant in this proceeding --

25 JUDGE KELLEY: Okay.

1 MR. MC CLUNG: -- which might have some effect --

2 JUDGE KELLEY: Okay.

3 MR. MC CLUNG: -- on the emergency planning
4 capability in contention number 1.

5 JUDGE KELLEY: Okay. Is that it?

6 MR. MC CLUNG: Well, that is where I am right
7 now. The document that I am working on, setting foundation
8 for, will have other reasons as well as I articulated earlier.
9 But I am not ready to move that document into admission
10 because we don't even --

11 JUDGE KELLEY: I am just talking about the EPZ.

12 MR. MC CLUNG: Oh, okay.

13 JUDGE KELLEY: Okay. Well, with that understand-
14 ing, why don't you go ahead.

15 BY MR. MC CLUNG:

16 Q Now, I would like to turn your attention back
17 to the Exhibit Number 24 again, which is the emergency plan-
18 ning zones for serious nuclear accidents document. You
19 stated, I believe that this document was prepared pursuant
20 to statute, is that correct?

21 A That is correct.

22 Q And if I might repeat myself, what was the
23 purpose of the creation of that document?

24 A Are you going back to the purpose of Senate Bill
25 1183?

1 Q Well, to the extent that that is the purpose of
2 the document, yes.

3 A Senate Bill 1183 was introduced by Senator
4 Giramandi after the Governor established a review panel as a
5 consequence of the Three Mile Island accident. It was felt
6 at that time that the acceptance of a simple 10 mile zone
7 was not appropriate since that was based on generic informa-
8 tion, and that there should be a site-specific study con-
9 ducted in California to substantiate or to come up with
10 different planning zones around each of the then four nuclear
11 power plants in California. Our office was the designated
12 agency to conduct and to put into effect Senate Bill 1183.
13 And that is essentially the basis for the derivation of the
14 document.

15 Q I am not -- let me try to clarify one thing.
16 Is it your understanding that the intent of that particular
17 piece of legislation was necessarily to draw a line, or an
18 emergency planning zone that was beyond the 10 mile zone?

19 A Absolutely not. The intent of the legislature --
20 and that was debated hot and heavy -- it was to come up with
21 the proper planning around plants in California. If those
22 zones came out to be 10 miles, that is fine. It was not
23 to come up with extended planning zones. It was simply to
24 conduct a site-specific study to ensure that the serious
25 nuclear power plant accidents were considered at each of the

1 four nuclear power plants based on that information to define
2 planning zones around each of the facilities.

3 Q Now was -- I take it that site-specific study
4 was conducted?

5 A That is correct.

6 Q And who conducted that study?

7 A Science Application Incorporated was awarded the
8 contract to conduct the study.

9 Q And what types of considerations were made by
10 them in their study?

11 A Science Applications Incorporated followed the
12 basic parameters that were utilized in the reactor safety
13 study, that is primarily I guess we go back to the calcula-
14 tion of radiation -- or reactor accident consequences, the
15 basic CRAC computer code, which takes into consideration the
16 safety systems and the mechanisms for accidents to occur at
17 the site. It takes into consideration the potential releases.
18 It takes into consideration the meteorology and the attendant
19 dose and dose commitments downwind, and that is broadly what
20 it is.

21 Q Now, are these manners in which the SAI report
22 was used -- or was the manner in which the SAI report was
23 used in aiding your determination of what emergency planning
24 zone should be provided in the state plan should be provided
25 in the state plan, was that document used --

1 MR. PIGOTT: I am going to object to the rele-
2 vancy of this line of question. I did not object to the last
3 question, but what is the probative value of going through
4 a procedure that winds up with a zone identical to the zone
5 that Applicants are proposing, with the sole exception of
6 how much of Camp Pendleton is included within its boundaries?

7 JUDGE KELLEY: Comment?

8 MR. MC CLUNG: I think that is a fairly legitimate
9 comment and I would like to respond to it. The emergency
10 zone that is set forth in the document as the basic zone,
11 and that is the one that is at issue, and I agree with
12 Mr. Pigott on that at the present time and for what I am
13 talking about. It is not identical in all the plans. There
14 are some plans that refer to a ten mile radius zone with
15 little glitches at the top called extended planning zones
16 which encompass San Juan Capistrano, and testimony has been
17 put into the record that certain aspects of coverage to those
18 areas do not meet the standards of NUREG 0654, namely siren
19 coverage. It is my position that in fact not all of the
20 emergency planning zones by the various local jurisdictions
21 were determined by looking at site specific data, and that
22 in fact some of them were arbitrarily drawn, and I think it
23 is relevant to look at the site specific data that was con-
24 sidered by the State of California.

25 We have had testimony in the record by an expert

1 witness from the Applicant that using the SAI study, factoring
2 it through NUREG 0396 criterion, he testified that that exer-
3 cise produced the result that the 10 mile zone -- exactly on
4 10 miles was sufficient. And that using that types of --
5 using the SAI study in that way, actually you did take into
6 consideration the meteorology and site specific data and
7 produce a radius of 10 miles exactly, and in this case I
8 would like to show how the state used that site specific
9 data to come out with an emergency planning zone which is not
10 the same as the 10 mile radius, and it varies in significant
11 respects from the zones that are contained in various of the
12 plans.

13 MR. PIGOTT: If I might comment, Mr. Chairman,
14 first of all, I believe Mr. McClung is referring to the
15 testimony of Mr. Woodard. Mr. Woodard in fact said based
16 on his calculations, a zone of less than 10 miles was ade-
17 quate, however, that misses the whole point, when we look
18 at the testimony of Mr. Kearns and the zone proposed, which
19 I fear is not yet understood by Mr. McClung, that the EPZ
20 proposed by Applicants, with the exception of the San Clemente
21 boundaries is identical with the basic emergency planning --
22 I am sorry -- with the exception of Camp Pendleton -- is
23 identical with the basic emergency plan of the state, and I
24 cannot see the relevance of going through how everybody got
25 there. It is the same. And I fail to see the probative

1 value of going back and going through everybody else's
2 calculations.

3 JUDGE KELLEY: That does appear to be the case.
4 I think, Mr. McClung, in your characterization of zones and
5 extended zones was not a fair assessment of the record. I
6 think we walked through that in great detail, and we know
7 how the Applicants got there. Now, you may not agree with
8 where they got, but the zone is pretty clear.

9 This witness, although I am sure he is familiar
10 with the SAI report, you are not offering him -- you are
11 not offering this report in evidence, are you?

12 MR. MC CLUNG: No, sir, I am not.

13 JUDGE KELLEY: Okay. Now, if in fact their
14 basic zone -- basic planning zone, is that what it is called --
15 is identical to the Applicants' zone with the exception of
16 the boundaries of Camp Pendleton, why don't we talk about
17 that? But otherwise, I don't see a basis for discussion
18 here. Certainly not of the SAI report.

19 MR. MC CLUNG: Okay.

20 JUDGE KELLEY: I might add -- as I understand
21 the SAI report with Mr. Woodard -- was he your witness?

22 MR. PIGOTT: Yes, he was.

23 JUDGE KELLEY: The Applicants aren't saying we
24 base this zone on the SAI report. Far from it. They based
25 it on other considerations or something coming in with a

1 witness who says and by the way, the two are not inconsistent.
2 Is that fair?

3 MR. PIGOTT: I think it is fair in this context,
4 yes.

5 JUDGE KELLEY: Yes. So let's bring this down
6 to earth and then talk about the differences between the
7 State's basic zone and then the Applicants'. Objection sus-
8 tained.

9 MR. MC CLUNG: Can I have a clarification for
10 what the objection was that was just sustained?

11 MR. PIGOTT: Basic relevancy from our standpoint.

12 MR. MC CLUNG: Of what?

13 MR. PIGOTT: Of discussing various lines of
14 arriving at the same answer. We did two plus two. They
15 did three plus one. What is the difference? We got to four.

16 MR. MC CLUNG: Okay, then I would like to make
17 reference to contention number three which sets forth the
18 emergency response plans fail to meet the requirements of
19 10 CFR section 50.47C2 because local emergency planning
20 officials have arbitrarily established the boundaries of
21 plume exposure pathway, EPZ, in that they have mechanically
22 applied a 10 mile boundary, and that the interagency agree-
23 ment, IAEP, among all local jurisdictions defines the EPZ
24 by drawing compass lines on a map of the area.

25 MR. PIGOTT: Could I --

1 MR. MC CLUNG: Et cetera.

2 MR. PIGOTT: Could I ask one --

3 MR. MC CLUNG: That particular contention --

4 JUDGE KELLEY: Excuse me. That doesn't sound
5 like the contention we admitted.

6 MR. MC CLUNG: That is -- I am reading from the
7 Applicants' trial brief, page 14.

8 JUDGE KELLEY: Well, let's establish what the
9 contention is before we go any further.

10 MR. MC CLUNG: Is that not the contention --
11 The only place they appear is in the Applicants' trial brief.

12 JUDGE KELLEY: The official version is somewhere
13 in the transcript.

14 MR. PIGOTT: That is what I have been using. I
15 believe it is accurate.

16 JUDGE KELLEY: Off the record a moment.

17 (Discussion off the record.)

18 JUDGE KELLEY: Back on the record. It appears
19 as though I misspoke. Mr. McClung was reading the right
20 contention. I don't think you have to finish. You were in
21 a colloquy with Mr. Pigott, I believe. I interrupted you,
22 so go ahead.

23 MR. PIGOTT: I think I was the one doing the
24 interrupting at the time we went off the record. I guess my
25 question is, are you -- since we are dealing with identical

1 zones now, ignoring the Camp Pendleton distinction, is it
2 the Intervenors' purpose to show that the State drew their
3 basic EPZ in an arbitrary fashion?

4 MR. MC CLUNG: I am not going to -- you character-
5 ize the record one way and I characterize the record another
6 way. You characterize the record as saying that we all have
7 identical plans and everything like that.

8 MR. PIGOTT: No, the Witness said that.

9 MR. MC CLUNG: I am going -- no, on the contrary.
10 On the contrary, I am going to show that the State, among
11 all jurisdictions, did take into consideration these factors.

12 MR. PIGOTT: And came to the same --

13 JUDGE KELLEY: What difference does it make if
14 they have the same line?

15 MR. MC CLUNG: The record states what the record
16 states, and so I am not going to -- I don't think that they
17 have the same line.

18 JUDGE KELLEY: Okay. Now, let's hone in on that.
19 There is a difference at Camp Pendleton. Where else is
20 there a difference of any consequence?

21 MR. MC CLUNG: I have stated this before. Some
22 of -- the Interagency Agreement does not contain reference
23 to the evacuation of what is known as the extended planning
24 zone, and there is a thing called the extended planning zone
25 which incorporates Dana Point and San Juan Capistrano in

1 certain of the plans. And if there is a confusion there, and
2 I think it is an important confusion in that one of our
3 positions in this case is that that line for the emergency
4 planning zone should be identical, and in fact that area in
5 San Juan Capistrano and Dana Point should be incorporated
6 within the emergency planning zone, like they did in the
7 State of California, and not in a new term which doesn't
8 appear in the regulations called the extended planning zone,
9 where there might be confusion. We have already seen that
10 there was confusion in this case with respect to the mailing
11 of the informational pamphlets to that zone. We have seen
12 that there is confusion in this case with respect to whether
13 or not people should evacuate from that zone. The testimony
14 of the people from San Juan --

15 JUDGE KELLEY: All right. Excuse me. Excuse me.
16 May I ask the Witness whether you participated in the drawing
17 of the lines being used by the Applicants in this case?

18 WITNESS KEARNS: I presume when you say the
19 Applicant you are including Orange County, because our dis-
20 cussion was with local government. Based on the study we
21 came to the conclusion that approximately 10 miles was cer-
22 tainly adequate for planning around the San Onofre plant.
23 Members of our staff worked with the Orange County officials
24 in defining the zones. We don't arbitrarily impose our
25 thoughts on them. They have the understanding, as I have to

1 repeat, we are in agreement with the zones drawn by Orange
2 County. Now, I have no idea what some of the other discus-
3 sion refers to. We have no conflict with the zone that was
4 drawn by the Orange County officials.

5 MR. MC CLUNG: Neither do I. And the Orange
6 County, among all the jurisdictions, incorporates the figure
7 which is on --

8 JUDGE KELLEY: For purposes of evacuation --

9 MR. MC CLUNG: They took --

10 JUDGE KELLEY: Mr. McClung, can I finish my
11 sentence and then I will give you your turn.

12 MR. MC CLUNG: I was in the middle of a sentence,
13 but go ahead.

14 JUDGE KELLEY: Could you specify, Mr. McClung,
15 exactly where there is any deviation whatsoever between the
16 EPZ in Orange County of the Applicants and the EPZ of the
17 State of California, the 10 mile line?

18 MR. MC CLUNG: Okay, are you referring to --
19 there is a confusion that I have with that question. If you
20 are referring to the EPZ that is contained in the Applicants'
21 plan in the Wilbur Smith study, which is Appendix E to the
22 Applicants' plan I can -- that is one answer. If you are
23 referring to the emergency planning of Orange County and the
24 plan which is for Orange County, that will produce a differ-
25 ent answer, so -- if you -- do you want both of those answers,

1 or one at a time?

2 JUDGE KELLEY: Well, you are not a witness, but
3 I also have the sense that if you got anything here, you are
4 about three weeks too late. We went into this in great depth
5 about extended lines and exactly where it is and who evacuates
6 and where the sirens go, and now we are here this morning
7 with a witness from the State and you want to delve into
8 things that I thought we got over with.

9 I mean, isn't it a fact that we went into the
10 where the line was and sirens and -- at great length in
11 this case?

12 MR. MC CLUNG: That is what I said. It is in
13 the record.

14 JUDGE KELLEY: Then what have you got to add here
15 this morning with this witness on this subject?

16 MR. MC CLUNG: This particular subject -- I
17 think this particular witness can add support for the idea
18 that the emergency planning zone, basic zone that they describe
19 in their plan, should encompass exclusively in all the plans,
20 San Juan Capistrano and Dana Point. He can also testify that
21 it is quite possible and it would be helpful to have the
22 basic emergency planning zone encompass the totality of Camp
23 Pendleton. Now that sounds like an irrelevancy to
24 Mr. Pigott, but it is not an irrelevancy because the testimony
25 in the record reflects that the Marine Corps is going to

1 evacuate into the back country of the Marine base, and if
2 in an accident necessitated evacuation beyond that point, they
3 would be stuck in the back country of the Marine base --

4 JUDGE KELLEY: All I want is the area. I don't
5 want you to testify. Let me ask the Witness whether you are
6 familiar with the record in this case in detail? Have you
7 read the transcripts? Have you read the testimony?

8 WITNESS KEARNS: No, sir.

9 JUDGE KELLEY: All right.

10 WITNESS KEARNS: I am not familiar with all of
11 the discussions that went on. I can only --

12 JUDGE KELLEY: Fire.

13 WITNESS KEARNS: -- repeat that we have no problem
14 as far as Orange County is concerned.

15 JUDGE KELLEY: Thank you. I don't think this
16 Witness is in a position to testify about sirens and extended
17 EPZs. If you want to get into the area of why all of Camp
18 Pendleton is included, proceed. Otherwise, I don't see any-
19 thing here to explore about the EPZ and I am going to termi-
20 nate questioning on that subject, except for Camp Pendleton.

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1 MR. MC CLUNG: All right. I'd like a clarification
2 tion of that ruling again please, sir. Are you saying that
3 I can't ask any other than about Camp Pendleton with
4 respect to the EPZ at this point?

5 JUDGE KELLEY: Yes. That's the ruling. You
6 have failed to show any legitimate area of questioning other
7 than Camp Pendleton. We have discussed it much longer than
8 we ought to have to, and you can proceed with Camp Pendleton.
9 That is the Board's ruling.

10 (Pause)

11 BY MR. MC CLUNG:

12 Q Mr. Kearns, what is the role of the Office of
13 Emergency Services in the formulation of emergency response
14 plans in general?

15 A Well, the basic mandate of the Emergency Services
16 Act is for us to be prepared to respond to any natural,
17 man-made or war-caused emergency. The basic role of the
18 Office of Emergency Services is to prepare state plans for
19 any type of emergency, to assist local government in the
20 development of their emergency programs, to coordinate state
21 resources in response to any emergency, and then to assist
22 local government and the private citizen in recovery from
23 an emergency. So our role in emergency planning relevant
24 to basic plans and those attend in appendices was to provide
25 guidance to them.

1 Q And with respect to nuclear power emergency
2 planning specifically, what is your role?

3 A Our role, again, is defined by Senate Bill 11.83
4 in this particular instance, going away from the Emergency
5 Services Act, was to define the planning zones and to develop
6 guidelines for them to develop plans to protect public health
7 and safety. And certainly in the review of NUREG 0654 it is
8 apparent that the guidelines have been covered more than
9 adequately and by necessity we simply said that NUREG 0654
10 would be the prevailing guidance in the development of their
11 nuclear power plant plans.

12 Q You've testified briefly earlier to the basic
13 document which is the state's plan. Can you describe what
14 kind of a planning document that is? And how it relates to
15 the other emergency plans.

16 A To the county emergency plans?

17 Q And those of the other agencies.

18 MR. PIGOTT: I'm sorry. Again I must ask which
19 document you are referring to specifically.

20 MR. MC CLUNG: Okay. Let's have a continuing
21 stipulation that I am always going to be talking about my
22 exhibit unless I specify otherwise.

23 MR. PIGOTT: Which one is that?

24 JUDGE KELLEY: You've got a lot. Which one?

25 MR. PIGOTT: McClung-1?

1 MR. MC CLUNG: With respect to the plans, there
2 are two state plans that are in exhibits. One is Exhibit
3 No. 52, I believe, which is Applicants' Exhibit No. 52, and
4 the other one is Exhibit No. 23, which I have misplaced.

5 JUDGE KELLEY: Do you mean revised March '81?

6 MR. MC CLUNG: Revised March '81, that is
7 correct. And so if I am referring to a plan of the state
8 I am referring to that particular plan unless I indicate
9 otherwise. Is that all right, Mr. Pigott?

10 MR. PIGOTT: I just have to know, that's all.

11 MR. MC CLUNG: I think that's fair.

12 BY MR. MC CLUNG:

13 Q The question was to describe the planning docu-
14 ment of the State of California and with reference to the
15 other local agencies, what type of a plan, describe the role
16 of the plan.

17 A The State of California Nuclear Power Plant
18 Emergency Response Plan addresses the responsibilities of the
19 state agencies in their response to an accident at any of
20 the facilities. We define in great detail who is responsible
21 for doing what. We address each function and come up with
22 a state agency concept of operations, recognizing that in
23 California basic responsibility for protection of the health
24 and safety is vested in local government. So therefore our
25 role at the state level is in support of their operation.

1 Not to usurp their authority. Therefore, the state plan more
2 or less addresses any shortfalls that may be identified by
3 the local plans. For example, if there is a continuing
4 need, and generally the state Office of Emergency Services
5 comes into play in protracted emergencies that extend the
6 basic responsibilities of local government beyond their
7 capabilities, they then turn to the state for assistance. In
8 the areas of monitoring, we are prepared that the Caltrans
9 will assist them in monitoring, as an example. California
10 Highway Patrol assists in traffic control. The California
11 National Guard is prepared to offer services once local
12 government has exceeded its capabilities.

13 That is essentially what the document describes.
14 As appendices to that are the four -- excuse me -- in this
15 case the three nuclear power plant plans. And it is that
16 document which will be taken to the state legislature for
17 their approval.

18 Q Now it is my understanding that there are differ-
19 ent standard operating procedures being prepared for the
20 various support organizations in the state government.

21 A That's correct.

22 Q To supplement your plan.

23 A That is correct.

24 Q What is the current status of the preparation
25 of those SOP's? Could you outline that briefly?

1 A Yes. The supporting procedures, our procedures
2 will be completed by October, 1981, and we would envision
3 by November virtually all of the procedures of the state
4 agencies would be completed, with the exception of the work
5 done regarding the corrections facilities. There are no
6 corrections facilities impacting on San Cnofre but at Rancho
7 seco and Diablo Canyon there is an impact. Because of the
8 severe problem posed at those facilities, a separate contract
9 has been let to accomplish that.

10 JUDGE HAND: Corrections facilities are state
11 jails?

12 WITNESS KEARNS: State prisons. California Mens
13 Colony, California Youth Authority.

14 BY MR. MC CLUNG:

15 Q What is the role of the Office of Emergency
16 Services in the preparation of standard operating procedures
17 for the various local jurisdictions' emergency response
18 plans?

19 A Our role is always in support of local government.
20 If they request our assistance for technical matters -- the
21 next witness, Dr. Mary Francis Reed, is prepared to provide
22 that. Again, we are always in support role to local govern-
23 ment.

24 Q Do you provide review? Does your agency provide
25 review of the various plans?

1 A That's correct.

2 Q Do you intend to provide review of the various
3 plans in the future?

4 A Consistent with Senate Bill 11.83, yes.

5 Q And will you be reviewing the various standard
6 operating procedures which will be prepared to aid in the
7 implementation of the various local government plans?

8 A That's correct.

9 Q What is your understanding of when those particu-
10 lar standard operating procedures might be sent to you for
11 your input?

12 A Based on conversations with Chief Coleman, who
13 is the head of the Interjurisdictional Planning Committee,
14 of which we have a representative, it is our understanding
15 that those standard operating procedures are expected to be
16 completed by October 15. However, they intend to have an
17 in-house review of their committee and submit them at some
18 later date. I have no idea when they will be submitted to the
19 state for our review.

20 Q Do you have any opinion for when those standard
21 operating procedures may be implementable?

22 A I'm sorry. I have difficulty in answering that
23 question. I am presuming that if they have defined these
24 procedures and they have been reviewed by the appropriate
25 agencies that they must consider them implementable. I'm

1 not certain that the sheriff would submit a procedure that
2 he didn't think he could implement.

3 Q Well, let me ask you this, do you think it would
4 be important as a planner, now, if you've got a basic emer-
5 gency document and you are trying to create standard opera-
6 ting procedures to aid in the -- facilitate in the implement-
7 ation of that particular document, would it be important
8 in the creation of those procedures to test whether or not
9 those particular procedures are going to work as according
10 to plan?

11 A Certainly.

12 Q Do you think it might be possible that the imple-
13 mentation of certain standard operating procedures, absent
14 certain tests, especially those which deal with multi-agency
15 standard operating procedures, do you think the implementa-
16 tion of those procedures might possibly be detrimental before
17 they are tested?

18 A Again, I'm not certain I can respond to that.
19 I am presuming that interjurisdictional planning committee
20 has taken into consideration the coordination necessary
21 among the agencies when they develop them and, not having
22 seen them, I don't think I can address that.

23 Q Okay. Does the Office of Emergency Services
24 have any opinion with respect to the invocation of the
25 memorandum of understanding?

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1 MR. PIGOTT: Oh, I'm going to -- if you are
2 talking about the memorandum of understanding between FEMA
3 and NRC I am going to object on the ground it is beyond the
4 competence of this witness to express such an opinion.

5 JUDGE KELLEY: Is that the question?

6 MR. MC CLUNG: I don't think I finished a ques-
7 tion.

8 JUDGE KELLEY: Maybe you could restate the
9 question.

10 MR. MC CLUNG: Maybe I'd better restate the
11 question.

12 BY MR. MC CLUNG:

13 Q Does the State Office of Emergency Services have
14 a position with respect to the manner in which the FEMA
15 review process has taken place?

16 MR. PIGOTT: I'm going to object. I don't think
17 it is either appropriate or within the province of this
18 witness to comment on FEMA's activity.

19 JUDGE KELLEY: Is the thrust of your question --
20 I think you need some foundation here as to his familiarity
21 with the process generally and in this case. I'm not sure
22 that it is there; perhaps it is, but I don't know. Could
23 you establish that first?

24 MR. MC CLUNG: Certainly. I can attempt to.
25

1 BY MR. MC CLUNG:

2 Q Are you familiar with the FEMA review of the
3 state and local plans that is on-going with respect to San
4 Onofre?

5 A Yes, I am familiar with the review process, if
6 you are making reference to the Regional Advisory Committee,
7 the so-called RAC committee.

8 Q Well, is that the extent of your knowledge of the
9 FEMA review process is the RAC committee? Is there more
10 review being done by FEMA other than the RAC committee, to
11 your knowledge?

12 A I'm sorry. I don't think I can address that
13 really. I am perhaps not following your question. Am I
14 missing the point? I'm sorry.

15 Q No, that's all right. It's not your fault;
16 it's my fault. Don't worry about it.

17 JUDGE KELLEY: It's jus' bout time for lunch.
18 Is this a logical enough stopping point for an hour and
19 fifteen minutes or thereabouts?

20 MR. MC CLUNG: Certainly.

21 JUDGE KELLEY: Let's stop for lunch and come back
22 at one o'clock.

23 (Thereupon, at 11:45 a.m., a recess was taken
24 until 1:00 p.m., the same day.)

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AFTERNOON SESSION

1:10 p.m.

JUDGE KELLEY: Back on the record. We will resume Mr. McClung's direct examination.

Whereupon,

JOHN KEARNS

the witness at the time of the recess, resumed the stand and, having been previously duly sworn by the Chairman, was examined and testified further as follows:

DIRECT EXAMINATION (Resumed)

BY MR. MC CLUNG:

Q Mr. Kearns, could you briefly set forth what the role of your organization would be in the event of an actual emergency?

MR. PIGOTT: What kind of an emergency?

MR. MC CLUNG: Radiological.

MR. PIGOTT: At San Onofre, I assume.

MR. MC CLUNG: To the extent that it is different -- I don't know that it will be different -- but yes, at San Onofre.

WITNES KEARNS: The role of the Office of Emergency Services, again, I emphasize is in support of local government. Some of the actions that would take place, we would activate our emergency operations center in Sacramento. There we would be in contact with Orange and San Diego Counties --

1 we have radio contact with them -- regarding any special
2 needs for resources from state agencies that would be of
3 assistance to them. Simultaneously, personnel would be
4 dispatched both from our office and the Radiologic Health
5 Section. The Radiologic Health Section would play a role
6 both in the dose assessment of a situation at San Onofre
7 as well as in the ingestion pathway and ultimately in recovery
8 and re-entry.

9 So our office in Sacramento is probably not much
10 different in a radiological emergency than it is in any other
11 emergency, and that is to coordinate all state resources to
12 assist local government, be it the California National Guard,
13 if they were to be needed, additional Caltrans personnel
14 outside of the personnel that have already been brought
15 into the planning process, California Highway Patrol, again,
16 outside of what has already been brought into the planning
17 process is funneled through the mutual aid system and we are
18 the coordinator of that system.

19 BY MR. MC CLUNG:

20 Q And the local agencies have direct responsibility
21 for taking the actual emergency response, is that correct?

22 A That's correct.

23 Q Could you describe briefly what your agency's
24 role is in the monitoring of radiation?

25 A Ours is very minimal as far as monitoring. The

1 radiologic health section has health physicists on their
2 staff that they would immediately dispatch to the area to
3 be of assistance in any way deemed fit by Orange or San Diego
4 Counties.

5 Now if you are talking about other state agencies
6 I referenced earlier the training that has been conducted
7 with the Caltrans personnel and they also are available to
8 assist.

9 Q Do you feel as an emergency planner that it would
10 be important to have off-site radiation monitoring devices
11 set at specific locations to monitor the plume in a radio-
12 logical emergency at a nuclear facility?

13 A Yes. In fact, Senate Bill 11.84 addressed that
14 and we certainly supported that contention.

15 Q What role, if any, do you play in the implementa-
16 tion of that legislation or -- strike that -- in the
17 installation of radiological monitoring equipment?

18 A The bill specifically stated that it was the
19 Department of Health Services who had responsibility to
20 work with local government in the determination of the types
21 of equipment and the locations of those equipment. And the
22 bill also specified that it would be in accordance with
23 NRC 1.97, I believe, a regulation that talks about require-
24 ments off-site.

25 Q Do you know what the status of that program is

1 with respect to the San Onofre nuclear power plant?

2 A May I reference my notes?

3 Q Of course.

4 MR. PIGOTT: For the record, I would be interested
5 in what issue this is concerned with.

6 MR. MC CLUNG: Yes. It refers to Contention No.
7 2(h), the method, staffing, system and equipment for asses-
8 sing and monitoring actual or potential off-site consequences
9 of a radiological emergency condition within the plume expo-
10 sure pathway EPZ for SONGS 2 and 3; also 2(j), which is
11 similarly worded, which refers to the ingestion pathway.

12 MR. PIGOTT: Thank you.

13 WITNESS KEARNS: From my notes it indicates
14 that Southern California has indicated that they will be
15 working with the radiologic health section in outlining
16 specifications of the off-site radiation monitoring devices
17 and the automated alert system required under Senate Bill
18 11.84. So presumably they are working in consort in this
19 area.

20 BY MR. MC CLUNG:

21 Q Do you know the status of that plan at the
22 present time in any more detail than you have just testified?

23 A I'm sorry. I don't have that information. It
24 certainly would be available, possibly from the utility or
25 certainly from the radiologic health section.

1 Q Could you describe what is known as the master
2 mutual aid agreement?

3 A The master mutual aid agreement, the mutual
4 aid program, is simply a process of neighbor helping neighbor,
5 whereby in an emergency cities may turn to adjoining cities
6 for assistance in mitigating any type of a disaster. When
7 it goes beyond the capabilities, they turn to the county.
8 The county has the capability of turning to adjacent counties.
9 When they are unable to provide the necessary resources to
10 take appropriate action they then go through our regional
11 office to implement mutual aid from anywhere in the state.
12 Possibly the best illustration is the fire mutual aid system
13 that we have in effect in California and is utilized many
14 times each year, whereby fire equipment may be brought from
15 various regions of the state to fight wildland fires any-
16 where in the state.

17 Q Would you describe the -- does the mutual aid
18 agreement, the Master Mutual Aid Agreement, in any way
19 require the local jurisdictions surrounding the jurisdiction
20 that may be in need to render assistance?

21 A Under a declaration of a local emergency or even
22 prior to the declaration of a local emergency mutual aid
23 response is voluntary. Under a gubernatorial declaration,
24 response to mutual aid request is mandatory.

25 Q Could you describe the emergency classification

1 scheme in California? You just alluded to it briefly there.
2 You referred to the local emergency and the governor's
3 declaration, I believe.

4 A Yes.

5 Q Could you explain that?

6 A If the local jurisdiction feels that any type of
7 an emergency is severe enough, they may declare a local
8 emergency. This provides certain immunities to the responding
9 jurisdictions. It provides the board of supervisors with the
10 capability of implementing rules and regulations. And it
11 also paves the way to ask the governor for gubernatorial
12 declaration. When a gubernatorial declaration is requested
13 and granted, it makes mutual aid mandatory, it brings into
14 play all state resources and it also is the initiating event
15 to go to the President and ask for a Presidential declaration
16 bringing into being all of the federal resources.

17 Q Under what circumstances can private property
18 of various individuals be commandeered for use in emergencies?

19 A Under a gubernatorial declaration. Again, I
20 would have to reference the act specifically. The governor
21 does have that capability and is responsible for payment
22 thereof. I might add that the commandeering of private
23 property generally is not implemented. There is usually
24 sufficient resources to go to the route actually of going
25 to the Association of General Contractors, for example, if

1 we need bulldozers. We don't commandeer with them, we
2 simply contract for their services and they provide us with
3 the resources.

4 Q Does there exist general rules and regulations
5 of the State of California which apply to emergency workers
6 who may be called upon to assist in an emergency?

7 A Yes, there's a classification called a "disaster
8 service worker". All public employees, by definition, are
9 disaster service workers. Disaster service workers may be
10 duly sworn in in the time of an emergency or they may be
11 impressed into service. The classification makes them
12 eligible for compensation and immunities.

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1 Q Now, is there any provision in the regulations:
2 referring to disaster workers for protection against
3 radiation exposure?

4 MR. PIGOTT: I am having trouble understanding
5 the cull of that question, Mr. McClung. It is rather
6 ambiguous.

7 MR. MC CLUNG: Okay.

8 BY MR. MC CLUNG:

9 Q What I want to know is, are there provisions in
10 the rules and regulations referring to disaster workers,
11 which would preclude their being irradiated, or venturing
12 into a contaminated area? If you know? If you don't --

13 A Well, I am not sure of the question itself. Are
14 you saying that a local jurisdiction would take a duly
15 impressed disaster service worker and order him into a
16 radiation area, is that the question you are asking? I am
17 sorry --

18 Q Let us assume that, but I am asking if there is
19 any -- if there are any rules or regulations which either
20 allow or prevent that, specifically.

21 A Well, first of all, our disaster service worker,
22 if he has been impressed into service, he can obviously say
23 no, he is not going to do it. I am having difficulty. We
24 know there -- the California Health and Safety Code lays out
25 criteria that have been specified as far as general population.

1 We know the Nuclear Regulatory Commission has
2 rules and regulations regarding exposures. I am having
3 difficulty --

4 Q That is all right.

5 A -- in assessing the question.

6 Q All right, I will withdraw it.

7 Describe the -- I take it there are mutual aid
8 regions in California, is that correct?

9 A That is correct.

10 Q Could you describe the mutual aid regions in the
11 Southern California area?

12 A Okay, the purpose of the mutual aid region is
13 so that there can be coordination within the region before
14 they turn to the state for assistance from other areas of the
15 state, and again, I will go back to the fire mutual aid
16 system. In each of the six mutual aid regions, there is a
17 fire mutual aid coordinator. He coordinates all response
18 within his region.

19 If his resources are overtaxed, he then turns to
20 the state and comes through our office to go to the other
21 mutual aid regions for resources to combat the problem that
22 he is facing. He does not have the prerogative of going to
23 another mutual aid region and asking them for assistance. He
24 goes through the state and that is where the Office of
25 Emergency Services plays a role.

3
1 Q And where are the boundaries of these regions as
2 regards the Orange County area?

3 A Orange County, Los Angeles County, Ventura,
4 Santa Barbara, San Luis Obispo comprise mutual aid region one.
5 Inyo, Mono, Riverside, San Bernardino, Imperial and San Diego
6 comprise region six, I think.

7 Q Is there any conflict, in your opinion, between
8 any of the requirements contained in the NUREG document,
9 0654, and any of the state requirements and responsibilities,
10 as outlined in the emergency response plan?

11 MR. PIGOTT: Could I have a showing of relevancy
12 of that question? I think that it was stated earlier by the
13 witness that they acceded to the NRC regulations within the
14 area of the plant. I don't understand the relevancy of his
15 question.

16 MR. MC CLUNG: If that is the answer, then to me
17 that would be relevant to the status of the emergency
18 preparedness.

19 JUDGE KELLEY: I frankly don't recall. Was there
20 a prior question about your agency's position with respect to
21 the plan? Onsite?

22 WITNESS KEARNS: There are two areas of
23 contention here. One is the basic emergency planning zone,
24 the 10 miles, or approximately ten miles around San Onofre,
25 and obviously 0654 is the dominant character there, and that

4
1 is the regulation that we are applying, and the guidelines
2 that we are applying to the plans. If we are getting into the
3 extended zones, we know that 0654 does not apply in that
4 area, so therefore, our guidance is unique in that respect,
5 but as far as the 10-mile zone is concerned, we have
6 accepted NUREG 0654 as the guideline to be used by the local
7 and the state in the preparation of plans.

8 BY MR. MC CLUNG:

9 Q Are there any other conflicts besides that, the
10 extended planning zone?

11 MR. PIGOTT: Well, I object to the characterization
12 as a conflict. I think one set of regulations, I will say,
13 extends beyond what another set does, but I don't see any
14 conflict.

15 MR. MC CLUNG: Okay.

16 BY MR. MC CLUNG:

17 Q Well, differences.

18 A No, I can think of no difference.

19 MR. MC CLUNG: No further questions.

20 JUDGE KELLEY: Cross-examination by the
21 Applicants, Mr. Pigott?

22 MR. PIGOTT: Yes, there will be -- if I can just
23 have just a minute, I am really not sure I have any questions
24 of Mr. Kearns at this time. I guess I would have one.

25

CROSS-EXAMINATION

BY MR. PIGOTT.

Q I would ask what the arrangements have been with respect to development -- developing necessary procedures within the ingestion pathway, the 50-mile area.

A The radiologic health section has had a draft plan, which I believe will be finalized this week. They are finalizing their procedures, and upon their acceptance of those procedures, and I might add, they have contracted with Envirosphere Corporation to do the developmental work. Once they radiologic health section accepts those as being adequate, they then will be working with the counties to develop the county input into this total ingestion pathway process.

Q And at this time, with respect at least to your department, do you have any problem areas or consider there to be any particular deficiencies with respect to the planning that is going on with respect to the ingestion pathway?

A No. In fact, I believe the radiologic health section is more than pleased with the work done by Envirosphere.

Q I gather from your testimony that the primary purpose of your department is by way of support to local government, state, or county or municipal, is that correct?

A That is correct.

6
1 Q And with respect to San Onofre itself, your
2 actual involvement in emergency-related activity is some dose
3 assessment, and the ingestment pathway, and I believe you
4 mentioned re-entry, is that correct?

5 A That is correct.

6 Q And at this particular time, would you have -- do
7 you have any plans or any -- well, what is it that your
8 department or agency would do with respect to re-entry and
9 recovery at San Onofre, should that ever become a necessity?

10 A Recovery and re-entry basically is a combined
11 local state and federal problem. The state health and safety
12 code designates the California Department of Health Services
13 radiologic health section as the agency to set standards
14 regarding re-entry. Once they have established these standards,
15 they will then assess the monitoring that is done, and work
16 with the locals and als other parties regarding
17 decontamination to reach those levels.

18 Q Let me ask one question in an area not actually
19 covered by Mr. McClung, but are you aware that the Applicants
20 in this case, Edison and San Diego, have a motion pending for
21 a permit to load fuel and do low power testing?

22 A Yes, sir. I am aware of that.

23 Q Okay. And has your office examined the question
24 of whether or not you have any position on the appropriateness
25 of such a license, given the present state of emergency

7
1 planning and preparedness as you know it?

2 A Well, I guess I would have to say based on my
3 limited understanding of possible accident consequences during
4 low power testing, I would say planning may well be adequate
5 to protect the public, and we would have no objection to the
6 low power testing.

7 Q I have no further questions. Thank you, Mr.
8 Kearns.

9 JUDGE KELLEY: Mr. Hoefling?

10 MR. HOEFLING: Yes.

11 CROSS-EXAMINATION

12 BY MR. HOEFLING:

13 Q Mr. Kearns, with respect to GUARD Exhibit 23,
14 which is the State of California Nuclear Power Plant
15 Emergency Response plan, revised as of March, 1981, am I
16 correct that it would be this plan which would govern the
17 state's response in a radiological emergency now?

18 A Yes, sir. That is correct.

19 Q Was this plan applied during the May 13, 1981
20 exercise?

21 A Yes, sir. We were only minimally involved in the
22 May 13 exercise. As you know, NRC regulations require that
23 the State have one test, and it was our intent to undergo
24 that test during the Rancho Seco exercise, which is coming up
25 later in the year.

8
1 We felt at that time all of your standard
2 operating procedures would be finalized, and it would be a true
3 and adequate test of our response, but yes, that was the plan
4 that was utilized. We did partially activate our emergency
5 center. We did transmit information between Sacramento and
6 the San Onofre area.

7 Q Now, I further understand that you are in the
8 process of finalizing procedures to be consistent with this
9 revised plan.

10 A That is correct.

11 Q Which procedures did you apply during the May 13,
12 1981 exercise?

13 A Most of us had preliminary draft procedures, and
14 that is what was applied. In fact, we have contracted to
15 finalize our procedures, and we use the initial draft, the
16 contractor that we had actually participated in the drill in
17 Sacramento to watch the flow of information and to pick up
18 anything that he felt would be important in any revision to
19 that draft.

20 Q Now, with respect to the basic EPZ to which you
21 have testified, as I understand it, that EPZ is more
22 extensive than the EPZ proposed by Applicants to meet the
23 Nuclear Regulatory Commission's regulations in the area of
24 Camp Pendleton, is that correct?

25 A That is correct, yes, sir.

9 1 Q Could you give us an idea of how much more
2 extensive it is, perhaps, in terms of mileage?

3 A The reason we even went to the extremes of the
4 Marine Corps base was basically geographical boundaries. We
5 felt it expedient if the Marine Corps was going to be involved
6 in it, there were only some two miles that fall outside of the
7 ten-mile zone. We felt for practical purposes the Marine
8 corridor would best be served by having a single plan that
9 covered the whole base, and so the zone we are talking about
10 is approximately two miles.

11 Q You mentioned a geographical boundary. Did you
12 mean a jurisdictional boundary of the camp, or --

13 A Excuse me, jurisdictional more than geographic,
14 in that area.

15 Q Fine, thank you.

16 MR. HOEFLING: That is all for Staff.

17 JUDGE JOHNSON: I am not sure whether you are
18 the appropriate one to ask this question, or a following
19 witness, but I will ask you, since they came up. The SOPs
20 from the local jurisdictions come to your office for approval,
21 is this correct?

22 WITNESS KEARNS: They come for review and
23 approval, but ultimate approval will be given by the State
24 of California Legislature in accordance with the government
25 code that I referenced earlier.

1 JUDGE JOHNSON: Suppose you get a plan from a
2 local jurisdiction on which you -- which causes you
3 difficulties. What is your approach to that jurisdiction in
4 resolving any difficulties you might find?

5 WITNESS KEARNS: Well, the key issue is the
6 resolution of the problem. We simply go down and begin to
7 express where we feel there are shortcomings, and make
8 recommendations that they could implement to overcome those
9 shortcomings.

10 Ultimately, however, we would not ram down the
11 Sheriff's throat how he would utilize his personnel. We would
12 probably be pointing out some inconsistencies with an SOP in
13 an adjacent jurisdiction, for example, and say we think there
14 is more clarification needed, but obviously, they are the
15 most knowledgeable in the development of their standard
16 operating procedures.

17 JUDGE JOHNSON: And your office does not attempt
18 to dictate to a local jurisdiction what shall or shall not be
19 included? Dictate?

20 WITNESS KEARNS: Dictate, probably not, probably
21 not.

22 JUDGE JOHNSON: Advise, yes?

23 WITNESS KEARNS: Advise with a heavy club, yes.
24 Yes.

25 JUDGE JOHNSON: I take it from that that the local

1 legislature, the state legislature looks very carefully at
2 any comments you might make on --

3 WITNESS KEARNS: Yes, I am certain that all of the
4 members of the legislature will not sit down and read the
5 volumes of material that are submitted to them. They will
6 obviously assign it to some small committee group, and we
7 would probably be working with them in discussing our review
8 of the plan.

9 JUDGE JOHNSON: And I think you indicated that
10 the SOPs from the local jurisdictions should be in your
11 office completed by about the middle of October.

12 WITNESS KEARNS: It is my understanding --

13 JUDGE JOHNSON: Yeah.

14 WITNESS KEARNS: -- that the plans will be
15 completed approximately October 15, and be submitted to us
16 after they have had preliminary review by the Interjurisdictional
17 planning committee.

18 JUDGE JOHNSON: How long does it take, or would
19 you expect it to take, from the time you receive the plans
20 before they are ready for legislative approval?

21 WITNESS KEARNS: Well, one of the difficulties
22 with it is, again as I referenced earlier, we do not
23 anticipate going to the legislature with just the plan from
24 San Onofre.

25 JUDGE JOHNSON: I understand that.

12 1 WITNESS KEARNS: They have asked us to wait until
2 we have them for all of the three facilities in California.

3 Certainly we do not anticipate that any lengthy
4 period of time would be involved since in many instances we
5 are deeply involved in the development of it, and periodically
6 have an opportunity to review drafts and submit comments back
7 to them.

8 JUDGE JOHNSON: So you are already quite familiar
9 with what you expect to find in the plans?

10 WITNESS KEARNS: At this point, we have not seen
11 many of the SOPS for San Onofre. They are still within the
12 interjurisdictional planning committee purview.

13 JUDGE JOHNSON: I think that is it. Thank you,
14 sir.

15 JUDGE KELLEY: I am not entirely clear yet about
16 the review function that your office would perform, in the
17 sense of approval or disapproval. Now, do I understand you
18 to say that the state plan and the plans for the various
19 reactors will ultimately be taken to the legislature for
20 approval?

21 WITNESS KEARNS: Approval by statute in fact, yes.

22 JUDGE KELLEY: They will review the plans, and
23 then they will pass a statute saying --

24 WITNESS KEARNS: That is the way the legislation
25 now reads.

1 JUDGE KELLEY: Okay.

2 WITNESS KEARNS: It must be approved by statute.

3 JUDGE KELLEY: Now, when you review a local plan
4 for adequacy, do you derive your standards in part from the
5 state plan revised March '81?

6 MR. PIGOTT: I wonder if I could ask for a
7 clarification. As to which portion of the -- if I might, to
8 make sure that you are communicating with the witness,
9 because it is very complicated, they are reviewing SOPs and
10 plans when they come in to go into the Bill, within both
11 areas, the basic EPZ and the extended EPZ, so I think you
12 have to ask concerning two different levels of regulations
13 depending on which area is being reviewed.

14 JUDGE KELLEY: We have established, I believe,
15 that 10 miles and in is consistent with 0654, correct?

16 MR. PIGOTT: That is correct.

17 JUDGE KELLEY: What I am really concerned about
18 here is, is -- possible inconsistencies and possibilities for
19 confusion, and let me skip up to that with an example, let us
20 say. The plans here we have before us did not have the
21 extended EPZ that the state plan has, which goes out some
22 additional miles beyond the ten-mile mark, judging by looking
23 at the map, and as I understand it, that is the major
24 difference between the state standards and 0654, if you had
25 to point to a single thing, that would be it. Now -- and

14
1 that is designed for low probability, very serious high
2 release accidents.

3 Now, the plans before us have elaborate
4 evacuation procedures, as you know, and they have provisions
5 for relocation centers in specific places. There are three
6 or four of them, as I recall, they are to be run by the Red
7 Cross, and we had a witness testify about that.

8 I am not certain, but my guess is that one or some
9 or all may be somewhere in your extended state planning zone.
10 There is one at Cal State Fullerton, is that correct?

11 MR. PIGOTT: I am not sure if the witness --

12 WITNESS KEARNS: I would have to verify it, but
13 I do know NUREG 0654 indicates that the congregate care center
14 should be located 20 miles from the plant, so it may well be,
15 and again, I would have to go back and look at the map to
16 verify it, but I am not certain that --

17 JUDGE KELLEY: I am far from certain, too. I may
18 be wrong. If they are all outside --

19 WITNESS KEARNS: Yes.

20 JUDGE KELLEY: -- the extended state plan line,
21 then that is an academic question.

22 MR. PIGOTT: A statement of Counsel again; my
23 understanding of the planning is that the relocation centers
24 are in fact beyond the extended area proposed in the state
25 plans.

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1 JUDGE KELLEY: Thank you. Put a broad question,
2 then. I won't go for more examples. Do you think that there
3 is any potential for confusion in having in effect two sets
4 of requirements in this area?

5 WITNESS KEARNS: No, sir, I honestly don't.

6 JUDGE KELLEY: Let me go back to where I was on
7 the approval process, just to finish it up. As of now, you
8 review a local plan, I take it, and if you find something
9 that is inconsistent, let's say, with your state plan, in-
10 cluding the extended EPZ concept, you then work with the
11 local officials and chances are they will change it, but
12 you wouldn't be in a -- the approval, disapproval part doesn't
13 even happen until the legislature gets around to reviewing
14 this and enacting a statute, right?

15 WITNESS KEARNS: That is correct, sir.

16 JUDGE KELLEY: So what the local authorities
17 are looking at, if they just disagree with you, they don't
18 want to make a change, they are looking at going before the
19 legislature at some point and having your office take the
20 position against them, and chances are they will accede to
21 your viewpoint?

22 WITNESS KEARNS: Well, we honestly don't envision
23 many areas of conflict since we are using NUREG 0564 as our
24 basic criteria. We would simply be pointing out to them
25 that in our perception they have not met the criteria of

k2 1 0654, and ultimately the federal emergency management agency
2 would also recognize that, so we begin to work with them to
3 correct the shortcoming that may be apparent in the plan
4 so that it meets 0654.

5 JUDGE KELLEY: Have you had any situations where
6 you thought 0654 required one thing and FEMA thought it
7 required something else in some significant point?

8 WITNESS KEARNS: I really can't address that.
9 Perhaps the next witness could address it in more detail.

10 JUDGE KELLEY: Okay. Redirect, Mr. McClung?

11 MR. MC CLUNG: No, sir.

12 JUDGE KELLEY: Okay. Mr. Kearns, thank you
13 very much. Appreciate your appearance.

14 WITNESS KEARNS: Thank you.

15 (Whereupon, the witness was excused.)

16 JUDGE KELLEY: Next?

17 MR. MC CLUNG: Yes, Intervenors would call
18 Dr. Mary Frances Reed.

19 Whereupon,

20 MARY FRANCES REED

21 having been first duly sworn by the Chairman, was called as
22 a witness herein and was examined and testified as follows.

23 DIRECT EXAMINATION

24 BY MR. MC CLUNG:

25 Q Would you state your name and address please

1 for the record?

2 A Mary Frances Reed. 411 South Flower Place,
3 West Sacramento, California.

4 Q Could you tell us the organization you work for
5 and your title?

6 A I am with the California Officer of Emergency
7 Services. I am Chief of the Nuclear Power Plant Planning
8 Section.

9 Q Could you describe for us briefly your educa-
10 tional background?

11 A I have a Bachelor of Science and a Ph.D. from
12 the University of California in Berkeley. My Ph.D. was in
13 nuclear chemistry. I have spent a year in a post-doctoral
14 appointment with the University of Kentucky Medical Center,
15 and I can go into professional now if you would like.

16 Q Well, that would be helpful if you would describe
17 your professional experience as it relates to emergency
18 planning.

19 MR. PIGOTT: Applicants are willing to stipulate
20 that Dr. Reed is an expert in the area of emergency planning
21 and that her testimony can be considered as expert testimony.

22 MR. MC CLUNG: That is helpful.

23 MR. PIGOTT: At least in the area of emergency
24 planning. That is what we are talking about.

25 JUDGE KELLEY: Why don't we just go ahead to

1 substance questions, then if questions about background come
2 up, we can get into it.

3 MR. MC CLUNG: Could I ask that we bind her
4 resume into the record at this point.

5 JUDGE KELLEY: Yes.

6 (Whereupon, the resume of Dr. Mary Frances Reed
7 was bound into the record following this transcript page.)

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February 6, 1981

MARY FRANCES REED, Ph.D.

Education and Degrees:

Ph.D., University of California, Berkeley, 1968, in Nuclear Chemistry-

Coursework included all phases of nuclear chemistry and nuclear physics, e.g. nuclear radiation, nuclear reaction processes, fission, nuclear reactor principles, radiation safety principles and procedures, personnel protection, exposure regulations, radiation detection instrumentation, etc. Research for thesis, entitled "The Excitation of Unnatural-Parity States in ^{24}Mg , ^{20}Ne and ^{16}O by Inelastic Alpha Scattering, which was a study of nuclear reaction mechanisms using a large cyclotron, involved planning the entire project, designing experiments, radiation safety and radiation detection systems and systems for handling radioactive gases, supervising technicians and other personnel assisting with the project, computer analysis of results, preparation of reports and writing the thesis.

B.S., University of California, Berkeley, 1964, in Physical Chemistry-

Graduated with honors from a program of extensive coursework in physical sciences and mathematics.

Short Courses:

"Physical Aspects of Nuclear Medicine", Special Summer Program, Massachusetts Institute of Technology, July 29-August 2, 1974 and

"Physics of Clinical Nuclear Medicine", American Association of Physicists in Medicine Summer School, Lexington, Kentucky, July 24-29, 1977

These two courses covered the physics and radiation safety aspects of nuclear medicine, reactor operations in the production of radiopharmaceuticals, preparation of radiopharmaceuticals from fission products or from samples bombarded in a reactor, safe handling of radioactive gases including methods for trapping radioactive xenon used for clinical studies, biological effects of radiation, calculation of radiation doses from the ingestion of radioactive materials by the inhalation, injection and oral pathways, detection of internally deposited radioactive materials, precautions necessary when caring for patients containing radioactive materials, etc.

"Orientation in Regulatory Practices and Procedures", U.S. Nuclear

Regulatory Commission State Agreements Program, Silver Spring, Maryland, September 11-22, 1978

Detailed study of Nuclear Regulatory Commission regulations and radioactive material licensing procedures including review and evaluation of applications, radiation hazards analyses, training and experience requirements for users, expected radiation exposures and comparison to legal limits, appropriate use and emergency procedures to minimize personnel exposures in handling various types of radioactive materials and writing of radioactive material licenses.

"Supervising by Objectives", California State Personnel Board Personnel Development Center, Broderick, California, May 21-24, 1979

Basic supervision course in management functions and techniques, planning, organization, administration and problem solving.

"Radiological Emergency Response Operations", U.S. Nuclear Regulatory Commission Office of State Programs, Las Vegas and the Nevada Test Site, October 10-19, 1979

Lectures, videotapes, discussions and actual training exercises at the Test Site in emergency response to radiation accidents in transportation, industry and at a nuclear power plant. Training exercises in response to the nuclear power plant accident were also carried out at a nearby town, at a hospital receiving casualties from the nuclear plant and at a dairy farm in the vicinity. Lectures included radiation physics, biological effects of radiation, exposure guides, internal dosimetry and bioassay, radiation detection and measurement, shielding, meteorology, air and environmental sampling, respiratory protection, contamination control and decontamination techniques, emergency response philosophy and procedures, handling radiation accident victims, protective action guides, nuclear reactor operations and emergencies, possible releases of radioactive materials in a nuclear power plant accident and appropriate protection procedures, press relations, etc.

Certification:

Medical Nuclear Physics by the American Board of Radiology, 1977-
In addition to extensive education and experience in the field, this certification required demonstration by both written and oral examinations of knowledge of nuclear medicine physics including nuclear processes, radiological hazards, radiobiology, personnel protection and monitoring, shielding, radiation detection instrumentation, internal dosimetry, nuclear medicine facility planning, exposure and release limits, cleanup of radioactive spills, personnel decontamination, etc.

Experience:

Chief, Nuclear Power Plant Planning, State of California, Office of Emergency Services, March 13, 1980 to present.

Responsibilities include managing the investigation of the consequences of serious nuclear power plant accidents in California and planning upgrades mandated by Section 8610.5 of the Government Code (SB 1183). A major thrust of the work to date has involved analyzing study results and working with state agencies and local jurisdictions in determining site-specific emergency planning zones (EPZ's) around each of California's nuclear power plants. In addition to meeting with contractors, consultants, utilities and federal, state and local government representatives, developing timetables, preparing correspondence, reports, recommendations, press briefings, I have made presentations to the Governor's Emergency Council, the Federal Emergency Management Agency's Regional Assistance Committee, OES staff and county Boards of Supervisors, and assisted the Department of Health Services and the counties of San Luis Obispo and Sacramento in preparing specifications for contract service agreements. Currently, I am coordinating the revision of the State Nuclear Power Plant Emergency Response Plan and coordinating these efforts with those of the counties, plant operators and the federal government.

Associate Health Physicist, California Department of Health Services, Radiologic Health Section, Sacramento, California, February 14, 1978 - March 12, 1980.

Various health physics assignments regarding radiological health hazards and sources of ionizing radiation in connection with the State of California's program for regulation and control of ionizing radiation:

- (1) Evaluation of applications for radioactive material licenses, of applicant's qualifications to use radioactive material, of the adequacy of their facilities, of the effectiveness of their procedures and controls in minimizing personnel exposure and assuring compliance with the California Radiation Control Regulations and writing of licenses. Substantial public contact regarding licensing, recommending radiation safety procedures and assisting applicants in preparing applications by correspondence, telephone conversations and meetings. Contact with the Nuclear Regulatory Commission and with regulatory agencies in other states regarding specific radiologic problems. Coordination of licensing actions with inspection agencies within the state. One project in consolidation of most of the city and county civil defense and office of emergency service radioactive material licenses within California into a single State Office of Emergency Services license, giving them broad authority in administering their programs in conjunction with local governments.
- (2) Coordination of California's Advisory Committee on Nuclear Medicine Technology in the implementation of legislation (AB 1545) which mandates the Department of Health Services to set standards of

competence for nuclear medicine technologists and to write and enforce the necessary regulations. I planned and organized meetings of the 11-member committee, prepared agendas and reports, etc. (3) Revised California's Medical Licensing Guide upgrading radiation safety standards for all medical uses of radioactive materials. Recommended changes from previous practices and coordinated the Department's Medical Advisory Committee's meeting and review of the new guide.

Assistant Professor of Radiation Medicine, University of Kentucky Medical Center, Lexington, Kentucky, 1973-January 1978
Taught nuclear medicine physics, radiation protection and radiopharmaceutical science (including production of radionuclides from the fission process in a nuclear reactor, processing of the materials into radiopharmaceuticals, etc) to medical students, residents and technologists. Established the radiopharmaceutical research and development program at the University. Prepared successful grant proposals. Set up and ran laboratories in 3 buildings on campus, hired and supervised 3 technical assistants for the projects and supervised the activities of other technical and clerical staff in work related to the projects. Designed experiments producing radioactive materials using a Van de Graaff accelerator, incorporating them into radiopharmaceuticals, and animal studies determining their biodistribution. Teaching and other experiments used radioactive materials and pharmaceuticals produced from fission products and activation products and required knowledge of nuclear reactor principles and operations. Controlled radiation hazards and contamination in experiments using solid, liquid and gaseous radioactive materials. Analyzed data, prepared reports and journal articles and presented results to scientific societies.

Consultant in Nuclear Medicine, Veterans Administration Hospital, Lexington, Kentucky, 1973-January 1978
General consulting in nuclear medicine physics and in a research project on imaging and ventilation dynamics of the paranasal sinuses using radioactive xenon.

Postdoctoral Research Associate in Radiation Medicine, University of Kentucky Medical Center, Lexington, Kentucky, 1972-1973
Training and course work in nuclear medicine, health physics, physiology, radiobiology and radiation therapy. Research in the production of radioactive fluorine for clinical bone scanning, a diagnostic test for bone cancer and metastases. Designed, set up and carried out production of the fluorine using the Physics Department's Van de Graaff accelerator.

Visiting Assistant Professor of Chemistry, University of Kentucky, Lexington, Kentucky, 1971-1972
Taught general chemistry lecture and laboratory sections to both regular and honor students. Supervised graduate teaching assistants for the laboratory sections and in grading examinations.

Research Chemist, University of Kentucky Medical Center, Lexington, Kentucky, 1969-1971
Supervised 2 technicians in a specialized clinical chemistry laboratory and carried out research into methods for detection of trace metals in biological samples.

Assistant Professor of Chemistry, Centre College, Danville, Kentucky, 1968-1969
Taught undergraduate physical sciences, physical chemistry and nuclear physics, including nuclear reactor theory.

Graduate Research Assistant in Nuclear Chemistry, Lawrence Radiation Laboratory, Berkeley, California, 1965-1968
Ph.D. thesis research. See education section.

Graduate Teaching Assistant, University of California, Berkeley, California, 1964-1965
Taught laboratory sections of freshman chemistry.

Laboratory Technician, Dow Chemical Company, Pittsburg, California, 1961-1962
Quality control analyses of caustic soda and potash samples.

Laboratory Technician, Lawrence Radiation Laboratory, Livermore, California, Summers of 1958, 1959, 1960 and 1963
General radiochemistry, laboratory work and radioactive sample counting. Environmental radiation monitoring and sample analyses. Experiments in the separation and analysis of mixed fission and activation products from an experimental reactor and of fission products from underground atomic bomb tests at the Nevada Test Site.

Professional Societies:

Health Physics Society
American Association of Physicists in Medicine
Society of Nuclear Medicine
American Association for the Advancement of Science
American Physical Society
American Chemical Society..

Non-Professional Society:

MENSA

Honors:

Outstanding Woman Faculty Member, 1972, by the Associated Women
Students, University of Kentucky, Lexington, Kentucky

Biographical Listings:

American Men and Women of Science
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The World Who's Who of Women

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Change 32 -

ANS Papers

presented at



1 BY MR. MC CLUNG:

2 Q Could you describe your duties and your re-
3 sponsibilities in your position as head of the Nuclear
4 Planning Section?

5 A In this position I am responsible for managing
6 the Office of Emergency Services Nuclear Power Plant Planning
7 efforts. And that does involve maintaining and updating
8 as necessary the state Nuclear Power Plant Emergency Response
9 Plan, coordinating that effort with the other state agencies
10 that are involved, assisting local jurisdictions in their
11 planning efforts, and of course a major part of it has been
12 the implementation of the requirements of Senate Bill 1183,
13 including managing the study of the consequences of serious
14 nuclear power plant accidents that we did contract out to
15 Science Applications Incorporated.

16 And then working with a number of people, in-
17 cluding local jurisdictions in setting the emergency planning
18 zones, and now in the process we are in -- the upgrade of
19 state and local emergency plans to correspond to those zones.

20 Another duty I have would be in the -- an actual
21 emergency situation at a nuclear power plant, our current
22 draft of the SOP would have me in the role of chief technical
23 advisor at -- if it was a UDAC, a Unified Dose Assessment
24 Center, the local jurisdictions were involved in, or in this
25 case I believe it is designated as an ODAC, an Offsite Dose

1 Assessment Center.

2 Q In your capacity in reviewing the local juris-
3 diction plan, have you made any study of the adequacy of
4 those plans as regards NUREG 0654?

5 MR. PIGOTT: Could we have a time frame on this,
6 with respect to your question, Mr. McClung?

7 MR. MC CLUNG: Okay. I -- you know, I appreciate
8 it, but you know, I think the question would have gotten a
9 yes or no answer, and my next question might have asked for
10 the date. I mean -- unless there is an objection --

11 MR. PIGOTT: I will withdraw --

12 MR. MC CLUNG: -- I would appreciate not being
13 interrupted in the middle of my --

14 JUDGE KELLEY: All right. Go ahead.

15 BY MR. MC CLUNG:

16 Q Have you in your capacity reviewed the state and
17 local plans as regards NUREG 0654?

18 A Yes.

19 Q And at what point in time did you do that,
20 approximately?

21 A This was during the latter part of May.

22 Q Of what year?

23 A Of this year.

24 Q And are these reviews -- were they incorporated
25 into written studies of any sort?

1 A I don't think studies is the word. We returned
2 our reviews to the local jurisdictions that submitted the
3 plans with our comments.

4 Q And did the NRC receive copies of that document?

5 A Not to my knowledge.

6 Q Did the Applicant receive copies of those docu-
7 ments?

8 MR. PIGOTT: You are asking whether they were
9 formally conveyed to us, or are you asking whether or not we
10 ultimately received copies?

11 MR. MC CLUNG: She can only answer whether they
12 were formally conveyed, I believe.

13 WITNESS REED: I do not believe we formally
14 conveyed them.

15 MR. MC CLUNG: Thank you.

16 BY MR. MC CLUNG:

17 Q Are the documents which describe your review of
18 the various local jurisdiction plans, those which I have
19 referred to in this proceeding as evaluation by state Office
20 of Emergency Services of the Orange County Nuclear Power
21 Plant Emergency Response Plan using NUREG 0654 criteria and
22 the same title with the various five different local agencies,
23 San Diego County, San Clemente, San Juan Capistrano, and the
24 Interagency Agreement -- are those particular exhibits, num-
25 bers 16 through 20 in this proceeding -- the review you made?

1 A I believe so.

2 Q Were they made under your direct supervision?

3 A Yes.

4 MR. MC CLUNG: I move at this time for admission
5 of Intervenors' Exhibit 16 through 20.

6 MR. PIGOTT: I would have a question prior to
7 their admission. If I may, I will just address it to the
8 Witness.

9 VOIR DIRE EXAMINATION

10 BY MR. PIGOTT:

11 Q Have you reviewed what has been identified and
12 distributed as 16 through 20?

13 A I have not seen the actual documents.

14 MR. PIGOTT: Okay, let me provide the Witness a
15 copy. Now, so as not to be mysterious, I believe there is
16 included in there four documents of an evaluation nature.

17 BY MR. PIGOTT:

18 Q Was there another document that accompanied each
19 of these four or five documents, whichever it was, at the
20 time it was conveyed to the various local agencies?

21 A They were all accompanied by cover letters.

22 Q And did the cover letters have statements con-
23 cerning the findings or the evaluation contained in the
24 proposed exhibits?

25 A Yes.

1 MR. PIGOTT: Okay. As a matter of completeness,
2 Mr. Chairman, I would submit that the evidence is objection-
3 able on the grounds that it is an incomplete evaluation or
4 an incomplete document with respect to what it purports to
5 be.

6 JUDGE KELLEY: Do you have any objection to
7 putting the cover letter in too?

8 MR. MC CLUNG: If they can be -- do you have
9 copies of those cover letters that you could provide me with
10 at some point and I could put into evidence?

11 MR. PIGOTT: I am not sure that some point is
12 satisfactory to Applicants. I think that if we are going to
13 have the document in front of us to be examined, we are
14 entitled to have the full document, especially whereas here
15 it contains a number of conclusions reached by the Witness.

16 MR. HOEFLING: I think that is right, Mr. Chair-
17 man. We should have --

18 JUDGE KELLEY: Does anybody have the cover letter?

19 WITNESS REED: I have copies with me.

20 JUDGE KELLEY: Did the Board at least have a
21 chance to look at these? Okay?

22 MR. PIGOTT: If we could have a short break for
23 that matter -- I only want them to be complete, and if we
24 can be provided each of the covers, I would be willing to
25 have copies made so that --

1 JUDGE KELLEY: Why don't we take a short break
2 and get the letter copied? Listen -- let me ask you, I
3 assume the letter was a boilerplate -- it is the same letter
4 to each of these jurisdictions, right, with a different
5 addressee?

6 WITNESS REED: Not exactly.

7 JUDGE KELLEY: Not -- oh, it does get into what
8 the plan is and so forth?

9 WITNESS REED: Not at great deal, but --

10 JUDGE KELLEY: Even so, I guess we should copy
11 all five. Let's take a premature coffee, tea break for 10
12 minutes or so. Off the record.

13 (Whereupon, a brief recess was taken.)

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1 JUDGE KELLEY: Back on the record.

2 We now have copies of the covering letters for
3 the five different evaluations, and as I understand Mr.
4 Pigott's request, it is that the covering letter be include.
5 with the five evaluations as an Exhibit.

6 MR. PIGOTT: Yes, as a part of the Exhibit,
7 rather than burden the record unnecessarily, perhaps just
8 label them 16(a) and call them the cover letters to be
9 attached, and I could read the titles of the --

10 JUDGE KELLEY: Let me see first whether Mr.
11 McClung is agreeable to having these letters included.

12 MR. MC CLUNG: I think they would be very
13 helpful, and I think if we label them with an A dash -- with
14 respect to the other -- you know, their perspective plan,
15 that would be what I have -- what we have talked about in
16 the hall. I think it is a good idea. I have to --

17 JUDGE KELLEY: So it would be 16(a) through 20(a)?

18 MR. PIGOTT: Well, let us -- well, I guess we
19 could go through them.

20 MR. MC CLUNG: Can I add something here? I
21 apologize.

22 JUDGE KELLEY: Yeah, go ahead.

23 MR. MC CLUNG: It is going to be relevant.

24 Inadvertently there are six of these plans corresponding
25 with the six agencies, and for some reason, one of them didn't

1 get copied into this volume, which I am going to have to
2 copy and provide for everyone, and I don't have copies now,
3 so I won't be asking extensive questions on it today. It is
4 one for the state parks. It is exactly identical to the
5 other ones, and there is a letter, there is a cover letter in
6 here that refers to that one as well, and I would like to --
7 once again for completeness, I would like to get that
8 particular one distributed, and I will do so tomorrow
9 hopefully.

10 JUDGE KELLEY: I think possibly you just
11 misspoke. You said plan. It is an evaluation.

12 MR. MC CLUNG: I mean evaluation. It is the same
13 as the other ones.

14 JUDGE KELLEY: Right, okay. So then, Mr. Pigott,
15 do you want to follow up on your suggestion, 16(a) would be
16 what?

17 MR. PIGOTT: 16(a) would be the letter of June
18 3, 1981, from Dr. Reed to Bert Turner, emergency services
19 coordinator of Orange County emergency services.

20 17(a) would be a letter of June 2 from Dr. Reed to
21 Jim Hunt, emergency services coordinator, San Diego County
22 Office of Disaster Preparedness.

23 18(a) would be a letter of June 2, according to
24 the second page, from Dr. Reed to Ron Coleman, Emergency
25 Services Coordinator, City of San Clemente.

1 19(a) would be a letter of June 1, from Dr. Reed
2 to Cynthia Ferguson, Office of Emergency Services, and that is
3 in San Juan Capistrano.

4 20(a), I cannot identify with a particular
5 jurisdiction, or --

6 JUDGE KELLEY: Wasn't that enclosed with each one?
7 It is the IAEP evaluation?

8 MR. PIGOTT: I don't know, because I haven't
9 looked at the bound volume of Exhibits that Mr. McClung
10 circulated. In fact, I don't even see --

11 JUDGE KELLEY: But in each of the cover letters
12 that I looked at, the evaluation of the IAEP was -- I guess
13 there were two enclosures. There was an evaluation of the
14 plan, and also an evaluation of the IAEP, is that right?

15 MR. PIGOTT: Well, I think --

16 MR. MC CLUNG: I believe that is correct.

17 MR. PIGOTT: I believe it is correct, but only
18 Mr. McClung can tell us for sure, or else look at the document,
19 which for some reason I am missing. Is that correct, Mr.
20 McClung?

21 MR. MC CLUNG: I would ask the witness.

22 BY MR. MC CLUNG:

23 Q Was the IAEP review distributed to all the
24 various jurisdictions?

25 A Yes. But it did not have a separate cover letter.

1 Q Right, right.

2 JUDGE KELLEY: Because the cover letter enclosed,
3 as I understand it, two documents. For example, evaluation of
4 Orange County, and another one called evaluation of IAEP.

5 WITNESS REEL: Yes.

6 MR. MC CLUNG: That is correct. Are we having the
7 confusion because there is an extra cover letter, because I
8 know what the extra cover letter is for.

9 JUDGE KELLEY: Well, you explained that, right.

10 MR. MC CLUNG: Okay.

11 JUDGE KELLEY: And you are going to add that.

12 MR. MC CLUNG: Okay, I just didn't know --

13 MR. PIGOTT: That is fine. Then we will wait
14 until that comes, I guess.

15 JUDGE KELLEY: Then there will just -- there will
16 be another Exhibit 21, which will be the evaluation of the
17 State Parks, and we already have a cover letter, which will
18 turn out to be 21(a).

19 MR. MC CLUNG: Well, it won't be 21, it will
20 actually be 25, but --

21 MR. PIGOTT: That is all right.

22 MR. MC CLUNG: Anyway, it will be 25(a).

23 JUDGE KELLEY: All right, we had some intervening--
24 we used that number.

25 MR. MC CLUNG: Yeah, we used the number --

1 JUDGE KELLEY: All right, I got it.

2 MR. MC CLUNG: -- unfortunately.

3 JUDGE KELLEY: So, as amended, this is being
4 offered into evidence, this exhibit, this series of exhibits?

5 MR. MC CLUNG: Yes, it is.

6 (Whereupon, the documents referred
7 to were marked as Intervenor's
8 Exhibits Nos. 16(a) through 20(a)
9 for identification.)

10 MR. PIGOTT: No objections to 16, 16(a), 17, 17(a),
11 18, 18(a), 19, 19(a) and 20.

12 MR. HASSELL: No objection.

13 JUDGE KELLEY: So ordered.

14 (Intervenors' Exhibits 16 and 16(a)
15 through 20 and 20(a) were there-
16 upon received into evidence)

17 MR. MC CLUNG: Okay. At this time I would like to
18 identify for the record what would be Intervenor's Exhibits
19 number 25, which is the evaluation of the State Office of
20 Emergency -- by the State Office of Emergency Services, of the
21 Department of Parks and Recreation, Pendleton Coast Area
22 Emergency Response plan, using NUREG 0654 criteria.

23 And that would be Exhibit 25.

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1 (Whereupon, the document referred
2 to was marked as Intervenors'
3 Exhibit No. 25 for identification)

4 JUDGE KELLEY: This is the one we were just
5 talking about, right?

6 MR. MC CLUNG: Right. I am just labeling it now,
7 so -- for the record, is that all right?

8 JUDGE KELLEY: Sure. Sure.

9 MR. MC CLUNG: And I would like to label for the
10 record the cover letter that went with that plan, which is
11 dated June 3, 1981, to Jack P. Stowe, manager of Pendleton
12 Coast area, and that Exhibit would be labeled 25(a), and
13 pending tomorrow I will supply copies of this, but I would
14 like to also move that particular document into evidence as
15 well, if that would be appropriate.

16 (Whereupon, the document referred
17 to was marked as Intervenor's
18 Exhibit No. 25(a) for identifica-
19 tion.)

20 JUDGE KELLEY: Why don't you move it tomorrow,
21 when you have got it?

22 MR. MC CLUNG: The witness won't be here tomorrow.
23 If it is all right, I will move it tomorrow with the copies,
24 but --

25 MR. PIGOTT: I have a copy of the documents, so

1 as far as I am concerned it can go into evidence, just as
2 long as the appropriate people have copies for cross-
3 examination.

4 JUDGE KELLEY: Well, fine. My guess is we can
5 somehow limp along, so why don't -- subject to -- well, on the
6 assumption that we can, the Exhibit is admitted, the two
7 Exhibits, 25 and 25(a).

8 (Intervenors' Exhibits 25 and 25(a)
9 were thereupon received into
10 evidence.)

11 DIRECT EXAMINATION -- (RESUMED)

12 BY MR. MC CLUNG:

13 Q You have described the fact that you did review
14 these plans based on NUREG 0654. Could you describe in a
15 little bit more detail how you went about reviewing the plans?

16 A I would like to mention that this plan review was
17 part of our ongoing system, if you want, for working with
18 local jurisdictions. We realized that the planning process
19 was not complete at that time. Many SOP's were missing. That
20 was acknowledged, and so in that sense this was an informal
21 review. It was not the sort of formal review we have had
22 before actually submitting the plan package to the legislature,
23 as Mr. Kearns discussed.

24 In fact, our purpose in doing this review was to
25 help them see the types of documentation that an outside

1 agency would need to adequately assess the plan. We did go
2 through NUREG 0654 and each plan page by page. We were
3 provided with an index to the plans, to the NUREG 0654
4 criteria.

5 We were looking for whether or not someone who did
6 not write the plans could actually understand what to do in
7 an actual emergency situation. Now, in nearly all cases,
8 the procedures were not supplied to us. Therefore, we could
9 not determine whether or not the specific functions could
10 adequately be carried out.

11 Q Thank you. You have stated that this was part of
12 an ongoing review process of your office, which has been
13 enumerated. Could you describe your particular role in the
14 ongoing review process of the local jurisdiction plans?

15 A Over the past year and a half that I have been
16 with the Office of Emergency Services, we have had numerous
17 meetings with local jurisdictions, and frequently utilities
18 have been represented as well, and in these meetings, and
19 problems have been discussed, suggestions made, and this
20 sort of process is continuing, and I am not sure more what
21 you are getting at.

22 Q That is fine. Did you participate in the May 13th
23 exercise in any way?

24 A Yes.

25 Q And how did you participate in that exercise?

1 A I was a state representative to the Orange County
2 EOC/EOF complex. Not Orange County, I am sorry, San Clemente
3 EOC/EOF Complex.

4 Q Did you find there is -- that the exercise at that
5 point was premature in the planning process?

6 A Yes, we believed it was premature to hold the
7 exercise at that time.

8 Q Now, why is it? Could you explain briefly why
9 that is?

10 A The SMP's were not in all cases completed. At
11 that time, very little training had been done. We felt it
12 would have been more appropriate to go further in the
13 planning and training process, and then to hold the complete
14 exercise.

15 Q Could you describe briefly what types of training
16 and planning you are referring to that would aid in conducting
17 an exercise?

18 A Well, by planning, the SOPs necessary to carry
19 out the specific responsibilities actually tasked to the
20 various agencies in the plans must be completed before they
21 can adequately test the capability for responding, and many
22 people are very capable and could in essence respond by the
23 seat of their pants, but we believe procedures do need to be
24 in writing. All emergency response personnel should be
25 trained in the basics of radiation, radiation hazards and

1 protection from the effects of radiation. Certainly decision
2 makers need specific training in terms of what the various
3 protective action guides mean, what the various emergency
4 classifications represent, what -- so they can adequately
5 do their job. Many of these people have had very limited
6 experience with anything to do with radiation. Those
7 people involved in assessment functions, monitoring functions
8 need fairly extensive training, and ideally a number of drills
9 would be carried out to test various functions and then the
10 entire package would be pulled together in a full scale drill.

11 Q Now, what kind of a drill or training should be
12 provided, in your opinion, for the decision makers who have
13 to make a determination of what type of protective response
14 should be taken in the event of a --

15 MR. PIGOTT: Could I ask which decision makers
16 this is being referred to? I want to make sure you are not
17 talking about the Board. In the context of that question.

18 BY MR. MC CLUNG:

19 Q The people that you have mentioned in your
20 answer to the previous question which have -- who are
21 responsible for making the choice of a particular protective
22 action in the event of a radiological emergency, you
23 indicated that it would be good to have some type of training
24 for them. What type of training or instruction were you
25 talking about?

1 A The local officials would need to be familiar with
2 the hazards of radiation to the point they could understand
3 how an accident that was, say, in progress at a nuclear power
4 plant might affect their population. They need to understand
5 how the plan of their jurisdiction fits together with any
6 other jurisdictions that might also be affected. Coordination
7 is essential.

8 Q Can -- do you have any specific recommendations
9 for the decision makers as far as improving their capability
10 to make a decision or coordinate a decision on a protective
11 response in the event of a radiological emergency?

12 MR. PIGOTT: I would ask, before that question,
13 it may not be improper, but I think there is a foundation
14 needed, and that is the extent to which this witness has
15 followed the ongoing procedure, whether she is aware of
16 exactly where everybody is in this overall planning, training,
17 preparation process, and if she is answering in a current
18 context.

19 MR. MC CLUNG: Okay. That is fair, I think.

20 WITNESS REED: I am not aware of the current
21 status of planning in this area.

22 BY MR. MC CLUNG:

23 Q So you are testifying now as of the time when you
24 had participated in the May 13 exercises, wouldn't that be
25 correct? Or --

1 A At that time, I was aware of at least some of the
2 training that had gone on, had actually attended some
3 sessions. I do not know exactly what has happened since then,
4 so I can't speak to that. I was answering for the sort of
5 training I think should be done, and it may well have been
6 done.

7 MR. MC CLUNG: Is that helpful, Mr. Pigott?

8 MR. PIGOTT: Yes, it is. It is very helpful.

9 BY MR. MC CLUNG:

10 Q Okay, what types of training would you recommend,
11 or measures would you recommend for decision makers, to aid
12 them in making coordinated decisions in the event that they
13 had -- there was a radiological emergency?

14 A What do you mean by measures?

15 Q Well, is there any specific type of program that
16 you would think would be appropriate for them specifically?
17 Should they get -- should they have specific meetings
18 themselves between only the decision makers?

19 A I think that is certainly important, and we have
20 been very much involved in training leading up to the Diablo
21 Canyon exercise. With the assistance of local jurisdictions
22 and the utility there, we put on a number of briefing sessions
23 to make -- or give the local officials an opportunity to find
24 out a good deal more about nuclear power plants, nuclear power
25 hazards, protective actions, radiation protection.

1 Q Did you find at the May 13 exercise at that time
2 that the decision makers did not have sufficient knowledge of
3 radiation and the consequences of radiation to deal effective-
4 ly and make effective response choices?

5 MR. PIGOTT: The witness said she was there, but
6 I am not sure that we have any foundation that she made any
7 evaluation of the nature being asked for.

8 Again, I don't object to going into these areas,
9 but I think we should know how we get there, that is all.

10 JUDGE KELLEY: Could you establish whether the
11 witness made an evaluation at the time?

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1 BY MR. MC CLUNG:

2 Q At the time of the exercise or thereafter with
3 respect to the exercise did you form an opinion about the
4 ability of the decisionmakers to take protective actions
5 in response to that drill?

6 A I was located at the EOC/EOF complex in San
7 Clemente. From what I saw, I believe that more training
8 would have been helpful to Mr. Carvalho. He did very well
9 using his technical staff, who were very familiar with the
10 emergency procedures and the emergency response and the
11 necessity for such. So I do recall that he was somewhat
12 hesitant. I think he would have felt more comfortable if
13 more training would have been available to him. I don't
14 mean to indicate he did not perform very well.

15 Q Did you note from your participation in the
16 exercise at the EOC/EOF any significant problems in the
17 implementation of the plans?

18 A Co-locating the two emergency facilities caused
19 a great deal of confusion.

20 Q Other than that fact?

21 A The EOF was not an EOF in the sense I would
22 interpret NUREG 0696. It appeared to me to be really just
23 a utility facility having liaison personnel.

24 Q Thank you. Were there any other things that
25 you noticed at the time?

1 A I think that was the major problem there.

2 Q As far as your on-going review process and help
3 and aid that you are offering to the various local juris-
4 dictions in formulating these plans are there any drills
5 scheduled that you know of now with respect to San Onofre?

6 A I am not aware of any specific dates set aside
7 for a drill.

8 Q In your review of the basic documents, preliminary
9 and formal review which you have referred to which are the
10 Exhibits 16 through 20 and 25 and the cover letters thereto,
11 taken together with your participation in the exercise, do
12 you believe that there are any problems in coordination
13 between the various local jurisdictions?

14 A At that time I believed there were.

15 Q Could you briefly set forth the problems that you
16 saw as far as coordination?

17 A More discussion needs to be done between the
18 decisionmakers prior to any actual implementation of pro-
19 tective actions. As I understand what happened, there were
20 some conflicting decisions made between San Clemente and San
21 Juan Capistrano.

22 Q When you made your informal review, the exhibits
23 that I just referred to, did you take into consideration the
24 availability of mutual aid agreements in the state?

25 A I'm not sure what you mean by availability of

1 mutual aid agreements.

2 Q Well, I note that there are references in the
3 -- in some of the cover letters and in the exhibits them-
4 selves to a lack of or not approving potentially of some of
5 -- some of the jurisdiction did not approve, apparently, or
6 it couldn't be told from the document whether they approved
7 the interjurisdictional plan, the interagency plan, the
8 IAEP.

9 A That's true.

10 Q Is it your opinion or the question I'm trying to
11 ask is would you think that the mutual aid law and the master
12 mutual aid agreement constitutes a sufficient connection so
13 that all the various local jurisdictions would be said to have
14 approved the interagency agreement? Too complex.

15 A I think I got --

16 MR. PIGOTT: Thank you for making my objection.
17 I think it is compound, complex. I don't understand what
18 the single call of the question is.

19 MR. MC CLUNG: Okay.

20 BY MR. MC CLUNG:

21 Q What I'm trying to understand is -- maybe I can
22 make it much simpler by getting away from the specifics and
23 ask you about the review process itself. When you did the
24 review did you just focus on the plans with respect to 0654,
25 I mean the basic documents in themselves, or did you take

1 into consideration the fact that there are existing resources
2 at the office of emergency services and other state resources
3 which would be backing up those plans, you know, when you
4 made your specific comments with respect to the adequacy or
5 inadequacy of various parts of the plan?

6 A We reviewed those documents submitted to us.
7 I'm not sure that the mutual aid agreement is relevant to
8 the question. I don't think I understand.

9 Q Well, for instance, the mutual aid agreement is
10 an agreement which applies interjurisdictionally to all the
11 jurisdictions which provides for emergency assistance in any
12 type of emergency, isn't that correct?

13 A Yes.

14 Q And so the existence of that structure, that
15 emergency structure, would be an aid to the coordination of
16 emergency preparedness in a radiological emergency, isn't
17 that right?

18 A Well, it can be called upon for any emergency.
19 As I mentioned earlier, we looked at the plans, the documents
20 submitted to us, and tried to determine what type of document-
21 ation would actually be needed for an outside agency to
22 adequately assess the plan. Senate Bill 11.83 does require
23 that in addition to approval by statute by the California
24 Legislature that these plans be approved or otherwise con-
25 curred in by the Nuclear Regulatory Commission. So in that

1 sense we are certainly tied into NUREG 0654 criteria as well.

2 Q Okay. I'd like to make a specific reference
3 now to Exhibit No. 10, which is the Orange County review,
4 power plant emergency response plan reviewed by you, and I
5 would like to turn to Planning Standard J9.

6 JUDGE KELLEY: Are we looking at the plan or the
7 evaluation?

8 MR. MC CLUNG: The evaluation. I'm sorry. I
9 might have misspoke.

10 JUDGE KELLEY: And that is page?

11 MR. MC CLUNG: Page 16.

12 JUDGE KELLEY: Of Orange County?

13 MR. MC CLUNG: You have to get into Orange County.
14 It should be the top, the first plan, page 16.

15 BY MR. MC CLUNG:

16 Q Could you explain your comment there on the
17 findings opposite J9?

18 A By "addressed" we mean that this particular
19 criteria was mentioned. Our additional comments indicate
20 that we believe more detail is needed.

21 Q Turning to 10(b), what is your finding there?

22 A No map showing where the population is actually
23 located were provided with the plan.

24 Q Is it your opinion as an emergency planning
25 expert that the plan should contain those types of documents?

1 MR. PIGOTT: You mean it has to be contained
2 within the four corners of the exact document being
3 reviewed?

4 MR. MC CLUNG: Should it.

5 MR. PIGOTT: Okay.

6 WITNESS REED: The information needs to be
7 made available to anyone who would be using the plan. I
8 don't know that it has to be specifically in this document.
9 It should be referred to in this document, it's availability
10 mentioned so someone could find it.

11 BY MR. MC CLUNG:

12 Q Do you believe that whether or not the PAG's
13 are referred to in the planning document or in some other
14 document to aid in the making of a protective action is
15 essential for a decisionmaker in a radiological emergency?

16 A Repeat that, please.

17 Q I'm referring, again, to the J-9 and your comment
18 with respect to the plan does not indicate how PAG's and
19 similar criteria will be used in making protective action
20 decisions relating to evacuation, sheltering, use of K_i ,
21 prevention of ingestion or inhalation, et cetera. Do you
22 believe that the planning document must contain that in order
23 to adequately provide the decisionmaker with a basis for
24 those choices?

25 A Yes.

1 Q Returning to J-10(e), you note that the plan
2 does not consider application of K_i to special applications.
3 The plan only states utility will provide K_i for emergency
4 workers. No mention of storage and distribution details.
5 Do you feel that NUREG 0654 requires the plan to set forth
6 provisions for having potassium iodide available to the
7 general public in the event of a radiological emergency?

8 A I don't interpret it that way.

9 Q Do you interpret it that it should be available
10 to special populations like schoolchildren or hospital
11 patients?

12 MR. PIGOTT: I would ask for a reference as to
13 whether or not there is a particular reference that you are
14 asking the witness to interpret. The first question I thought
15 was a general experience-type question. I think you are
16 now calling for an interpretation of a portion of 0654.

17 MR. MC CLUNG: Okay. I think that is a fair
18 question.

19 BY MR. MC CLUNG:

20 Q What I am trying to get at is the meaning of your
21 response in 10(e) on that page 17.

22 A If you are going to provide K_i --

23 JUDGE KELLEY: Excuse me. Do we have a question
24 about the meaning of 0654 or is that withdrawn? If we do,
25 let's find the pertinent section of 0654.

1 MR. MC CLUNG: Well, I'm referring to 10(e).

2 JUDGE KELLEY: I understand that. But then the
3 question was do you read 0654 as requiring such and such
4 about potassium iodide, as I recall it.

5 MR. MC CLUNG: That's right.

6 JUDGE KELLEY: And I am just saying where in 0654
7 is this discussed.

8 MR. MC CLUNG: 10(e).

9 JUDGE KELLEY: Pardon?

10 MR. MC CLUNG: 10(e) is the reference to 0654.

11 JUDGE KELLEY: 0654 --

12 MR. MC CLUNG: J-10(e).

13 JUDGE KELLEY: Where in 0654 is potassium iodide
14 provision discussed?

15 MR. MC CLUNG: Page 63.

16 JUDGE KELLEY: Fine. Just a minute. Okay. Oh,
17 I see. The numbers in the evaluation are keyed to 0654.

18 MR. MC CLUNG: I apologize.

19 JUDGE KELLEY: No, I think I should apologize to
20 you. But in any event, let me just take a look at this.

21 (Pause)

22 JUDGE KELLEY: Okay. Well, we have a reference.
23 Go ahead, Mr. McClung.

24 BY MR. MC CLUNG:

25 Q My question was whether or not you believed that

1 the NUREG requires that there be potassium iodide available
2 for special populations like people in hospitals or school-
3 children.

4 A I would interpret it to mean that this must be
5 considered.

6 Q As an emergency planner, do you think that that
7 is an important consideration?

8 A I certainly do for hospitals where actual evacua-
9 tion of the population would be very difficult.

10 Q Do you think it would be a good idea to have
11 potassium iodide available, stored at various institutions
12 like hospitals within the emergency planning zone as a pre-
13 ventative type measure?

14 A Yes.

15 MR. PIGOTT: Could I have just a clarification
16 of the general approach of Intervenors in this line of
17 investigation? Is it Intervenor's position that all of the
18 criteria in 0654 actually have to be reflected in the plan?

19 MR. MC CLUNG: No. I don't see why necessarily
20 that would be the case.

21 MR. PIGOTT: In other words, these considerations
22 such as the provisions for radioprotective drugs could be
23 reflected in some document other than the Orange County plan,
24 for instance, and the thrust of your questions --

25 MR. MC CLUNG: I think it would probably be part

1 of the Orange County plan. I don't know what you mean by
2 The Orange County plan.

3 MR. PIGOTT: I apologize really for bringing
4 this up, but there does seem to be a pervasive feeling from
5 the Intervenors that if something is not reflected in a
6 plan document that it falls short of satisfying the require-
7 ments of 0654. I think it has been testified to many times
8 that various provisions are found in various locations.
9 Yesterday we had Dr. Ehling from the Orange County Department
10 of Health testifying concerning how they had taken care of
11 this particular matter, but I'm feeling that it is supposed
12 to also be in the plan. I would like to know if that is the
13 theory that Intervenors are proceeding under.

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JUDGE KELLEY: Well, I think it would be helpful to know -- to know whether that is the theory just so -- and without indicating any view from the Board on the matter one way or the other, but the Applicants may not agree with that view, and they may want to ask a question on cross just to make a quick --

MR. MC CLUNG: Well, do you want my statement of counsel on that?

JUDGE KELLEY: Go ahead, yes. Mr. Pigott asked you a question.

MR. MC CLUNG: Yeah, okay.

JUDGE KELLEY: So why don't you go ahead.

MR. MC CLUNG: Intervenors don't believe that it necessarily has to be in something that is called the Plan, the Orange County Plan. We do believe, however, that it has to be in writing and it has to be in existence and part of the plan -- I don't know what title you have to put on that -- I think it would have to be in an SOP. I think that the NUREG is requiring a written consideration of some sort of the various items and whether or not they have been submitted in this case, I think, is important. If they haven't been submitted in this case, then I am not going to presume they don't exist, but I think it is relevant that they are not here.

MR. PIGOTT: Thank you. That is very helpful.

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BY MR. MC CLUNG:

2 Q Do you think it would be important from an
3 emergency planning standpoint to have radioprotective drugs
4 available to other special populations who might not be able
5 to evacuate, for instance, school children?

6 A I think the possibility should be considered.
7 I hesitate to make a blanket statement saying yes to that.

8 Q Let me ask you a hypothetical question. If for
9 instance the emergency response evacuation plan provided a
10 scenario whereby the schoolchildren were some of the last
11 persons to be evacuated out of the emergency planning zone,
12 do you think it would be an important consideration of emer-
13 gency planners to perhaps provide radioprotective drugs for
14 those specific school locations that might not be evacuated
15 at the onset of the radiological emergency?

16 A I think it should be considered in such a case.
17 I am not a physician. KI can in some cases cause problems.

18 Q Do you think -- now I am going to refer to J-10
19 F -- we are talking about the problems that you just raised.
20 Do you think that the plans should set forth criterion for
21 the administration of potassium iodine to people that may
22 need it in the event of a radiological emergency?

23 A Yes, I think so.

24 Q Okay, now I would like to turn to J10G. You
25 talk about the Orange County Plan and how it addresses the

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1 relocation procedures, and you indicated the plan does not
2 contain relocation procedures, does not correlate reception
3 center capacity to projected population. Do you believe that
4 that is an important consideration that should be addressed
5 in some planning document?

6 A Yes.

7 Q Do you believe that that would be required by
8 the NUREG 0654?

9 A That is my interpretation.

10 Q Now I would like to turn your attention to J10K
11 in which you state that the plan states that impediments
12 may occur. You are referring to potential evacuation impedi-
13 ments, and on -- you note that on page V-9 the plan states
14 sheltering is an alternative protective action if roads or
15 weather are bad. You note that alternative routes are not
16 identified. Do you think it is important that alternative
17 routes, in case something happens to the main evacuation
18 route be identified in evacuation planning?

19 A I think some consideration certainly should be
20 given to them.

21 Q Do you believe that that consideration would
22 be a requirement of NUREG 0654?

23 A My understanding of NUREG 0654 is that each of
24 the planning standards, as is indicated under J on page 16
25 that we have just reproduced here, must be met, but not

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1 necessarily every single number under that standard has to
2 be met to the full extent, but the goal is this planning
3 standard. In some cases, particular jurisdiction may find
4 an alternate method of meeting the standard.

5 Q Okay, I thank you for that. What I am particu-
6 larly concerned with, though, is the alternative routes, the
7 specific one that we are referring to here, and what I would
8 like to know from your point of view as an emergency planning
9 official, whether or not you believe that particular NUREG
10 requirement is an important one which should be addressed.

11 MR. PIGOTT: I am going to object. I don't be-
12 lieve the Witness is here to express an opinion on NUREG
13 0654 criteria. It is one thing for Dr. Reed to testify con-
14 cerning an evaluation made back in May and June. It is
15 another thing for her to be addressing an interpretation of
16 an NRC document when I don't believe she has professed that
17 that in fact is part of her job or her expertise.

18 MR. MC CLUNG: Well, I am at somewhat of a loss.
19 We stipulated that she was an expert in emergency planning
20 for nuclear purposes.

21 MR. PIGOTT: No.

22 MR. MC CLUNG: Oh, it was a limited stipulation?

23 MR. PIGOTT: She was an expert in emergency
24 planning, but I think by her own qualifications she is -- or
25 by her own statements I thought that Dr. Reed had not held

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1 herself out to be an expert at identifying or interpreting
2 NUREG 0654 criteria.

3 MR. MC CLUNG: I --

4 JUDGE KELLEY: You are not an attorney?

5 WITNESS REED: No.

6 JUDGE KELLEY: Right. Let me try --

7 MR. MC CLUNG: Go ahead.

8 JUDGE KELLEY: -- a question or two if I may.

9 I think the Board would feel that sort of legal interpreta-
10 tion of 654 from this Witness, we don't need that. It
11 wouldn't really be very useful. It might be another considera-
12 tion, I suppose, if -- is it your view that your department
13 in reviewing matters is bound by 654?

14 WITNESS REED: Yes.

15 JUDGE KELLEY: So that if you thought a provision
16 required something, whatever it required, whether you were
17 right legally or not is irrelevant. That is what you think,
18 and that is what you review by, is that right?

19 WITNESS REED: Yes.

20 JUDGE KELLEY: So, Mr. Pigott, why isn't it
21 relevant what the department of the OES office things, 654
22 requirements?

23 MR. PIGOTT: Well, my objection was that I did
24 not believe that she was holding herself out as being the
25 person interpreting 0654. If she says that is a part of her

k6 . job and her function, I guess that is a different thing, but
2 that was not -- that is not my interpretation of the Witness's
3 testimony up to the time of the objection.

4 JUDGE KELLEY: All right. In light of what the
5 Witness just said --

6 MR. PIGOTT: If the questions are phrased as to
7 what she thinks in her department, as to the way she uses
8 0654, no objection.

9 JUDGE KELLEY: Okay, is that satisfactory to
10 you?

11 MR. MC CLUNG: That is fine.

12 JUDGE KELLEY: All right. Go ahead.

13 MR. MC CLUNG: I would like to refer again to
14 LJK and the alternate route problem. I would like to ask
15 you whether you feel that the existence of an alternate
16 route is one important requirement of NUREG 0654 --

17 MR. PIGOTT: I am going to object on the grounds
18 of characterizing 0654 as a requirement. We have planning
19 standards and evaluation criteria, and I would think that
20 the question should be phrased in those terms.

21 MR. MC CLUNG: Getting tough.

22 JUDGE KELLEY: I will sustain the objection in
23 the sense that 654 is the NRC Regulatory Staff's opinion
24 of what the law requires. In the strict technical sense
25 it isn't a requirement. One can argue with it if one wants

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1 to, but it is a very fine line I think we are drawing, but I
2 will sustain the objection on that basis.

3 BY MR. MC CLUNG:

4 Q Do you think that the question of whether or not
5 there is an alternate route that is identified in the plan-
6 ning documents is an important standard contained in NUREG
7 0654?

8 A Let me comment that there may be more than one
9 way of achieving a particular objective. In this case it
10 would be overcoming an evacuation impediment. I know for
11 our earthquake planning we have designated bulldozers in
12 essence as one possible means that could be used in case an
13 overpass was down, for instance, and we needed to get through
14 an area, so an alternate road is not the only possible way
15 of meeting this particular goal.

16 Q Thank you. That is helpful. Do you believe
17 that it would be an important or a useful way of meeting
18 that standard?

19 A By another road? Yes.

20 Q Turning to J10M you note that -- it is with
21 reference to basis of choice of protective action. You
22 know that the NUREG 0654 identifies this as the state plan-
23 ning requirement, however it is a local responsibility to
24 determine the full protective action from plume. What do
25 you mean by that statement?

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1 A In California basic responsibility for protecting
2 population rests with the local jurisdiction. This is not
3 the case as I understand it in many other states, and I
4 believe that NUREG 0654 is written thinking more in terms
5 of those states where the state government has a primary
6 responsibility there.

7 Q So you don't feel there is any conflict or
8 problem created by the fact that NUREG 0654 refers to that
9 as a state responsibility?

10 A No. It just has to be interpreted in terms of
11 California law.

12 Q Turning to that same standard, J10M, you note
13 that the Orange County Plan does not contain criteria for
14 recommending specific protective actions. Do you believe
15 that that is an essential planning standard in the NUREG 0654?

16 A I think it has to be considered. It is not the
17 sort of thing you can put into a cut and dry situation where
18 the local official would not have the ability or authority
19 to use his best judgment given time. I believe the plan
20 should contain guidance on this matter.

21 Q Do you believe that the guidance contained in
22 the Orange County Plan at the time you reviewed it was
23 sufficient?

24 A It should have more detail, I believe. It did
25 mention the PAGs. It did not go into the details of how they

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1 might be used in determining protective action. Again
2 this comes down to the standard operating procedures, which
3 in general were not provided.

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Q Finally J-12 --

2 MR. HOEFLING: Mr. Chairman, I would like to
3 interrupt at this time. I just want to get an understanding
4 of where we are going. Are we going to go through these
5 critiques in a line by line fashion? It appears to the
6 Staff that given the situation we have where the Witness has
7 indicated that she is not knowledgeable as to the current
8 level of preparedness, and given -- and I think her comments
9 with respect to the abstract principles of 654 are valuable,
10 but they are not being applied to the facts, if you will, of
11 the current state of preparedness. I wonder what value we
12 are getting from this examination.

13 JUDGE KELLEY: Mr. McClung, what was your inten-
14 tion?

15 MR. MC CLUNG: My intention is twofold. The
16 first part of my intention is to backup so to speak, the
17 FEMA RAC review and the FEMA findings that came out. There
18 has been testimony in this case that there were some prob-
19 lems with those findings and some of them there may not
20 have been enough staff at FEMA, there may have been some
21 problems with those findings, and I am attempting to support
22 those findings with similar findings of other bodies, other
23 responsible emergency planning bodies. That is my first
24 purpose.

25 The second purpose is Intervenors believe that

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1 many of these things that we are questioning about today
2 don't exist. There has been testimony that many standard
3 operating procedures will be perhaps done, but they are not
4 in the record of this case, and the fact that they are going
5 to be done is relevant to -- but it is not conclusive of the
6 issue, and to -- we feel that it is important to note which
7 ones of these things should and must be done, and in order
8 to have an adequate state of emergency preparedness.

9 I might add, I think it is important, if we are
10 talking about time and you know, the probative value versus
11 the amount of time that we are spending on this, I don't
12 intend to go through every planning standard in every one
13 of these plans. I wanted to go through a representative
14 sampling so that the process that Dr. Reed did will become
15 clear, and the judgments that are contained sometimes in
16 brief form in the review will be more meaningful to the
17 Board and the parties.

18 JUDGE KELLEY: Well, I think, you know, the
19 testimony based on these evaluations can be useful to the
20 record. We are certainly not prepared to cut you off. I
21 was assuming that you weren't going to ask the same question
22 about all five plans, but rather were going for some sort
23 of illustrative cross section.

24 I am a little unclear as to the -- and that was
25 for the first half. I am a little unclear as to the second

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1 and as to the existence or status of SOPs. We can stipulate
2 that as of the exercise last May or June there were some
3 that weren't done, and since then some have been done. Is
4 this the right witness to nail down what is down and what is
5 not done? You weren't saying that?

6 MR. MC CLUNG: No. I don't --

7 JUDGE KELLEY: That is good.

8 MR. MC CLUNG: She is definitely not the right
9 witness for that. She --

10 JUDGE KELLEY: Tell me again what you wanted to
11 get out with regard to SOPs then? I understood you to say --

12 MR. MC CLUNG: Well, I want to elucidate the
13 intervenors' position or underline which SOPs which may not
14 be in -- the record reflects the ones that are being done
15 and the ones that have been done, and many witnesses have
16 testified to that. But what I am -- we want to underline --

17 JUDGE KELLEY: Excuse me. Excuse me. That is
18 my impression. Do we have somewhere in the record sort of
19 a comprehensive list of SOPs? What is done and isn't done?

20 MR. MC CLUNG: We --

21 JUDGE KELLEY: I guess I would have to --

22 MR. MC CLUNG: Well, Pilmer's, is a little bit --

23 MR. PIGOTT: Mr. Pilmer and probably Mr. Bernie
24 Murray's, especially Mr. Murray's exhibits may give us a
25 fairly decent handle on the current status.

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1 JUDGE KELLEY: I am sure there is a lot of in-
2 formation. I wasn't sure whether the one could say there,
3 you know, 185 done and 37 not done, and I don't know about
4 that.

5 MR. PIGOTT: I am afraid a lot of them also
6 come from the local representatives that were subpoenaed
7 during the Applicants' portion of the case.

8 JUDGE KELLEY: Okay. And you were saying you
9 wanted to underline your position about the importance of
10 having them done and --

11 MR. MC CLUNG: Yeah, some specific ones that
12 may not be done that we want to make sure get done.

13 JUDGE KELLEY: And you would be referring to
14 some specific ones in the course of talking -- of examining
15 this witness?

16 MR. MC CLUNG: Well, we have already referred
17 to specific --

18 JUDGE KELLEY: I understand. Well, okay. I
19 think that, you know, throughout this we have been alert
20 to when we thought we were getting -- doing productive work
21 and when we were starting to spin our wheels, and that hap-
22 pens, I am sure we will hear from the lawyers, but at this
23 point the Board is not prepared to intervene. We might be
24 prepared to have a cup of coffee, though. Let's keep it
25 to five or ten minutes, and not longer, okay? Let's take

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1 a short break. Off the record.

2 (Whereupon, a brief recess was taken.)

3 JUDGE KELLEY: Back on the record. Resume
4 direct examination.

5 BY MR. MC CLUNG:

6 Q Thank you. I would like to refer again --
7 before we went off into a discussion we were talking about
8 planning standard J-12, which is concerned with the means
9 of registering and monitoring people that might come into
10 relocation centers and you note in your review that the
11 plan does not contain specific procedures for meeting this
12 requirement. Do you think that having procedures set forth
13 for monitoring -- people that -- evacuees that come to the
14 relocation centers for contamination is an important standard?

15 A I believe some method for screening people that
16 may have been contaminated does need to exist in the plan.
17 And procedures are needed to do this. Plan our SOPs and
18 accompanying documents.

19 Q Turning now to another planning standard, I
20 would like you to refer to E, planning standard E, which is
21 on -- I am afraid -- page seven, I believe, if you have
22 page numbers on your copy, but it is E, dealing with notifi-
23 cation methods and procedures. And I would like to refer
24 you to number two, which talks about the procedures for
25 alerting and notifying and mobilizing response personnel.

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1 You note that it is not possible to determine if the
2 response organizations can receive alert on a 24 hour basis.
3 Now, obviously it is important, is it not, to have that
4 capability?

5 A Yes.

6 Q Now, do you think that it -- that particular
7 capability should be set forth in the plan?

8 A Or in procedures accompanying it, yes.

9 Q And there is no way to tell from the planning
10 document that you reviewed whether or not the various
11 response agencies within the Orange County organization can
12 respond to the 24 hour notice?

13 A The procedures weren't available for our evalua-
14 tion, or for evaluation by our communications experts.

15 Q Okay, I would like you to turn then to E-5,
16 which discusses the establishment of the dissemination to
17 the public of the appropriate information including the source
18 of additional information in referring to the emergency
19 broadcast system. You set forth in your statement that
20 the plan must contain evidence of the agreements and the
21 capabilities to implement this. Do you think that is an
22 important planning standard which must be addressed?

23 A The capability for activating EBS system is
24 essential.

25 Q And do you believe that this standard operating

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1 procedure for that implementation is essential?

2 A Yes.

3 Q Okay, I would like you to turn to the next planning
4 standard, which is planning standard six, and you have a
5 detailed response there concerning the procedures, physical
6 means for instructing the public. You talk in that discus-
7 sion at about the middle of your finding that the procedures
8 and documentation were not made available to support an
9 alerting of remote populations. What did you mean by that?

10 A I am sorry. I don't recall. Does someone have a
11 copy of 0654 so I can see where I referred to page 3-3?

12 MR. PIGOTT: Yes.

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1 WITNESS REED: I was referring to that section
2 in Appendix 3, page 3-3, that does talk about the necessity
3 for considering remote populations such as extended water
4 areas and remote hiking trails.

5 BY MR. MC CLUNG:

6 Q And referring a little bit farther down, you
7 note that the plan does not contain procedures for contacting
8 people who did not receive the first alert, which is also
9 found in Appendix 3, page 3.

10 A Yes.

11 Q What --

12 A It was mentioned; it was not detailed.

13 Q Right. What types of procedures would you recom-
14 mend for contacting people who did not receive the first
15 alert?

16 A The procedures for the method they outline might
17 be just fine. They were talking about having people as they
18 leave tie a colored cloth to their door. There was a con-
19 flict, though, in color between this plan and I believe the
20 San Clemente plan, with in one case a brightly colored cloth
21 meaning the opposite from what it did in another. Something
22 obviously needs to be straightened out.

23 Q And is that the means that is identified for
24 contacting people who did not receive the first alert?

25 A They were talking about a door-to-door.

1 Q Oh.

2 A And if the door was marked with a certain color
3 cloth this would indicate someone had actually received the
4 notification and needed no assistance.

5 Q Okay. Turning now to E-7, which deals with the
6 written messages that would be provided to the public, you
7 note there that the public messages included in the plan are
8 incomplete and do not accurately reflect the emergency
9 classification scheme. Do you recall what you meant by that
10 particular comment?

11 A I think they needed more work.

12 JUDGE KELLEY: Is this a case where the review
13 has been superceded by events? The mailout material, when
14 was that mailed?

15 MR. PIGOTT: The mailout material has been mailed
16 out over a period of time the last month or so, I guess.
17 Certainly since June 3.

18 JUDGE KELLEY: You're talking about the foldout
19 with the maps and the roads.

20 MR. PIGOTT: Yes.

21 MR. MC CLUNG: Your Honor, this particular planning
22 standard did not address the public information before an
23 accident. This is talking about what would happen --

24 MR. PIGOTT: I think that has also been redone,
25 though.

1 MR. MC CLUNG: Well, it may have been redone
2 but it is not in the form of testimony in this hearing at
3 the present time that I am --

4 MR. PIGOTT: Well, I would --

5 MR. MC CLUNG: -- that I am aware of.

6 JUDGE KELLEY: One at a time, gentlemen.

7 MR. PIGOTT: If noplac e else, I think Mr. Poorman
8 from Orange County discussed the hard copy for receiving
9 messages and so on, and Mr. Ray, I believe, testified
10 concernin g the messages themselves.

11 JUDGE KELLEY: My concern simply is that you are
12 using this -- and it is legitimate -- as a vehicle to probe
13 certain areas, and fair enough. But if some of these areas
14 it is perfectly clear that what is now before the house was
15 never reviewed by the OES, then it seems to me to be pretty
16 marginal to ask the witness a question about something that
17 is no longer relevant.

18 MR. MC CLUNG: Okay. It is a situation that --
19 perhaps the way I am going about this is not detailed enough
20 to get of everybody an understanding of what particular
21 planning standard we are dealing with, but this particular
22 one has not, to my knowledge, been superceded by new evidence.
23 These are referring to the public notification warnings
24 that are contained in the back of the Orange County plan.
25 To my knowledge, those are still in the back of the Orange

1 County plan. Until they get removed from there, we are stuck
2 with them, as far as I know.

3 JUDGE KELLEY: That's fair enough. If it's a
4 message in the plan itself that is still being submitted,
5 then okay. Could we turn to that then if that's what we
6 are talking about?

7 BY MR. MC CLUNG:

8 Q Dr. Reed, do you have a copy of the Orange County
9 plan?

10 A Yes.

11 JUDGE KELLEY: Which message are we referring to?
12 The evaluation does not appear to reference the public
13 message that it refers to, at least by page. Appendix 6,
14 sample TV-radio announcement, is that what we have in mind?

15 MR. MC CLUNG: That would be part of it, I
16 believe. I'm asking the witness.

17 WITNESS REED: Yes. That is indeed one of the
18 messages we were talking about. We made a general statement
19 there.

20 JUDGE KELLEY: So we have a number of sample
21 published messages beginning at 6-1 and going over to 7-8.
22 Maybe that goes too far. In 6-1 to 6-4.

23 WITNESS REED: Yes.

24 JUDGE KELLEY: Those appear to be public
25 messages.

1 WITNESS REED: I'd like to comment that our
2 public information officer has been working very closely
3 with public information officers in the local jurisdiction
4 and with SCE since our plan review and assures me that a
5 great deal of progress is being made.

6 BY MR. MC CLUNG:

7 Q That is helpful. But could you refer perhaps
8 to one of those public messages which you were referring to
9 in your general comment that they are incomplete or that
10 they do not accurately reflect the emergency classification
11 scheme?

(Pause)

12 MR. PIGOTT: I really question the probative
13 value of going through old messages and, further, I think
14 it might be a little bit burdensome on the witness to ask
15 the witness to recreate her thinking of someplace in the first
16 part of June with respect to incompleteness of messages
17 that are perhaps rather technical in nature, especially
18 when one is looking for an omission.

19 MR. MC CLUNG: Why don't we see if the witness
20 can answer the question.

21 MR. PIGOTT: The witness has --

22 MR. MC CLUNG: She looks like she might have --

23 JUDGE KELLEY: Is the witness prepared to
24 respond?

25 WITNESS REED: On review, I do see the brightly

1 colored cloth here and, as I alluded to a few minutes ago,
2 that was inconsistent with I believe the San Clemente plan.
3 One aspect of further work that is needed.

4 JUDGE KELLEY: Where is the reference to brightly
5 colored cloth?

6 WITNESS REED: Page 6-4, about three-quarters
7 of the way down.

8 JUDGE KELLEY: And the other plan?

9 WITNESS REED: I believe for the same thing it
10 was talking about a white cloth, if I remember correctly.

11 JUDGE KELLEY: What difference would it make?

12 WITNESS REED: In the other plan an orange cloth
13 had a specific meaning, if I recall correctly, red or orange.
14 In that sense, it would make a difference. I believe one
15 color was further assistance is needed or assistance in
16 evacuation would be needed. The other was no assistance
17 was needed.

18 JUDGE KELLEY: But in different jurisdictions
19 with different people, what difference would it make?

20 WITNESS REED: Well, San Clemente is in Orange
21 County.

22 JUDGE KELLEY: There's a plan for San Clemente
23 and the San Clemente police and firemen and fire people all
24 know you are supposed to have a bright colored cloth in San
25 Clemente and the rest of Orange County has white cloths and

1 the police in those areas know that, what difference does it
2 make?

3 WITNESS REED: I think confusion could exist in
4 that case.

5 JUDGE KELLEY: Why? I don't understand the point.
6 Who would be confused?

7 WITNESS REED: Mutual aid assistance may well be
8 needed to actually implement an evacuation.

9 JUDGE KELLEY: Oh, you mean people come in from
10 other areas to help and they think you need white cloths and
11 it turns out that in that particular town it is a yellow
12 cloth?

13 WITNESS REED: Confusion and the EPS message could
14 not be confined to just San Clemente. It would be the whole
15 area.

16 JUDGE KELLEY: All right. Fair enough. It
17 doesn't seem to me this is a problem, though. It is my
18 understanding and the Board's understanding that this plan,
19 complete with appendices, is before for review. Correct?

20 MR. PIGOTT: Correct.

21 JUDGE KELLEY: Now if you have prepared some
22 materials that are improvements over these materials, that's
23 fine. But they are not here before us today and Mr. McClung
24 is, with this witness, probing the adequacy of these plans
25 and focusing in on these sample public announcements. What

1 are we to make of that? How are we -- are we to just forget
2 about the appendix because it is being improved somewhere
3 else or what? I guess I'm asking for a statement of counsel.

4 MR. PIGOTT: Okay. The plans that you have
5 before you in the blue binder which we have been reviewing
6 are the ones that were in effect at the time of the exercise.
7 The exercise identified numerous deficiencies. The defi-
8 ciencies are being worked on. I think that is reflected in
9 the testimony not only of Applicants' witnesses but the
10 representatives of the local municipalities that have taken
11 the stand.

12 However, it is also realistic to note that the
13 time between June, the first of June and especially where we
14 were at the start of the hearings and at the time we filed
15 testimony, and recognizing that these documents are in a
16 sense political documents requiring approvals by city councils,
17 other types of regulatory boards, that it has not been
18 possible to revise and adopt. That simply has not been done.

19 What we are relying upon is that the statements
20 of these people involved with these plans that they are
21 working on them and that they are improving them and ulti-
22 mately we are going to in large part be expectantly awaiting
23 what especially FEMA has to say with respect to the status
24 of the on-going plans. We have, and I think Mr. Bascomb's
25 letter is in as Applicants' Exhibit 144, come to an agreement

1 with FEMA as to which of the significant deficiencies had to
2 be corrected to come up to an implementation level that was
3 satisfactory to them. So if you are looking for the bottom
4 line, so to speak, it is going to come in the form of every-
5 thing we've put in, the evidence of progress and taking
6 corrective actions, and I guess some reflection of the feelings
7 of the regulatory staffs of the NRC and FEMA as of the time
8 they actually take the stand.

9 So I am not at all surprised that Mr. McClung
10 can go back and make a pretty convincing case that as of
11 June 3 there may have been a number of holes. But I would
12 also point out -- well, I guess I'll get my chance on cross
13 examination -- that the full story was not before either
14 FEMA or OES at the time they did their evaluation documents.
15 That has been testified to as well. So it is not an easy
16 kind of a presentation for us to make, frankly, and it is
17 a piecemeal presentation for the Board to reflect and
18 decide on.

19 JUDGE KELLEY: Okay. And I didn't in my question
20 mean to imply that we were in any sense surprised. We know
21 about these developments. My concern was Mr. McClung is
22 taking the approach that he is taking, it seems to be a
23 legitimate approach. But when we burrow our way down into
24 the papers we may find that it is superceded, it is not
25 there anymore. Then it is kind of a waste of time. It is a

1 hard thing to -- it's a hard process to go through in any
2 efficient, effective way.

3 I think in a case like this if Mr. McClung wants
4 to ask a question about a particular planning standard and
5 a particular criticism, if we can get into the papers and
6 then discover that it is there, fine. But if it has been
7 superceded and then tell us and we'll see where we go from
8 there. I think it was good to go ahead and take a look.
9 We have been sort of going along, skipping over the water,
10 and not really getting into what the reference was to.

11 I'm not sure in the three or four or five pre-
12 ceding planning points whether what we were talking about
13 was something changed or something the same. I'm not sug-
14 gesting we go back, but I think we do have to focus in on
15 what is at the bottom of this and, if we don't go down to
16 that point, then we are not going to do anything useful.

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2 MR. PIGOTT: More by way of clarification,
3 Mr. Mc Clung can go after an awful lot of detail. I would
4 hardly expect the Board to be reviewing the detail to see
5 whether or not each of these plans meets the criteria of
6 0654.

7 The significant deficiencies, I think, have been
8 identified and we've discussed them and we'll get to the
9 other side of the story, as it were, from the regulators in
10 due time.

11 I would also submit that there have been
12 witnesses, I think, from virtually every local municipality
13 and the county intimately involved with the development of
14 these plans and I would submit that perhaps Mr. Mc Clung
15 should have been asking about whether or not these
16 deficiencies were cured at that time rather than asking
17 someone who did a review in June and has been relatively
18 detached as compared to the people involved with it since
19 that time.

20 MR. MC CLUNG: We're getting an awful lot of
21 statement of counsel in here without any statement from the
22 intervenors.

23 JUDGE KELLEY: I asked for it.

24 Well, we talked before about the approach to
25 this and I understand your commitment to be selective on
the thing and not review all the plans. And, with that

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1 understanding, why don't you resume.

2 I think we can pass the public messages. We've
3 established that there's later material and there's really
4 no point in critiquing these any further.

5 BY MR. MC CLUNG:

6 Q. Okay. I'd like you to turn now to the
7 Planning Standard F-1. It indicates that the Plan must
8 include titles of individuals at both ends of the
9 communication links and primary back-up systems.

10 Let me ask you first if you think that that is
11 an important planning standard.

12 JUDGE KELLEY: What page are we on now? Sorry.

13 MR. MC CLUNG: The next page, F, number 1.

14 WITNESS REED: I think it's important that
15 someone is actually charged with this responsibility.

16 BY MR. MC CLUNG:

17 Q. And then your comment is that the Plan
18 procedures are not available that identify titles of
19 individuals on system; is that correct?

20 A. Yes.

21 Q. What problems can be created by not having
22 specific individuals specified to use communication links?

23 A. Problems can come in if someone doesn't
24 realize they have that responsibility, doesn't receive
25 appropriate training in what they're to do if, indeed, say

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1 notification comes in from the Plan, who they're to
2 contact, what the Plan actually is, what the procedures are.

3 Q Referring to the yellow phone which is a
4 dedicated line between the various response organizations,
5 do you think it would be important to have specific
6 individuals who are designated as the users of that
7 particular phone in the event of an emergency?

8 A Possibly it would -- well, in our organization,
9 we have a 24-hour warning center, the state warning center
10 where someone is there the entire time, and that individual
11 is aware of what the yellow phone means, what to do if the
(sic) 12 thing rings and notification of any certain type comes in,
13 who to contact, you know. They're familiar with our plan.
14 In that case, you designated the warning controller with
15 that responsibility as appropriate.

16 I'm not sure what more you're getting at.

17 Q Well what I want to know is could there be some
18 confusion in an emergency situation where the yellow phone
19 might be tied up by someone talking for some reason that's
20 less important, say, than the actual choice of the
21 emergency response that needs to be taken?

22 A As I understand the dedicated system, it seems
23 unlikely. However, again to go back to our system, if there
24 were someone there that were not familiar with what the
25 yellow phone meant, it could cause, you know, a great deal

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1 of problem and delay -- unnecessary delay.

2 Q Okay. Now I'm going to skip to the Planning
3 Standard G and number 4, under that 4b, and that discusses
4 the arrangements for timely exchange of information between
5 the various response jurisdictions.

6 You indicate that the Orange County Plan does
7 not contain any procedures for an exchange of information
8 with other responding jurisdictions and that the Plan does
9 not contain procedures for insuring a coordinated public
10 information effort.

11 Do you think that it's important that that
12 planning standard be met?

13 A Yes.

14 Q What potential problems could arise if the
15 various jurisdictions didn't have an agreement or a procedure
16 set forth for coordinating public information?

17 A The public would be very confused at what was
18 being done to protect them, what they were to do if indeed
19 an evacuation or sheltering were necessary.

20 Q Thank you.

21 What type of plan do you envision is prescribed
22 by that planning standard for having coordination between
23 the various jurisdictions?

24 A I'm sure the standard could be met in a variety
25 of different ways. However, as I understand what's being

rp5 1 done by the inter-jurisdictional planning committee, I
2 think they're going about it in a very valid way.

3 Q What are they doing? Do you know?

4 A For one thing, they're all sitting down and
5 talking about how they're going to plan for an accident
6 rather than separate jurisdictions coming up with separate
7 plans with somewhat limited coordination in doing that and
8 separate procedures for many things.

9 Q When was that inter-jurisdictional planning
10 committee formed?

11 A I believe it was just shortly after the
12 May 13th exercise. In fact, I believe the minutes I have
13 here of their June 16th meeting was their first meeting.

14 Q Thank you.

15 I'd like you to turn to the Planning Standard
16 L-1 for the Orange County Plan.

17 This standard in NUREG 0654 refers to local and
18 back-up hospital services with the capability for evaluating
19 exposure and uptake, as you described the standard. And
20 you indicate that the plan does not contain specific
21 information on the capabilities of medical facilities and
22 that the Plan does not demonstrate an ability of hospital
23 staff to evaluate exposure and uptake and the Plan does not
24 indicate the existence of a medical plan for handling large
25 numbers of exposed, irradiated, injured or possibly exposed

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1 individuals.

2 Do you believe that that planning standard,
3 NUREG 0654-L-1, refers to injured or contaminated people
4 other than the general public?

5 A. Yes.

6 Q. Do you believe that the plans for Orange County
7 should contain references to the ability of the hospitals
8 or whatever health institutions exist in the county to
9 treat the irradiated or injured or exposed individuals?

10 A. Yes. But -- so I won't be misinterpreted, can
11 I add that I'm not sure that the hospital is the place to
12 actually do, say, what's commonly referred to as triage
13 if people are not actually injured. Contamination and
14 decontamination -- contamination screening and decontamina-
15 tion may well better be done somewhere else.

16 Q. Thank you.

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T18 kl 1 Q Turning to L-4, it is right there on the same page,
2 you note that the transport of victims was not addressed in
3 the plan. Do you take those victims to be victims that
4 may be contaminated in the general public?

5 A Since NUREG 0654 indicates that that is the
6 criteria that applies to the licensee, to state and local
7 jurisdictions as well, I would interpret it to apply to
8 both, say, a contaminated injured worker from the plant or
9 someone that, say, was hurt in an unrelated traffic accident
10 but who was in a contaminated area when it happened.

11 Q From an emergency planning point of view, do you
12 feel it is important that that particular aspect be addressed
13 in the plan?

14 A Yes.

15 Q Okay. Sorry to be flipping around like this, but
16 I would like you to turn back to planning standard C-3. Now
17 you note there in your comment with respect to the existence
18 of the radiological labs and the capabilities for monitoring
19 analyses that the NUREG 0654 indicates that this is a state
20 responsibility and that in California it is a local responsi-
21 bility, could you tell us whether you believe that that
22 provides any conflict at all, that would be an emergency
23 planning problem?

24 A I don't see where the peculiar set-up of state and
25 local government in California is a conflict. I am not sure

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1 what you are getting at.

2 Q Okay, I am going to cease this tack this afternoon.
3 And ask a few more questions of the Witness. From your
4 point of view as an emergency planner involved in the review
5 of these plans, and from a point in time when you made your
6 review, and given all your knowledge of the ongoing planning,
7 do you believe that there are any problems with the local
8 response organizations, emergency planning, which are signifi-
9 cant which should be corrected?

10 A I am not familiar enough with the current status
11 of planning to evaluate that at this time.

12 MR. MC CLUNG: I think I have no further questions.

13 JUDGE KELLEY: We will next have cross examination
14 by the counsel for the Applicants. Mr. Pigott?

15 MR. PIGOTT: Thank you.

16 CROSS EXAMINATION

17 BY MR. PIGOTT:

18 Q Dr. Reed, to continue looking at exhibits 16, 17,
19 18, 19 and I guess 20, and their accompanying cover letters,
20 it would appear that even at the time you made this evalua-
21 tion, you did not have a complete -- you did not have before
22 you the complete papers, whether they be a planned SOP or
23 other general plans before you. Is that correct?

24 A That is correct. The overall plan for Orange
25 County was in the final stage of its update, that I understand

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1 goes one at about every four years at that time, and I
2 believe the latest available general plan for San Clemente
3 at that time was the 1975 plan.

4 Q And these general plans, do they contain documenta-
5 tion of elements that are considered at least desirable in
6 the NUREG 0654?

7 A Certainly some of them, yes.

8 Q And the standard operating procedures, the SOPs,
9 to your knowledge, would they or could they also contain
10 information found desirable in 0654?

11 MR. MC CLUNG: Could we have some foundation that
12 the witness has reviewed those documents?

13 MR. PIGOTT: Well, what I am trying to prove is
14 that she didn't.

15 MR. MC CLUNG: Well, if she didn't, then how can
16 she state what is in them?

17 MR. PIGOTT: Excuse me. The question is going --

18 MR. MC CLUNG: You are asking the Witness to
19 speculate about something --

20 JUDGE KELLEY: No, I think the question is legiti-
21 mate given the objective of the line of questioning, which
22 is a legitimate one.

23 BY MR. PIGOTT:

24 Q Do you have the question in mind, Dr. Reed?

25 A Could you repeat it, please?

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1 Q The question essentially is whether the SOPs
2 either whether you know, or whether they could contain in-
3 formation found desirable in 0654?

4 A We --

5 MR. MC CLUNG: What SOPs? I object. There is no
6 foundation for any SOPs existing.

7 JUDGE KELLEY: I think we have established that
8 SOPs are being written and have been written to accompany
9 the plan and they are certainly referred to in the interim
10 findings.

11 MR. MC CLUNG: Could we get a statement -- the
12 question of what SOPs referring to?

13 JUDGE KELLEY: Could you give us a brief definition
14 of an SOP?

15 MR. PIGOTT: Let me ask the Witness. She is
16 qualified as an expert, not me.

17 BY MR. PIGOTT:

18 Q In this area, what is meant by an SOP and what
19 would one generally find in such a document?

20 A It is a fairly detailed document in general, telling
21 just exactly how whoever is responsible for doing a certain
22 task as part of the emergency response would do it.

23 Q Would it be fair to characterize the plan in many
24 instances as being a policy document, and SOP as being an
25 implementing type of document?

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1 A Yes, that is correct.

2 Q So would it be unexpected to find that a plan may
3 be very general in its nature and leave many of the details
4 to the follow up documents such as an SOP?

5 A No, that is not unexpected at all.

6 Q In fact, isn't that the usual way you put together
7 one of these overall plans?

8 A Yes.

9 Q Now have you been involved -- or to what extent
10 have you been involved in ongoing review at San Onofre since
11 your letters of approximately July 3 -- or June 3?

12 A Another member of my staff has attended just one
13 of the interjurisdictional planning committee meetings. Our
14 public information officer has attended a number of meetings
15 with the public information officers in the area working on
16 their standard operating procedures. We have had numerous
17 telephone contacts with people from the local jurisdictions.
18 We had a meeting in San Diego in -- I guess it was mid-August
19 with key officials from Orange and San Diego Counties.
20 There have been numerous contacts, however we have not had
21 the opportunity to actually sit down with the planning
22 committee and go over their drafts page by page.

23 Q Would it be fair to characterize the planning
24 associated with emergency evacuation with respect to the San
25 Onofre Unit as being an active -- as being active at this

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1 time?

2 A Yes.

3 Q Going back to the exhibits 16 through 20 and the
4 accompanying letters, and I refer you to a letter which --
5 are you familiar with a FEMA letter of June 3 evaluating
6 the exercise and the plans of -- it is the one that finds
7 that the plans and the exercise of the plans were minimally
8 acceptable and --

9 A Yes, I have seen it. I don't have another copy
10 with me.

11 Q Okay. In your evaluation, did you arrive at any
12 general type conclusion of the -- such as FEMA did?

13 A No.

14 Q And since that time, have you arrived at any
15 particular overall conclusion with respect to San Onofre?

16 A No.

17 Q Have you done any evaluation subsequent to the
18 ones of June 3? Formal -- or I shouldn't say formal -- but
19 written at least?

20 A No.

21 Q Just with respect to a couple of the particular
22 items that were brought up by counsel for the Intervenors,
23 I believe that during the exercise you commented that the
24 time of that exercise, the EOC and the EOF were combined
25 and that caused confusion in your mind, is that correct?

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A Yes.

Q Are you aware of whether or not that is still a combined facility?

A My understanding is that they have been separated.

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1 Q Are you familiar with the commitments that are
2 made by SCE to the FEMA with respect to corrective actions
3 subsequent to the exercise of May 13th?

4 A Yes.

5 Q And in your opinion if those commitments are
6 implemented, would it be your opinion that the guidelines
7 of 0654 have been met?

8 A Not necessarily.

9 Q In what respect do you qualify that?

10 A As I recall that document, SCE made quite a number
11 of commitments that I think were more rightly commitments
12 that the local jurisdiction should have made.

13 Q Well, all right. If we disregard the distinction
14 as to who made them, but look substantively at whether or
15 not they are in fact implemented, what would be your answer?

16 MR. MC CLUNG: I have to object. I don't know if
17 there is a foundation that she made that type of study of
18 that document, and she has testified that she is aware of
19 the document, but to have a judgment of the findings she
20 would have to have made a very detailed study of it, I would
21 think.

22 MR. PIGOTT: Well, let me ask a preliminary ques-
23 tion, then.

24 MR. MC CLUNG: Thank you.

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1 BY MR. PIGOTT:

2 Q Have you reviewed the commitments that I have
3 cited against the requirements of NUREG 0654?

4 A In a general way.

5 Q And in that same general way if we disregard the
6 facts that the commitments are coming from SCE but just
7 assume they would be -- yes, assume that they will be imple-
8 mented by whatever the relevant body is, would you think
9 that upon completion of those commitments that the standards
10 of 0654 have been met?11 A I would have to look more closely at the documents
12 before I could say that.13 Q You are not in a position then to make that con-
14 clusion, is that what you are saying?

15 A Not at this moment.

16 MR. PIGOTT: Excuse me for just a moment to make
17 sure that I have completed the items I wished to question,
18 Your Honor.

19 BY MR. PIGOTT:

20 Q Do you have any knowledge or understanding as to
21 whether there has been since May 13th any additional either
22 training or construction of training programs with respect
23 to this overall subject? Again, I am not really sure if you
24 have followed it to that degree or not.

25 A The only thing I am currently aware of is to do

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1 with the training in the public information regard. I
2 believe, media training, something coming up later this
3 month or -- possibly I guess next month.

4 Q No, I believe you also responded to a question
5 concerning review of SOPs, and I believe your answer was
6 that you are not aware of any particular date for reviews
7 of those SOPs and I am thinking of the ones coming from the
8 local jurisdictions. Are you generally aware of what program
9 may be contemplated for the review of those documents?

10 MR. MC CLUNG: Are you speaking review by whom?

11 MR. PIGOTT: Well, by Dr. Reed's organization.

12 WITNESS REED: We have discussed a mechanism for
13 our review, our informal review again of these documents
14 with Chief Coleman of San Clemente who is heading the inter-
15 jurisdictional planning committee.

16 BY MR. PIGOTT:

17 Q So you are satisfied that you will have an oppor-
18 tunity to comment on these as they are evolving?

19 A Oh, yes.

20 Q In fact they will be a necessary part of your
21 submission to the legislature at some time?

22 A Yes.

23 MR. PIGOTT: I have no further questions, thank
24 you Dr. Reed.

25 MR. HOEFLING: No questions.

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1 JUDGE KELLEY: Okay.

2 JUDGE JOHNSON: Just one small question, I think.
3 Dr. Reed, I think you indicated in response to an earlier
4 question that hospitals were probably not the -- and I am
5 not quoting -- were probably not the appropriate place for
6 screening for contamination.

7 WITNESS REED: For non-injured people, yes.

8 JUDGE JOHNSON: For non-injured people. I am
9 sorry, yes. Are you aware of planning for such screening
10 at someplace by the local jurisdictions -- where would this
11 screening take place?

12 WITNESS REED: I cannot recall the details of that.

13 JUDGE JOHNSON: No, I am not asking for details.
14 It is being planned for, is it not?

15 WITNESS REED: I would certainly think so. I am
16 not positive.

17 JUDGE JOHNSON: But it is something you would look
18 for in your normal comment on SOPs?

19 WITNESS REED: Oh, yes.

20 JUDGE JOHNSON: So it would not be overlooked?

21 WITNESS REED: No, certainly not.

22 JUDGE JOHNSON: Thank you, Dr. Reed.

23 JUDGE KELLEY: Just one question, Dr. Reed.

24 Mr. McClung asked you some questions about medical arrange-
25 ments and you indicated your view that such arrangements

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1 were required for the EPZ, I believe. Now, there is the
2 10 mile EPZ, the 654 EPZ, if you will, and there is the
3 state's extended EPZ or extended planning zone, I am not
4 sure which it is. Would it be your view that any particular
5 medical arrangements were necessary in the extended zone?

6 WITNESS REED: Certainly consideration of shelter
7 within the hospital and possibly use of KI for the patients
8 should be considered in that extended zone.

9 JUDGE KELLEY: Now, when you say considered, what
10 kind of a level of consideration have you got in mind? Let
11 me give you an idea of what I mean. Could one, say, for
12 example, there are a lot of hospitals up there and a lot of
13 nurses and surely there is some KI, so I have considered it,
14 but that is it, or do you have to in your view make any
15 kinds of specific arrangements, either in a plan or in an
16 SOP?

17 WITNESS REED: Policy has to be decided by local
18 officials working with the hospital staffs and then based
19 on that policy, appropriate arrangements or procedures need
20 to be made. I am not sure what you are getting at more than
21 that.

22 JUDGE KELLEY: Well, I am trying to get at the
23 idea of specific arrangements keyed to a nuclear accident
24 as opposed to whatever resources happen to be in an area,
25 and one can review those resources and perhaps one would

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1 conclude, well, the existing resources could handle this
2 problem, and therefore no particular arrangements need to
3 be made. Or a review of the matter and a conclusion that
4 existing resources might not be able to handle it, and there-
5 fore some other additional explicit arrangements ought to be
6 made. That is what I am getting at.

7 WITNESS REED: Fine.

8 JUDGE KELLEY: What fine?

9 WITNESS REED: It -- using the hospital example,
10 every hospital has plenty of KI available and physicians
11 who can prescribe it. That is certainly a very easy one to
12 handle, and a hospital can usually decide, fine, we can do
13 that if it is necessary.

14 JUDGE KELLEY: So, no particular arrangements are
15 necessary?

16 WITNESS REED: Right. Now, a prison, that may
17 well be a different situation. If we look at KI again --

18 JUDGE KELLEY: Let me ask you if you -- have you
19 ever yourself had occasion to focus on this particular
20 problem and conclude one way or the other in a given --
21 whether around San Onofre some supplementary arrangements
22 would be needed in the 20 mile zone, or whether there is
23 really enough back-up resources there as it is and no
24 particular arrangements are necessary. Have you looked at
25 that yourself?

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1 WITNESS REED: Now, are you specifying any type
2 of arrangements, or making a very general question?

3 JUDGE KELLEY: Well, I am asking a rather general
4 question. I suppose I could take an example. Well, let me
5 put it to you generally and see if you think you can respond.
6 Can you respond to the general question?

7 WITNESS REED: Certainly in the extended planning
8 zone, rather than not addressing anything, I think public
9 education is needed. Some method for getting a notification
10 or warning to the public has to be addressed in case indeed
11 anything does ever happen that could impact them.

12 JUDGE KELLEY: No, I am talking about medical
13 arrangements specifically.

14 WITNESS REED: Oh, are we talking about -- okay.

15 JUDGE KELLEY: Yeah, the whole question has to do
16 with medical arrangements.

17 WITNESS REED: Okay.

18 JUDGE KELLEY: That is what I am asking about. If
19 I was unclear I am sorry.

20 WITNESS REED: Could you then repeat the question?

21 JUDGE KELLEY: I must be doing a bad job. Do you
22 have any personal opinion about the extent and availability
23 of medical resources and arrangements in the area around
24 San Onofre, including out to the 20 mile zone? Have you
25 ever studied that yourself?

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1 WITNESS REED: Not in detail. I know there are a
2 number of hospitals there.

3 JUDGE KELLEY: All right. Have you ever given
4 any thought generally to the question of whether specific
5 medical arrangements ought to be made in the extended plan-
6 ning zone in the event of a radiological emergency?

7 WITNESS REED: I do not think specific plans are
8 necessary to, say, evacuate a hospital in that extended zone
9 for instance. However I do think some consideration to
10 sheltering and KI should be given. Any more than that -- I
11 am not quite sure what you are getting at. If you are
12 talking about for the hospital population --

13 JUDGE KELLEY: I am talking about the general
14 public.

15 WITNESS REED: Okay.

16 JUDGE KELLEY: Right. Any special medical arrange-
17 ments?

18 WITNESS REED: Probably not. I would not antici-
19 pate any need for specific medical arrangements for the
20 general public in that zone.

21 JUDGE KELLEY: The extended 20 zone?

22 WITNESS REED: True.

23 JUDGE KELLEY: How about the zero to 10 zone?

24 WITNESS REED: It is unlikely there even in terms
25 of any acute care need. Now I --

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JUDGE KELLEY: Well, could you expand upon that? I thought your earlier answer was to a somewhat different effect. Could you expand on that a little bit?

WITNESS REED: There does need to be specific planning to take care of someone in the general population that may be injured and contaminated. A hospital does not necessarily have to be set aside though for someone that may possible have picked up some contamination or received some exposure. Not to say that isn't a problem, but it is not an acute problem that has to be taken care of right this minute.

JUDGE KELLEY: Yes, right.

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JUDGE KELLEY: Yes.

WITNESS REED: Medical screening does need to be done of anyone that is actually exposed, and long-term medical follow-up is important, but hospitals don't need to be set aside for immediate care of those people.

JUDGE KELLEY: So you would say that -- are you saying, then, that you would think that special arrangements for hospital facilities would not be necessary? in the zone out to ten miles? For people contaminated or irradiated, or both?

WITNESS REED: As long as they are uninjured, no traumatic injury to go with it, or no, say sudden illness from some other cause.

JUDGE KELLEY: I just mean radiation.

WITNESS REED: The likelihood of radiation requiring immediate hospital care of anyone in a nuclear power plant accident, except for someone onsite, is very very small.

JUDGE KELLEY: Thank you. Redirect, Mr. McClung?

MR. MC CLUNG: Yeah, I just have one, maybe two questions.

REDIRECT EXAMINATION

BY MR. MC CLUNG:

Q To your knowledge, do you know how many times the interjurisdictional planning committee has met?

2
1 A Approximately, I can count the number of minutes,
2 copies of minutes I have. They have been meeting at least
3 once a month since June.

4 Q If you have the minutes, I would appreciate it if
5 you would tell me.

6 A I have minutes of a June 16 meeting, September 11,
7 August 19th. There seem to be some June 17th minutes also,
8 and I believe there was one more meeting in there that I
9 don't have minutes for.

10 Q Okay, thank you.

11 JUDGE KELLEY: Is that it? Dr. Reed, thank you
12 very much. We very much appreciated your coming down and
13 testifying, and it has been very helpful. You are excused.

14 Have we got one more witness today?

15 MR. MC CLUNG: Yes, we do, sir.

16 JUDGE KELLEY: Why don't we take five minutes, get
17 settled, and then come back. Brief recess.

18 (Brief recess)

19 JUDGE KELLEY: On the record.

20 MS. GALLAGHER: Intervenors would call Wilma Bloom.
21 Whereupon,

22 WILMA RUTH BLOOM

23 was called to the witness stand and, having been first duly
24 sworn by the Chairman, was examined and testified as follows:

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BY MS. GALLAGHER:

Q Please state your name and address for the record.

A I am Wilma Ruth Bloom. I live at 101 Buena Vista,
San Clemente.

Q And are you here in response to a subpoena from
Intervenors in this proceeding?

A I am.

Q Would you please tell us what your occupation is?

A My husband and I own a Ace Hardware in San
Clemente.

Q And how long have you been owner of a business in
San Clemente?

A About one six years --

Q Do you have another business?

A Yes. I have a license -- we are apartment owners,
and I do resort rentals.

Q In addition to your business occupations, do you
serve as a member of the San Clemente Planning Commission?

A Yes, I do.

Q Are you Vice-Chairman?

A Vice-Chairman this year, yes. As of July 1.

Q When were you appointed?

A A year ago, July 1.

Q And how long is your term?

4
1 A Two years.

2 Q What are your duties and responsibilities as a
3 planning commissioner?

4 A Well, we review all land use planning, all
5 variances, conditional use permits, tract maps, at this point
6 home occupations, and make recommendations to the City Council.
7 I think we do their homework for them.

8 Q And for the record, in your testimony today, are
9 you speaking for the Planning Commission?

10 A Absolutely not. I am speaking as a private
11 individual.

12 Q In your capacity as a member of the San Clemente
13 Planning Commission, have you had occasion to study the issue
14 of growth of development in San Clemente?

15 A Long before I became a planning commissioner, we
16 were studying growth, and that was -- I became involved in
17 1972 as a member of the League of Women Voters, on land use
18 and housing. That was my beginning.

19 Q And since you have become a planning commissioner,
20 is this one of your duties, to address the problem of growth
21 in the area?

22 A Well, we have to look at every tract map that
23 comes in. After all, San Clemente, you very uniquely have
24 5,000 undeveloped acres, and for a coastal community, that is
25 rather unique, and it is very valuable land, people -- very

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1 desirable place to live. Yes, it is an issue.

2 Q Can you tell us just briefly what new development
3 is planned for San Clemente?

4 A New development? As I mentioned, the 5,000 acres,
5 which are on the east side of the freeway, to the outskirts of
6 San Clemente. There is some development -- or to the border
7 line up to Riverside County, actually. There is one little
8 area that wishes to be annexed as part of San Clemente. The
9 other growth issues are the undeveloped lots along the beach
10 frontage, or wherever there is still a vacant lot, and then
11 part of our redevelopment, which individual homes, the older
12 homes are being torn down, and highrise condos -- so that is
13 part of the growth.

14 Q As a result of just new development, what impact
15 will this have on the population of San Clemente over the next
16 ten years?

17 MR. ROGIN: Could we have an explanation of whether
18 the new development is now approved development or development
19 that is in the future because there is vacant land? I think
20 it might be helpful to define the issue.

21 WITNESS BLOOM: Okay, I think -- very properly
22 say that all 5,000 acres are on-line in planning at some stage
23 of the game, whether it is simply the tentative, where they
24 have filed a tentative tract map, or whether they -- I think
25 every one of them have at that point.

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1 MR. ROGIN: I guess my question would then be one
2 of timing, so that we are clear in terms of next year as
3 opposed to, for example, Mr. Mecham's testimony about 1990.

4 MS. GALLAGHER: My question specified over the
5 next ten years.

6 JUDGE KELLEY: All right.

7 WITNESS BLOOM: The population will double, plus.

8 JUDGE KELLEY: What is it now approximately?

9 WITNESS BLOOM: Approximately 27,500, 28,000
10 approximately.

11 BY MS. GALLAGHER:

12 Q And as a member of the Planning Commission, what
13 is one of the major concerns you have concerning the
14 projected development of San Clemente?

15 A My personal major concern is a lack of a master
16 circulation plan.

17 Q What do you mean by a master circulation plan?

18 A A plan simply for roads to get people in and out
19 of town, and from one -- point A to point B.

20 Q I take it that as a member of the Planning
21 Commission, you have acquired familiarity with the roadways
22 of San Clemente?

23 A I think I have, yes.

24 Q Are there frontage roads along I-5 so that one
25 can get off I-5 easily and travel by a direct route over

7
1 surface streets to one's destination anywhere in San
2 Clemente?

3 A Frontage roads? I think I would have to say no,
4 and I can -- there is a reason why. Very hilly terrain, a
5 lot of canyons, and when San Clemente developed back in 1927,
6 no canyons were ever filled in. All the roads went around
7 canyons.

8 Q Is that still true?

9 A Yes, we have an ordinance against filling any
10 canyon, although one has been filled, to put in one of the
11 major developments, oh, I am guessing approximately five
12 years ago, one of the major canyons -- well, it is the only
13 way they could get a road through a private cul de sac road,
14 fill a huge canyon, and then keep building.

15 Q So that if I were to get off I-5 at Pico, for
16 example, could I take surface streets to, for example,
17 Avenida de la Paz?

18 MR. ROGIN: Do you mean any surface streets, or
19 any combination of surface streets, or just one street?

20 MS. GALLAGHER: Yes. I am inquiring whether there
21 is a way to get from one offramp street to another area of
22 San Clemente, which if you would like, we could point to it
23 on the map.

24 MR. ROGIN: That is fine, and now the question
25 was whether there was an easy way to do it or a difficult way

1 way, or --

2 MS. GALLAGHER: Yeah, that is what I am getting at.

3 MR. ROGIN: Or an easy as opposed to a possible?

4 MS. GALLAGHER: Yeah.

5 MR. ROGIN: All right.

6 WITNESS BLOOM: I could get there, because I know
7 all the cul de sacs and blind streets. The average citizen
8 I don't think could. Mostly de la Paz, let us face it, is a
9 very short street. You would almost -- you would have to
10 know where it is.

11 BY MS. GALLAGHER:

12 Q The reason that I use that as an example is that
13 I -- that has happened to me. I have gotten off someplace,
14 and then I had to get back on the freeway because there was
15 no way to --

16 A But that, you know, for a resident, that is one
17 of the scenic things and the beautiful things of that
18 community, is we have no real through streets. It is all very
19 scenic, short narrow streets.

20 Q Are there many such examples of the one that I
21 am familiar with?

22 A I think every residential area, that would be it.

23 Q Does the lack of a circulation plan, and not only
24 a circulation plan, but circulation roads, make it take longer
25 to reach destinations in San Clemente than it would if there

9
1 were circulating roads?

2 A Well, a master plan would have more than one
3 through street, which we have now, which was I-5. You get
4 off of I-5, and you get onto El Camino Real, which is the only
5 major through street there, if you are going to jog south and
6 pick up Ole Vista, you go around several canyons, you can get
7 through town that way.

8 Q So in the process of doing that, it takes you
9 longer than if you had connecting circulating roads?

10 A Yes. Yes.

11 Q And likewise, does the lack of such roads also
12 make it take longer to get out of San Clemente than it would
13 if there were such roads?

14 A Definitely.

15 Q How would this lack affect the time it might take
16 to evacuate in an emergency?

17 MR. ROGIN: Compared to what? Again, compared to
18 if there were better roads?

19 BY MS. GALLAGHER:

20 Q Compared to if there were circulating roads.

21 A If there were a master plan, is that what you are
22 asking?

23 Q Yes.

24 A Could you repeat that and put it in the context
25 of if there were --

10 1 Q Sure. Sure. How does the lack of such
2 circulating roads affect the time it would take to evacuate
3 in the event of an emergency?

4 A I would like to preface that with that I am not
5 an expert in any time analysis. I am not a traffic engineer.
6 Personally, I could probably get out of there very quickly,
7 because I have lived there for ten years. I know all the
8 back streets and all the shortcuts. I know where not to go.
9 Are you talking about the visitor, the tourist, the person
10 who is unfamiliar with the road system?

11 Q Well, let us start with that person. Let us
12 start with that person. I don't expect any quantitative
13 answer.

14 A Right.

15 Q I am just asking you in general whether in your
16 opinion it would affect evacuation time?

17 MR. ROGIN: Let me interpose an objection. I --
18 if we are talking about a particular evacuation, I think we
19 need to know whether there is an assumption of traffic control
20 points being implemented, and the plan for San Clemente
21 being implemented, which includes traffic control assistance
22 from police and fire department, in terms of directing
23 traffic, or whether we are talking about a situation where
24 there is no such implementation of the plan. I think the
25 answer could be quite different.

1 JUDGE KELLEY: I think Mr. Rogin's point is well-
2 taken. You might -- perhaps you might establish whether the
3 witness is familiar with the plan in detail.

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1 MS. GALLAGHER: I think she will represent that
2 she is not.

3 WITNESS BLOOM: Not in detail. No, sir.

4 JUDGE KELLEY: All right. Your question would
5 be -- then how would you phrase the question?

6 MS. GALLAGHER: Assuming one were leaving from
7 a residential area in which there were no traffic control
8 points. It is a really simple question.

9 MR. ROGIN: You just want to assume that there
10 is no assistance by way of traffic control points or sheriff
11 or police or firemen directing traffic.

12 MS. GALLAGHER: Yes.

13 MR. ROGIN: All right.

14 MS. GALLAGHER: And by way of clarification, I
15 understand that there won't be traffic control points in
16 every residential area.

17 MR. ROGIN: I don't think we need to get into
18 that as long as there is an assumption that there aren't any
19 for the purpose of this answer.

20 WITNESS BLOOM: Okay. Back to assuming that --
21 I could get out, but I think there are a lot of people that
22 could not. And I think those that I say could not would be
23 lost, would be our tourist population, which can swell the
24 size of the community on any given day during the summer.

25

1 BY MS. GALLAGHER:

2 Q So in your opinion would it take them longer to
3 evacuate in the event of an emergency than it would if there
4 were circulating roads?

5 A If there were a master plan. Yes.

6 Q Okay. In your opinion, is the lack of a circu-
7 lation -- well, have you examined the Wilbur Smith study and
8 its time estimates for evacuation, without claiming to be
9 an expert on the Wilbur Smith study, and have you examined
10 it?

11 A Yes.

12 Q Have you found any reference in it to the peculiar
13 configuration of San Clemente streets and roadways?

14 A Not at what I would like to see included in such
15 a report, without finding fault with the report. I don't
16 really remember any real discussion on the gated communities,
17 the one way ingresses and egresses, the fact that everybody
18 has to come down off of the hills or from the beach and go
19 to El Camino Real or I-5. That's the only way out.

20 Q And in your opinion, is the lack of a circulation
21 plan in the City of San Clemente a factor that should be
22 considered in arriving at evacuation time estimates?

23 MR. ROGIN: I think I have to object to this
24 now. It seems to me we are asking for an expert opinion.
25 There is no foundation as to whether she knows the time

1 estimates in the Wilbur Smith study with respect to San
2 Clemente do take into effect, as I think counsel referred
3 to it, a peculiar situation there. I mean it is self-
4 evident if there are more through streets time would be
5 shortened and I think that is all the question can really
6 ask for at this point.

7 JUDGE KELLEY: Could you repeat the question,
8 please?

9 MS. GALLAGHER: I asked if in her opinion the
10 lack of a circulation plan is a factor that should be con-
11 sidered in making time estimates.

12 JUDGE KELLEY: You don't think a layman can have
13 an opinion on that, Mr. Rogin?

14 MR. ROGIN: Well, I think we are at the point
15 where if she wants to answer the question, it's all right.
16 I think it is self-evident. If there are more roads there
17 are more available things to do. I'm not sure its probative
18 or we are going to get anywhere with it, but let's go ahead.

19 MS. GALLAGHER: It may be self-evident, but it
20 is not on the record.

21 JUDGE KELLEY: Let's put it on the record.
22 The answer. Go ahead. You can answer the question.

23 WITNESS BLOOM: Would you just one more time so
24 I know exactly what you are saying?

25

1 BY MS. GALLAGHER:

2 Q In your opinion do you believe that a lack of a
3 circulation plan for the streets of San Clemente is a factor
4 that ought to be taken into consideration in arriving at a
5 time estimate for evacuating the population?

6 A In my opinion as a layperson, as a resident, and
7 as a businesswoman and as a planning commissioner, yes.

8 Q As a planning commissioner, are you aware of the
9 planned road development?

10 A Yes. I have sat through a study session where
11 the city is involved on a regional South Orange County master
12 circulation plan. When that is finally adopted and we know
13 exactly where they are coming from from, well, the middle of
14 Orange County to the south, then San Clemente will be imple-
15 menting and trying to get their own to fit in. But you have
16 to have the regional before you can do your -- or at least
17 this is what I was told -- you have to have your regional
18 completed before you can do your local.

19 Q And have you any idea how soon a plan will be
20 in place in San Clemente for circulating roads, a general
21 circulation plan?

22 A The master plan? I would hope within 18 months
23 that a plan could be made available and hopefully through
24 our comprehensive planning, which is now about a month old
25 and they have given a timeframe of 18 months to have at least

1 a plan.

2 Q Once the plan is in place do you know when the
3 roads will be built?

4 A No.

5 Q Are they contemplated to be built along with the
6 planned development?

7 A That would make sense, yes.

8 Q Would you comment on the Presidential Heights
9 roadway?

10 A Okay. That is the one that I said had a massive
11 condominium project go into the first portion of our undevel-
12 oped land behind the San Clemente Golf Course. No roadways
13 other than a cul de sac which was San Pablo, a private --
14 not a private, a public residential street -- ended in a
15 cul de sac dead end. And they filled in the canyon there,
16 crossed over and developed and started and it is now becoming
17 a very massive -- they are continuing, the city is still
18 building homes. Each hill keeps going back further, and
19 still only one street. It has been the worst bottleneck of
20 San Clemente. So now what they have done is split off San
21 Pablo and San Gabriel one way in and one way out. And it
22 has destroyed a residential area. The people in San Pablo
23 who purchased their homes are very unhappy because of traffic
24 congestion.

25 Q Do you know of plans to extend the Cristianitos

1 Road as a way out of San Clemente to the East?

2 A What I am going to say is going to be strictly
3 personal opinion, someone who has been there for quite a
4 while. I think Los Cristianitos Road is proposed as part
5 of the Foothill Corridor, which will tie into Riverside
6 County at the very north end. It is a very political situa-
7 tion because Los Cristianitos Road, although the on and off
8 ramp has already been developed south of San Clemente, that
9 road is part of San Diego County. It is not in Orange
10 County. It also goes through the Camp Pendleton Marine Corps
11 Base. Whether it will ever be developed, I don't know.

12 Q In your role as planning commissioner, have you
13 understood that San Diego might not want that road developed,
14 San Diego County?

15 A Not as a planning commissioner. I sat through
16 many of the hearings on the Foothill Corridor just in the
17 public workshops and the basic philosophy that was expressed
18 at that point is why should San Diego County develop a road
19 that would be primarily used for Orange County. And the
20 money, the politics, and the Marine Corps Base is probably
21 the reason it has not been developed. Hopefully, they keep
22 saying it will be and everybody keeps, every time they talk
23 about it it's another 15 years. But it is really money and
24 politics that have to be resolved before San Clemente can use
25 that one. And that would open the back country to us be-

1 cause it -- well, there are -- the New West development is
2 depending upon the Los Cristianitos Road being developed.

3 Q You mentioned that it goes partly over the Marine
4 Base.

5 A Right.

6 Q Is it your understanding that Camp Pendleton
7 authorities are concerned about security in regard to having
8 public traffic go across the base?

9 A I'm sure that that would be their main concern.
10 The one time that we were talking of -- they were beginning
11 to say okay, we wouldn't object to a road, but there wouldn't
12 be any offramps at any point on that base, which a concern
13 then for San Clemente is then how do you get them into the
14 New West development because there has to be an offramp to
15 get people to that one huge development.

16 Q Is it fair to say that the topography of San
17 Clemente makes it difficult to create a general circulation
18 of roads?

19 A No. No. I think it has just been a matter of
20 a lack of funds and lack of planning, master planning. The
21 city has grown. We were a very small, sleepy, forgotten
22 community and all of a sudden the people recognized a
23 beautiful little seaside village and we have boomed to the
24 point where planning has not been able to keep up with it
25 and I think that is the only reason, that and lack of funds.

1 Q Besides the planned new development in the City
2 of San Clemente you mentioned redevelopment. What kind of
3 redevelopment?

4 A Well, the Pear Bowl area, if you are familiar
5 with the city, is under redevelopment at this point. It has
6 also been one of those very narrow streets, mostly apartments.
7 At one point there were -- it is I think all R-4 now, but
8 what few R-1 homes are there are going down and condominiums
9 are going up. And it is becoming strictly -- it will be a
10 face like Newport, frontage on the beach. We keep on approving
11 plans for condominiums, but we have no way of expanding the
12 roads.

13 Q So your redevelopment is going to be higher
14 density population than the pre-existing structures?

15 A I think that's a fair assumption.

16 Q In your opinion will the redevelopment cause an
17 increase in traffic in the older parts of San Clemente?

18 A Anytime you take down a single family home where
19 possibly with one car, maybe two, and you put up seven or
20 eight units and you have to allow two cars per unit, yes,
21 that is increased traffic.

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1 Q What are the commercial streets in San Clemente?

2 A The main thoroughfare through San Clemente
3 northeast is El Camino Real. That's where the business are.
4 Off of that comes Del Mar Avenue which takes you down to
5 the beach area; that is the center of town.

6 Pico will become a major arterial roadway with
7 the commercial development.

8 Q And are these streets generally capable of
9 carrying larger capacity of traffic than your residential
10 streets?

11 A Yes.

12 Q And are all other streets in San Clemente
13 residential streets?

14 A When you're saying "all others", that's kind
15 of tough to answer because there is Las Molinos which is
16 a very small, winding, commercial street down in the
17 industrial section right now, but it's maybe four or five
18 blocks long. But it intercedes into Pico. It comes off of
19 El Camino Real. So that is not basically residential.
20 But I think it would be pretty --

21 Q I'm using these terms, you know, probably too
22 loosely.

23 A Yeah.

24 Q What I was getting at was whether there are
25 -- the streets that you named, El Camino Real, Del Mar and

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1 Pico, whether they are the primary high-capacity arterial --

2 A. Right. At this point that is what we have, yes.
3 The rest of them are secondary and I'm not sure that there's
4 even one that would really classify as a secondary at this
5 point. This is what our circulation plan is trying to
6 develop is secondary arterial roadways.

7 Q. Were you consulted in your capacity, as a person
8 responsible for regulating land use, of planning commissioner
9 regarding the location of the plume exposure pathway EPZ?

10 A. No.

11 Q. In considering the line that has been drawn for
12 the EPZ, do you have any concerns about facilities or
13 populations that are very close to the EPZ?

14 MR. ROGIN: I'd have to object to the question
15 now. I think we're calling for expert opinion and this
16 witness is involved with -- and I've not objected to
17 questions about San Clemente streets and highways, but the
18 City of San Clemente, as a matter of record, is entirely
19 within the EPZ and now I think we're calling upon this
20 witness for expert opinions about other areas.

21 JUDGE KELLEY: It's unclear to me what the
22 thrust of the question is.

23 MS. GALLAGHER: Well, if I may ask Ms. Bloom,
24 in her capacity as a citizen, are there areas directly
25 outside of the EPZ of large population?

3 1 MR. ROGIN: Again we're now well beyond, I
2 think, the capacity of this witness to testify. There's
3 no foundation even if she knows where the EPZ is.

4 JUDGE KELLEY: I don't think the question is
5 proper of this witness. I'll sustain the objection.

6 BY MS. GALLAGHER:

7 Q Ms. Bloom, do you know where the EPZ is?

8 A Yes, I do.

9 Q Do you know the area outside of the EPZ from
10 personal knowledge?

11 MR. ROGIN: I think we're leading to the same
12 question again. I think the same objection --

13 JUDGE KELLEY: I really fail to see why a
14 resident of San Clemente -- and this witness is here in
15 that capacity, basically, as I understand it -- why her
16 opinion as opposed to anybody else's, anyplace has any
17 bearing on this. I really don't see the nexus between this
18 witness and her background and -- outside this EPZ is a
19 fair ways from San Clemente.

20 BY MS. GALLAGHER:

21 Q Besides your position as a businessperson in
22 the community and an appointed member of the planning
23 commission, what other community involvement do you have or
24 have you had in the recent past?

25 A I've been active in the Chamber of Commerce,

4 1 serving on the tourist committee. I have been extremely
2 active while my children were in the public school system
3 and involved in the PTA's and all their activities.

4 I am well aware of the boundaries of our school
5 district, so it does give me an interest more than just my
6 residential boundary of San Clemente.

7 I've been president of the League of Women
8 Voters of Capistrano Bay Area for two years, and I am
9 president of the Soroptimists International San Clemente
10 which has boundaries outside of San Clemente. We are an
11 area group.

12 Q. Are you familiar with the city beaches in
13 San Clemente?

14 A. I live right on the beach. I certainly am.

15 Q. How long a city beach area is there in
16 San Clemente?

17 A. According to the Chamber, we have seven miles
18 of unobstructed public beaches.

19 Q. And by "unobstructed", do you mean that there
20 is fairly open access by members of the public to the beach?

21 A. I'm not sure what you mean by "unobstructed".

22 I meant you could go for seven miles from one
23 end of San Clemente to the other on the beach without having
24 to leave the beach and go back.

25 Q. I guess my question was more directed to

5 1 whether a beach-goer can get onto the beach without going
2 through a turnstyle, for example.

3 A. Oh, we have no turnstyles. We have -- oh, dear,
4 me. While we were doing our local coastal plan, we had
5 to identify every beach access and I can't right at this
6 moment tell you precisely how many accesses we have. We
7 identified them as primary and as secondary beach accesses.
8 All the primaries are well marked on every map and the
9 roadways and the freeways tell you how to get there.

10 What we refer to as the secondary beach access
11 would be the -- those that come in off of the very narrow
12 residential areas and somehow or other the city has provided
13 stairs to the beach, as many as 110 steps down, but those are
14 noted as our secondary accesses.

15 Q. So the public is free to come and go --

16 A. Yes.

17 Q. -- as they will?

18 A. Yes.

19 Q. Is there a lot of traffic at the beach?

20 MR. ROGIN: Foot traffic or car traffic?

21 BY MS. GALLAGHER:

22 Q. Car traffic.

23 A. Yes. We are congested.

24 Q. In the event of a nuclear accident, do you know
25 how the beach populations would be notified?

6
1 A. At this point by sirens.

2 Q. Since there is no way of knowing how many people
3 are at the beach on a given day -- I believe you indicated
4 that there's open access -- then is it true then that from
5 one day to the next you have no absolute numbers of people
6 at the beach?

7 A. I wouldn't but I think our marine safety is
8 very capable of making a good estimated guess because they
9 have to keep tabs on numbers and I think someone in the
10 city could have a pretty good idea every day, because we
11 start with July 4th. That's the day the residents stay
12 home because they can't get to the beach. And then, after
13 Labor Day, we can use our beaches.

14 Q. Have you seen the exhibits of the Applicant,
15 the posters and pamphlets, which are to be used for public
16 information?

17 A. Yes.

18 Q. Is it your understanding that persons operating
19 businesses in San Clemente will be asked to display these
20 posters?

21 MR. ROGIN: There have been no posters --
22 Mr. Cramer's testimony? Just so we have some identification
23 of them. Okay.

24 WITNESS BLOOM: I have not been aware through
25 any public agency telling me that this is what is going to

7
1 happen with that.

2 The only thing that I'm really familiar with is
3 what Edison Company mailed out to the residents, that
4 brochure.

5 BY MS. GALLAGHER:

6 Q Assuming that there will be a display poster
7 that businesspersons are asked to display, is there any
8 reason why in a resort community there may be resistance to
9 displaying posters about accidents in your opinion?

10 A Strictly personal? It could have a very
11 negative effect on scaring the populace if they stopped to
12 read it.

13 I'm not sure. I really don't know.

14 Q Do you intend to display a poster in your
15 hardware store?

16 A If I am asked to as a businessperson by the
17 city, if this is part of our plan, yes, I will.

18 Q Based on your knowledge of the public's
19 propensity for reading displayed materials, do you have an
20 opinion about whether or not they will be read by shoppers
21 in the community?

22 MR. ROGIN: I object to the question as calling
23 for speculation. I don't know if this witness has any
24 expertise in whether people read posters or not.

25 It's so vague and it's calling for speculation

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1 of this witness.

2 MS. GALLAGHER: She's a businessperson who
3 displays advertising --

4 JUDGE KELLEY: I don't know that there is any
5 such thing as an expert in this subject.

6 MR. ROGIN. Well you could do a survey. I mean
7 people have -- there's no reason to think she has any
8 knowledge other than a guess.

9 JUDGE KELLEY: I will let her answer that
10 question.

11 WITNESS BLOOM: Will people read a poster?

12 I have one window that I -- every community
13 organization that wants to advertise, I think, comes and
14 gives it to me, "Will I put it up", and I put it up. And
15 we keep it up for ten days to two weeks and then we put up
16 some more.

17 Do people actually stop and read? Yes. Some
18 will; some won't.

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Q You mentioned before that you are in the business of resort apartments. How long have you had that business?

3 A We have had apartments for -- since 1965 in San
4 Clemente, actually going into what I call totally vacation
5 apartments, I think it has been eight years now.

6 Q And from your experience as an operator of these
7 apartments, how long are the transient populations resident
8 in such apartments during the summer?

9 A Most people will come from one to two weeks during
10 the summer.

11 Q And in the winter?

12 A "The snowbirds" love it three to four months.

13 Q Do you anticipate that there might be difficulty
14 informing the public about emergency planning, the transient
15 public about emergency planning since there is this turnover
16 of transient populations?

17 A I can give you a personal opinion on that, because
18 I have talked to our fire chief, Ron Coleman about that
19 because I do have -- I am not an expert, but I do have some
20 knowledge on that. This was one of my questions. How do
21 you inform people that come for vacation, stay for a while,
22 enjoy themselves and leave. They were all kinds of sugges-
23 tions and all this, but I am not sure that we really have
24 an answer there yet.

25 Q Since you are a resident at the site of this

k2

1 particular business, do you plan to display information and
2 to make information available to your guests?

3 A Well, the original flier that we did receive I did
4 put in the apartment, and they have disappeared. Whether
5 they have taken them or put them, you know, in the circular,
6 I don't know. They were mailed to me, then I received
7 another letter, if I need more I can always get more from
8 Edison. As far -- okay. I live there and I am there every
9 day. As far as many, many apartments of the San Clemente
10 are by absentee owners and they are managed by a professional
11 management company, whether they would every display or put
12 anything, I just don't know. I couldn't answer that.

13 Q I see.

14 MS. GALLAGHER: I believe that is all. Thank you
15 very much.

16 JUDGE KELLEY: We will have cross examination
17 next by -- is it Mr. Rogin?

18 MR. ROGIN: Yes.

19 JUDGE KELLEY: Representing the Applicants.

20 MR. ROGIN: Thank you.

21 CROSS EXAMINATION

22 BY MR. ROGIN:

23 Q Good afternoon, Mrs. Bloom.

24 A Good afternoon.

25 Q I just have a few questions for you. You

k3

1 indicated earlier that you had not specific knowledge, I
2 think you said, about the traffic control points in the San
3 Clemente plan for evacuation, is that right?

4 A Not specific. I have discussed this with Chief
5 Coleman because I had concern as a private citizen and then
6 talking to him about the tourists and then as a planning
7 commissioner. But to say do I know specifically each and
8 every one, I would have to say I am familiar with it, but I
9 am not an expert on that.

10 Q But you are aware of generally the approach to
11 have traffic control by the Sheriffs and the Police and the
12 Fire Department --

13 A Right.

14 Q -- to some extent --

15 A Right.

16 Q -- to help people who may not be familiar with the
17 roadways to get to the main evacuation routes?

18 A At the roadway, but how do you get them to the
19 roadway. That was my point.

20 Q No, I am speaking of traffic control points back
21 away from Highway Five, for example. Are you aware that
22 there are any traffic control assistance for people other
23 than on Highway Five?

24 A In what I think would have been the -- what we
25 call our major beach accesses, I think that is where you are

k4

1 talking about.

2 Q Those are the only ones you are aware of?

3 A Yes.

4 Q Have you worked with Mr. Coleman in suggesting
5 that others be established to help citizens?

6 A No, I think Mr. Coleman is very professional and
7 will listen to any citizen. My concern was the beach area --

8 Q And you --

9 A -- because that is where I live.

10 Q And you are working with him and will provide
11 assistance to him if asked to develop additional points or
12 additional traffic control if it can be implemented?

13 A Right.

14 Q At one point you said Highway Five was the only
15 through road in San Clemente. I am not real familiar with the
16 geography but El Camino is also another through road?

17 A It is a through road, but it bogs down once you
18 get to the north part of San Clemente. It goes down to a
19 single lane, and that is because of erosion problems on the
20 bluffs. The first little sprinkle that we have in San
21 Clemente the bluffs come down and the highway is blocked.

22 Q Entirely?

23 A Sometimes it is reduced to one lane both directions.

24 Q But it does go through, it is a through street?

25 A No, sometimes it is detoured, back to Pico and

k5

1 back on to I-5, and I have seen that blocked off for two,
2 three weeks at a time because of major slides.

3 Q With respect to the master plan, circulation plan,
4 this is something I gather you are working to implement as
5 quickly as possible in San Clemente, is that right?

6 A Hopefully, yes.

7 Q And would it be your expectation that some of the
8 additional development you described earlier, I believe,
9 over the next ten years or so would be done in conjunction
10 with the development of additional circulation -- main cir-
11 culation roads in San Clemente?

12 A The only way we can have more housing and develop-
13 ment is by developing roads.

14 Q So the roads would --

15 A There are no roads now back there at all.

16 Q My point would be that there -- the roads would
17 be developed along with the housing that you described.

18 A Right.

19 Q You described earlier that in your review of the
20 Wilbur Smith study you didn't see any direct reference to
21 the particular road situation in San Clemente, but do you
22 know if the particular road situation in San Clemente was
23 in fact considered in the Wilbur Smith study and the results
24 indicated in that study?

25 A I found no direct reference to what I -- as I

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1 said, a real particular problem, like Presidential Heights --
2 I didn't see it identified as such.

3 Q Specifically, but you don't know whether in the
4 road situation as it exists in San Clemente was actually
5 considered in putting together the Wilbur Smith study?

6 A No, I could not answer that affirmatively.

7 Q You don't know if it was or wasn't?

8 A No, I don't.

9 Q You indicated a little bit in questioning by
10 Mrs. Gallagher that if asked to display a poster in your
11 business that you would do so?

12 A Yes.

13 Q And would you generally attempt to assist in in-
14 forming the transient population of San Clemente of emergen-
15 cy plans and procedures that are in effect in the event
16 that there were an emergency?

17 A I would assume that responsibility, yes.

18 Q And if you were supplied copies -- additional
19 copies of the pamphlet -- I don't see one handy, but the
20 emergency pamphlet which has been described, so that you
21 could provide copies to your guests and the people using
22 your apartment, would you provide those copies so that they
23 would be available for people if you found that they were
24 otherwise being removed or destroyed?

25 A I said that I would, yes.

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1 MR. ROGIN: Thank you very much, Mrs. Bloom. We
2 have no further questions.

3 MR. HOEFLING: No questions.

4 JUDGE KELLEY: Redirect?

5 MS. GALLAGHER: Mrs. Bloom, thank you very much
6 for coming. We appreciate your appearance. You are excused.

7 (Whereupon, the witness was excused.)

8 JUDGE KELLEY: So tomorrow, we begin with the
9 Staff, is that right?

10 MR. HOEFLING: Yes, Mr. Chairman. We have
11 Mr. Rood available to respond to that concern over the FES
12 table, and we could do that now, or take that up first thing
13 in the morning.

14 JUDGE KELLEY: Not now. We all need a good night's
15 sleep.

16 MR. HOEFLING: Mr. Chairman, we have some
17 materials that we would like to distribute.

18 JUDGE KELLEY: Okay, fine. Will there be anything
19 else though, before we go off the record? Quick.

20 MR. PIGOTT: I did want to talk a little bit more
21 about schedules.

22 JUDGE KELLEY: Should we go off the record?

23 MR. PIGOTT: Yes, that is fine.

24 JUDGE KELLEY: Off the record.

25 (Discussion off the record.)

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1 JUDGE KELLEY: Back on the record.

2 MR. HOEFLING: Okay, I have got three items I
3 want to distribute. One is additional testimony of Kenneth
4 Nauman, Jr. Second is the Appeal Board's order in this
5 proceeding rescinding its earlier order with respect to the
6 earthquake issue. Third will be the Commission's memorandum
7 and order in Diablo Canyon which addresses low power licen-
8 sing, and I think it would be useful for the Board and par-
9 ties to have.

10 JUDGE KELLEY: I think I might have gotten it.

11 MR. HOEFLING: Have you gotten it?

12 JUDGE KELLEY: Yeah. You mean -- which is this?

13 MR. HOEFLING: The Diablo Canyon --

14 JUDGE KELLEY: Commission --

15 MR. HOEFLING: Commission memorandum and order --

16 JUDGE KELLEY: Oh, the green light of the other
17 day?

18 MR. HOEFLING: It was issued on Monday.

19 JUDGE KELLEY: Yeah, I would like to have that.

20 Fine.

21 MR. HOEFLING: And I have copies of the Commission
22 order, but I take it most everybody has those by now.

23 JUDGE KELLEY: I would like one.

24 MR. HOEFLING: Fine. Well, let me hand these four
25 items out to everybody.

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1 MR. CASEY: While we are on the record, Mr. Chair-
2 man, just a couple of housekeeping items. You recall Appli-
3 cants' Exhibit 134 which was the emergency management agree-
4 ment between Orange County and the City of San Juan
5 Capistrano which we admitted provisional that it was adopted
6 the night of September first. It has been adopted, and we
7 would ask that that provision be released and it be admitted
8 into evidence.

9 JUDGE KELLEY: I don't really remember what this
10 is about. Any objection?

11 MR. MC CLUNG: Just could we have the record
12 reflect when it was adopted?

13 MR. CASEY: The night of September 1st.

14 MR. MC CLUNG: No objections.

15 JUDGE KELLEY: So ordered.

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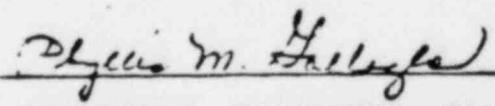
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
SOUTHERN CALIFORNIA EDISON COMPANY,) Docket Nos. 50-361 OL
ET AL.) 50-362 OL
(San Onofre Nuclear Generating Station,)
Units 2 and 3))

INTERVENORS' GUARD, CARSTENS ET AL.
WRITTEN TESTIMONY ON EMERGENCY PLANNING
CONTENTIONS

Intervenors, GUARD et al. hereby submit written
testimony of their witness on the Emergency Planning Evacuation
Contention pursuant to 10 C.F.R. §2.743 .

August 25, 1981


PHYLLIS M. GALLAGHER, Attorney
for Intervenors, GUARD ET AL.

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WRITTEN TESTIMONY

OF

SHELDON C. PLOTKIN

I. INTRODUCTION

My name is Sheldon C. Plotkin. I am president of Sheldon C. Plotkin & Associates, a Los Angeles consulting engineering firm. I received my Doctorate in Electrical Engineering from the University of California at Berkeley in 1956. Since then I have worked and written extensively in the fields of transportation and communications analysis, systems analysis and safety evaluation. In 1971 I formed Sheldon C. Plotkin & Associates. We perform accident and safety analyses, systems development and accident reconstruction, analyzing component failures and human factor dynamics, and the relationship between them.

My work experience includes applications of mathematical models to highway and vehicular systems. I have worked closely with highway and traffic engineers and have supplied information concerning applicable required specifications and recommended practices from the Traffic Department of the California Department of Transportation. In my work with highway and traffic engineers, I have performed the basic systems and safety analyses, relying on them only for the information concerning safety standards, as noted above. I have analyzed, for example, many multiple vehicular accidents, considering elements of highway design, driver performance, human factor response to accident conditions, etc. I have written a text on the subject, entitled Accident and Product Failure Analysis.

1 My background includes development of a study on
2 automated highways, advanced computer-controlled applications
3 for automobile diagnosis, and numerous other systems and safety
4 analysis projects. Attached to this testimony is a biography
5 and partial list of publications, to be incorporated herein.
6

7 II. SUMMARY AND CONCLUSIONS

8 I have been asked to review the Applicants' and the
9 local jurisdictions' plans for evacuation to determine whether,
10 based upon my professional judgment as a systems safety engineer,
11 the populations within the EPZ plume exposure pathway would
12 be justified in believing that they were reasonably assured
13 that adequate protective measures can and will be taken in the
14 event of a radiological emergency. "Adequate protective measures"
15 implies the choice of the protective measure which will protect
16 the health and safety of the populations at risk. When the
17 protective measure of choice is evacuation, there must be a
18 reasonable expectation that evacuation will result in a so-
19 called "dose savings," i.e., the populations at risk should
20 receive significantly less radiation due to protective actions
21 taken than they would if it were not taken. As has been stated
22 in NUREG 0654, FEMA-REP-1, Rev. 1 at page 6, "The overall
23 objective of emergency response plans is to provide dose savings
24 (and in some cases immediate life saving) for a spectrum of
25 accidents that could produce offsite doses in excess of
26 Protective Action Guides (PAGs)." Based upon my analysis of the
27 Applicants' Plan's time estimate for evacuation of a sector of the
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1 plume exposure pathway EPZ under certain accident scenarios,
2 I have concluded that under many possible accident scenarios
3 for which persons responsible for choosing the appropriate
4 protective measure might conclude that evacuation is the
5 protective action of choice, evacuation would, in fact, expose
6 the evacuating populations to unacceptable levels of radiation,
7 causing injury and death.

8 10 CFR Part 50, Appendix E IV. requires the Applicant
9 to submit plans which "provide an analysis of the time required
10 to evacuate and for taking other protective actions for various
11 sectors and distances within the plume exposure pathway EPZ for
12 transient and permanent populations." As part of Applicants'
13 Emergency Plan, such an analysis is included. It is the analy-
14 sis of this time estimate which leads to my conclusion that
15 populations for whom evacuation may be selected would not, in
16 fact, be afforded dose savings, since they would be exposed to
17 radiation far in excess of the PAGs.

18 The exposure of these populations to radiation in
19 excess of the PAGs would come about, in part, due to flaws
20 of the time study, the "Wilbur Smith Study," which will be
21 detailed later. As is stated in NUREG 0654, Appendix 4, p.4-1,
22 it is important to provide (accurate) updated time estimates,
23 "Because the evacuation time estimates will be used by those
24 emergency response personnel charged with recommending and
25 deciding on protective actions during an emergency..." It
26 follows that decisions whether to evacuate or not will be as
27 sound as the data upon which they are based. The Wilbur Smith
28 Study which I have analyzed is seriously flawed, and cannot

1 be relied upon to produce accurate time estimates concerning
2 the time required to evacuate the various populations of the
3 plume exposure pathway EPL. If relied upon for any serious
4 accident in which it is important to have a reasonably accurate
5 assessment of the time available for carrying out the
6 appropriate protective action, it will result in serious and
7 life threatening miscalculations of the time available for
8 taking such action.

9
10 III. ANALYTICAL APPROACH FOR DETERMINING CANCERS PER PERSON

11 A. Identification of Pertinent Parameters for Analysis

12 The Los Angeles Federation of Scientists Committee
13 on Evacuation Time Study participated with me in studying the
14 Wilbur Smith and Associates time estimates. We identified the
15 following parameters for analysis of radiation effects:

- 16 1. Core inventory released
17 2. Wind speed
18 3. Wind direction.
19 4. Number of persons at risk
20 5. Volume of plume
21 6. Radioactivity of plume following release

22 b. Assumptions Made

23 This study group adopted certain assumptions, which are
24 identified as follows:

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- 1 1. The plume was assumed to travel for one hour before
- 2 its radiological effects were taken into account.
- 3 2. Radionuclides in the plume were assumed to be
- 4 homogeneously distributed within it.
- 5 3. Evacuation was assumed to be constant at the exits
- 6 from the EPZ plume exposure pathway.
- 7 4. A one per cent (1%) release of the core inventory
- 8 was considered to be a representative serious
- 9 accident.
- 10 5. A wind condition of a South East wind (SE) which
- 11 creates a 22 1/2° plume of a relatively constant
- 12 twenty meter (20 m.) height was assumed.

13 C. Results of the Study

14 Using the Wilbur Smith and Associates adverse weather
15 time estimate for the evacuation of the Northern Sector, plume
16 Exposure pathway EPZ, 6.25 hrs., we concluded that there would
17 be 2.0 to 8.4 cancers per persons as a result of radiation exposure.

18 Using the Los Angeles Federation of Scientists' Worst
19 Case time estimate for the evacuation of the Northern Sector,
20 plume exposure pathway EPZ of 28 hrs. we achieved a result of

21 9 to 35 cancers per person as a result of radiation exposure.
22 The results of this study have caused me to conclude that even
23 if the Wilbur Smith and Associates Study were cured of its
24 flaws, there is no reason to expect that populations within the
25 plume exposure pathway EPZ could be evacuated in time to prevent
26 widespread injury and death from radiation under a large
27 number of accident scenarios.

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1 D. Methodology

2 To consider the effects of the above mentioned parameters
3 on the health of the population at risk, we used the NRC's
4 NUREG 0490 data for summarizing various atmospheric release
5 categories representing hypothetical accidents at a PWR to
6 calculate upper and lower bounds for radiological damage
7 corresponding to release categories PWR 1 and PWR 9, respectively.
8 The NRC worst case (PWR 1) gives releases that range from a high
9 of 90% for noble gases to a low of 0.3% for the rare earths and
10 and for the related radionuclides. For the least case accidents
11 (PWR 9) releases ranged from a high of 3×10^{-4} or 0.0003%
12 to 0%.

13 Our calculated damage estimates for a 1% release (within
14 NRC Categories PWR 1 - 9) are 178,700 to 3,127,250 total
15 cancers among the 89,350 persons, all of whom were assumed to
16 be adults, at risk in the plume exposure pathway EPZ. The
17 intervening scenarios, including PWR 2 through PWR 8 releases,
18 have been evaluated for only those radionuclides which make
19 the most significant contributions to the overall radiological
20 damage to the exposed population according to our uniform release
21 scenario.

22 In our scenario, we considered the circumstances and
23 results based upon a uniform release of 1% of the core inventory
24 and calculated the corresponding radiological damage to the
25 persons at risk of exposure in the EPZ plume exposure pathway.
26 Our use of the 1% release figure is justified since it is
27 well within the range of releases postulated in the NRC figures
28

1 for postulated releases ranging from PWR 1 through PWR 9.

2 In our 1% release scenario, we also worked out the
3 damage that would result from three (3) different evacuation
4 times. For all other variables except evacuation times,
5 changes in radiological damage effect were directly or
6 inversely proportional to the assumed values of the given
7 parameters.

8 Our cancer estimates are based upon long term effects
9 of exposures to radiation in large amounts over a relatively
10 short period of exposure. A time frame of 50 years was used
11 to permit the cancers to develop. Obviously, not all of the
12 expected cancers will develop, since the very lethal ones will
13 claim their hosts' lives before the subsequent ones can. Also,
14 the long period of time will permit other intervening causes
15 of death to prevent the actual development of cancer in some
16 cases.

17 IV. A CRITIQUE OF THE WILBUR SMITH AND ASSOCIATES TIME ASSESSMENT

18 A. Inconsistencies with NUREG 0654 Appendix 4, p. 4-1

19 I have studied the Wilbur Smith study and the NUREG
20 document just mentioned, and I have noted some ways in which
21 the Wilbur Smith study does not meet the requirements of the
22 NUREG guidelines, i.e., is inconsistent with it. A partial
23 list follows, which I intend to supplement with a more complete
24 list as an Exhibit.

- 25 1. NUREG 0654 Appendix 4, Section 1 part B requires that
26 analyses of time assessments provide all assumptions
27 used in the analysis. Only a partial statement is made.
28 page 7.

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1 2. NUREG 0654 requires that the analyses include a
2 source for obtaining further data or documentation
3 if computer models have been used. No such source
4 is provided in the Wilbur Smith study.

5 B. Unsubstantiated Assumptions. Stated and Unstated in the
6 Wilbur Smith Study. A brief list follows, which I shall
7 supplement with an exhibit.

- 8 1. All vehicles in the plume exposure pathway EPZ
9 have enough fuel to exit the EPZ.
- 10 2. No major roadway accidents will occur.
- 11 3. Spontaneous evacuation outside the area being
12 evacuated will not materially interfere with
13 evacuation.
- 14 4. Driver behaviors under conditions in which a threat
15 to health is perceived will not have a negative
16 impact on evacuation times.
- 17 5. No earthquake induced destruction of roadway
18 networks has occurred.

19
20 V. A MORE REALISTIC APPROACH TO TIME ASSESSMENT USING A
21 SYSTEMS ENGINEERING METHOD

22 Using a systems engineering method, and taking into account
23 pertinent assumptions, a more realistic, and necessarily
24 pessimistic time assessment for evacuation is obtained. The
25 factors to be included in the system are:

- 26 1. Road network
- 27 2. Number of vehicles

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- 3. Condition of vehicles
- 4. Human factors under adverse circumstances
- 5. Condition of roads
- 6. Population to be evacuated
- 7. Adverse weather
- 8. Occupants per vehicle
- 9. Highway failure modes.

I have examined a severe earthquake scenario, and an accident ^{s and/or} under adverse weather ^{conditions} but without earthquake conditions, using a systems engineering approach. The earthquake scenario yielded a one week period for evacuating the entire Northern sector of the plume exposure pathway EPZ. The adverse weather senario without earthquake yielded a 28 hr. evacuation time estimate.

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The extended evacuation times which would be necessary under many accident senarios plus the doses of radiation which would be contained in the plume exposure pathway EPZ would result in radiation injury and death of unprecedented magnitude in time of peace.

1 Biographical Data Re Sheldon C. Plotkin

2
3 Education BSEE University of Colorado 1946
4 BS Aeronautical Engineering University of Colorado, 1949
5 PhD Electrical Engineering University of California at Berkeley,
6 1956

6 Professional Experience

7 Private consulting practice 1971 to present
8 RAND Corporation 1969-71 Santa Monica, Calif. Senior engineer
9 in Engineering Sciences Dept., worked on various systems,
10 including communication and transportation
11 TRW Systems 1967-69 Redondo Beach. Automatic Highway and
12 high speed ground transportation development, large scale
13 failure modes, automobile safety studies, train air suspension,
14 civil system developments
15 Hughes Aircraft Company 1961-67 Staff engineer for G&C Advanced
16 Systems Laboratory and mathematics consultation department.
17 Dynamic analyses, advanced control system design, communication
18 system analyses, mathematical modeling, automobile systems
19 development. (Originated infra red radar system concept for
20 vehicle control.)
21 University of Southern California 1958-61 Los Angeles
22 Assistant Professor in charge of graduate and undergraduate
23 electronics courses, redesign of electrical engineering labs.
24 Hoffman Electronics Corporation, 1959 to 1961 Consultant in
25 Communications Systems Department
26 Energy Systems (Formerly Levinthal Electronic Products), 1956-58.
27 Senior Project Engineer at Palo Alto for design and safety of
28 high voltage, high power pulse modulators
University of California at Berkeley 1950-56. Teaching assistant
1950-54 in EE Dept. Project Engineer Cosmic Ray Lab in charge
of equipment and operation
U.S. Naval Missile Test Center 1949-50 Point Mugu Conduct and
evaluation of missile tests as Aero and Electrical engineer
Los Alamos Scientific Laboratory 1946-47 New Mexico Design
and construction of electronic material

22 Professional Affiliations

23 Registered Professional Safety Engineer, S.S.S., I.E.E.E., Pi Mu
24 Epsilon, Eta Kappa Nu, Sigma Xi, Los Angeles Federation of
25 Scientists.

25 Publications and Seminars

26 Several hundred papers, reports, and intra-company documents
27 Accident and Product Failure Analyses (book)
28 "Introduction to Accident, Safety and Forensic Engineering."
(seminar)

Biography, continued

1
2 Military Service

3 Apprentice Seaman, U.S. Navy V-12 program, 1944-46
4 Lt. J.G. Naval Reserve (inactive) 1946 -approx 1953

5 Court Testimony

6 Vehicular accident reconstruction and design; slip and fall;
7 human impact; electrical explosion; electronic circuitry;
8 high voltage; escalator safety; elevator operation; highway
9 design; pattern recognition; production equipment design
10 and operation; human factor perception and dynamics.

11 Deposition and Reports

12 Fires; tire fabrication and design; test equipment; vehicle
13 characteristics; criminal evidence.
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PUBLICATIONS (Partial List)

- "A Feasibility Study of High Power Magnetic Modulators," Final Report, Contract No. AF30(602)-1177, October 1956.
- "Discontinuous Transition Time Between Stable States in Ferroresonant Circuits," Trans. AIEE Pt. 1 (Communication and Electronics), Vol. 76, pp. 410-421, September 1957.
- "Regenerative Fractional Frequency Generators," Proc. IRE, Vol. 48, pp. 1988-1997, December 1960. Co-author O. Lumpkin.
- "A New Approach to Electrical Engineering Laboratories," Trans. IRE-PG on Education, Vol. E-4, No. 1, pp. 9-11, March 1961.
- "On Limitations of Broad-Band Impedance Matching Without Transformers," Trans. IRE-PGCT, Vol. CT-9, No. 2, pp. 125-132, June 1962. Co-author Dr. W. Nahi.
- "Improving the Linearity of the Steady State Gain Characteristic by Use of Nonlinear Feedback," Trans. AIEE Pt. 2 (Applications and Industry), Vol. 81, pp. 277-282, November 1962. Co-author Dr. N. Nahi.
- "On Nonlinear AGC," Proc. IRE (Correspondence), Vol. 51, p. 380, February 1963.
- "Refined Method for Calculating Satellite Interference from Microwave Transmitters," Report No. 2, Contract No. NASw-495, HRL, Malibu, Calif., November 1962. Co-author Dr. S. G. Lutz.
- "The Coverage Overlap Area with Satellites of Equal Height," Report No. 3, Contract No. NASw-495, HRL, Malibu, Calif., December 1962. Co-authors Dr. S. G. Lutz and Dr. G. Dorosheski.
- "A Feasibility Study of Satellite Communication in the 15-20 Gc. Frequency Range," Report No. 4, Contract No. NASw-495, HRL, Malibu, Calif., January 1963. Co-author Dr. S. G. Lutz.
- "Preliminary Study of Modulation Systems for Satellite Communication," Report No. 6R, Contract No. NASw-495, HRL, Malibu, Calif., June 1963.
- "Preliminary Study of Companders for Satellite Communication," informal report on Contract No. NASw-495, HRL, Malibu, Calif., May 1963.
- "Some Overall Aspects of Automatic Checkout for Aerospace Systems," Proc. Systems Engineering Conf., N.Y., June 8-11, 1964. Co-authors W. H. Lauschner and Dr. V. Mayper, Jr.
- "FM Bandwidth as a Function of Distortion and Modulation Index," IEEE Trans. on Com. Tech., Vol. COM-15, No. 3, pp. 467-470, June 1967.
- "External Prison Security Study, Phase I," Final Report, State of Calif., Contract No. 1235, TEW, Redondo Beach, Calif., April 1968.
- "Automation of the Highways, An Overview," IEEE Trans. on Veh. Tech., VI-18, August 1969.

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the
NUCLEAR REGULATORY COMMISSION

in the matter of: Southern California Edison Company, et al (San Onofre
Nuclear Generating Stations, Units 2 and 3)

Date of Proceeding: September 24, 1981

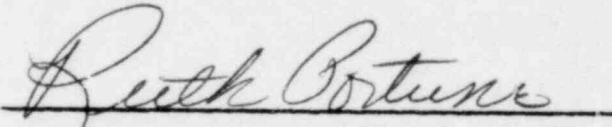
Docket Number: 50-361 OL, 50-362-OL

Place of Proceeding: Anaheim, California

were held as herein appears, and that this is the original transcript
thereof for the file of the Commission.

Ruth Portune

Official Reporter (Typed)



Official Reporter (Signature)