

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )

SOUTHERN CALIFORNIA EDISON COMPANY, )

ET AL )

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

Docket No.s 50-361 OL  
50-362 OL

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TESTIMONY OF FEMA'S KENNETH W. NAUMAN, JR.,  
ON GUARD CONTENTIONS 1 AND 2 RELATED TO  
EMERGENCY PREPAREDNESS FOR THE SAN ONOFRE  
NUCLEAR GENERATING STATION, UNITS 2 and 3

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AUGUST 24 , 1981

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NOTE: - Current workload and timing constraints prohibit an elaborate description of details relating to some seven plans relating to San Onofre. In light of the detailed citation of current findings in the informal plan review and the exercise evaluation, I find it appropriate to make reference to those documents for response to these contentions.

Q.1 State your name and title:

A. Kenneth W. Nauman, Jr., Emergency Management Specialist, Federal  
Emergency Management Agency, Region IX.

Q.2 Do you have a statement of professional qualifications?

A. Yes. A copy of my statement of professional qualifications is  
attached to this testimony.

Q.3 What is the purpose of this testimony?

A. The purpose of this testimony is to address Contentions 1 and 2  
raised by Intervenors GUARD in this operating licensing proceeding  
each of which is related to the emergency preparedness of the San  
Onofre Nuclear Generating Station, Units 2 and 3 (SONGS 2 and 3).  
My testimony will examine the state of off-site emergency  
preparedness as it affects GUARD's contentions.

Q.4 GUARD Contention 1 states:

Whether the state of emergency preparedness for  
SONGS 2 and 3 provides reasonable assurance that  
the offsite transient and permanent population  
within the plume exposure pathway Emergency Planning  
Zone, 10 C.F.R. & 50.47(c)(2), for SONGS 2 and 3 can  
be evacuated or otherwise protected in the event of  
a radiological emergency with offsite consequences  
occurring at SONGS 2 and 3, as required by 10 C.F.R.  
& 50.47(a)(1), (b)(10), and Part 50, Appendix E.IV.

With respect to the portion of Contention 1 dealing with

evacuation time estimates, i.e., Part 50, Appendix E.IV, to what extent are evacuation time estimates considered by you in your evaluation of offsite emergency preparedness for SONGS 2 and 3?

A. The evacuation time estimates were reviewed in accordance with NUREG 0654/FEMA REP-1 to the extent that they were indicated in the emergency planning and that emergency direction and control personnel considered them in their protective action recommendations.

Q.5 What criteria did you apply in your evaluation?

A. The criteria applied were those reflected in NUREG 0654/FEMA REP-1, Rev. 1, Part J, Protective Response.

Q.6 Describe the results of that evaluation?

A. The assessment reflected the jurisdictions have considered the evacuation time estimates developed in the SONGS study by W. Smith and Associates and reflected an intention to give consideration of time estimates in dealing with protective response in an emergency situation.

Q.7 In your opinion, do the evacuation time estimates which you have evaluated meet the criteria which you have identified in your response to Question 5 above?

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A. Yes. The evacuation time estimates meet the criteria.

Q.8 With respect to the portion of Contention 1 dealing with evacuation or taking other protective measures for offsite permanent and transient population within the plume exposure pathway EPZ, have you evaluated this area for SONGS 2 and 3?

A. Yes, I have examined the capability of offsite organization to evacuate or take other protective measures for the offsite permanent and transient population within the plume exposure pathway EPZ. Such capability is required by planning standard 10 C.F.R. & 50.47(b)(10). In my evaluation, I applied the criteria of NUREG 0654/FEMA REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," II.J.

Q.9 Which organizations in the vicinity of SONGS 2 and 3 have you evaluated for conformance with the guidance of NUREG 0654?

A. I have evaluated the plans of the local jurisdictions within the plume exposure pathway Emergency Planning Zone (EPZ) and the plans of the State of California for conformance with the guidance of NUREG 0654. The local jurisdictions include Orange County, San Diego County, the City of San Clemente, the City of San Juan Capistrano, State Parks and Recreation and Camp Pendleton.

Q.10 What were your findings with respect to each of the jurisdictions which you have identified in response to Question 9 above with regard to each of the guidance elements contained in NUREG 0654, II.J?

A. With respect to each of the jurisdictions related to SONGS 2 and 3, the findings are reflected in the plan review and exercise evaluation findings produced by FEMA Region IX (Informal Plan Review letter to Alex Cunningham, State of California Office of Emergency Services, dated April 27, 1981; and, Evaluation Findings, San Onofre NGS, Offsite Emergency Response Plans Exercise, May 13, 1981). They identified additional work was needed to meet all of the NUREG 0654 criteria.

Q.11 Summarize the status of offsite jurisdictions' conformance to the guidance contained in NUREG 0654, II.J and provide us with your judgement as to whether or not the offsite jurisdiction meet planning standard 10 C.F.R. & 50.47(b)(10).

A. The status of offsite jurisdiction planning as it relates to conformance to NUREG 0654 is reflected in the plan review addressed in the answer to Question 10 above. Generally, the jurisdictions demonstrate an ability to respond to general disaster conditions, but need additional training in the

radiological response areas. It is my opinion that the jurisdictions have met the planning standard 10 C.F.R., Para. 50.47(b)(10) except to the extent that further development of protective action procedures for ingestion pathway EPZ has to be completed.

GUARD Contention 2 states:

Whether there is reasonable assurance that the emergency response planning and capability of implementation for SONGS 2 and 3, effecting the offsite transient and permanent population, will comply with 10 C.F.R., Section 50.47(a)(1) and (b) or (c)(1) as regards:

- A. the procedures for notification by Applicants of State and local response organizations, 10 C.F.R. Section 50.47(b)(5), and for notification of and continued communication among emergency personnel by all involved organizations, 10 C.F.R. Section 50.47(b)(6);
- B. the means for notification and instruction to the populace within the plume exposure pathway Emergency Planning Zone, 10 C.F.R. Section 50.47(b)(5);
- C. the information and the procedures for dissemination of information to the public within the plume exposure pathway Emergency Planning Zone on a periodic basis on how they will be notified and what their initial action should be in the event of an emergency, 10 C.F.R. Section 50.47(b)(7);
- D. the arrangements for medical services for contaminated and injured individuals, 10 C.F.R. Section 50.47(b)(12);
- E. necessary transportation and communication equipment, and the operation of the emergency operations centers of the principal response organizations, 10 C.F.R. Section 50.47(b)(8);
- F. the capability of each principal response organization to respond and to augment this initial response on a continuous basis, 10 C.F.R. Section 50.47(b)(1);

- G. radiological emergency response training to those who may be called on to assist in an emergency, 10 C.F.R. Section 50.47(b)(15);
  - H. the methods, staffing, systems, and equipment for assessing and monitoring actual or potential off-site consequences of a radiological emergency condition within the plume exposure pathway EPZ for SONGS 2 and 3, 10 C.F.R. Section 50.47(b)(9);
  - I. the physical design, communications equipment, and operating procedures for the interim Emergency Operations Facility, 10 C.F.R. Section 50.47(b)(3) and (b)(8);
  - J. the methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition within the ingestion pathway EPZ for SONGS 2 and 3, 10 C.F.R. Section 50.47(b)(9); and
  - K. general plans for reentry and recovery plans and procedures, 10 C.F.R. Section 50.47(b)(13).
- A. To the extent that the standards of NUREG 0654/FEMA REP-1, Rev. 1, have been applied to the review of emergency response planning and capability of implementation regarding SONGS 2 and 3, and assuming the contention asks if there is a reasonable assurance that the items A-K (less J) will be or have been addressed in planning, the answer is in the affirmative. (This assumes reentry and recovery planning will be accomplished.)

2nd Part of

Q.12 With respect to Contention 2.A, have you examined the procedures of offsite response organizations for notification of and

continued communication among emergency personnel by all involved response organizations?

2nd Part of

A.12 Yes, the procedures of offsite response organizations for notification and communication regarding emergency personnel were examined in accordance with NUREG 0654/FEMA REP-1, Rev. 1, standards II.E and II.F.

Q.13 With respect to Contention 2.A, do the procedures for notification of and continued communication among emergency personnel which you have described in response to Question 12 above meet planning standard 10 C.F.R. Section 50.47(b)(6)?

A. Yes. Additionally, siren systems are being installed at this time and are forecast to be in place before licensing. Plans and procedures currently exist for notification and communication.

Q.14 With respect to Contention 2.B, have you examined the means established by offsite response organizations for notification and instruction to the populace within the plume exposure pathway EPZ?

A. Yes, the standards of NUREG 0654/FEMA REP-1, Rev. 1, Part II.E, were applied. These means include, establish government telecommunications systems, government vehicles, media, sirens, and Emergency Broadcast System equipment.

Q.15 With respect to Contention 2.B, do the means which you have described in response to Question 14 above for notification and instruction to the populace within the plume exposure pathway EPZ meet planning standard 10 C.F.R. Section 50.47(b)(5)?

A. Yes, to the extent that they have been addressed in planning and were critiqued by the informal plan review document referred to in the answer to Question 10. When sirens are installed and tested and plans and SOP's finalized/updated, they should meet the standard. Future evaluation of the demonstrated implementation will validate the capability to meet the standard from an implementation standpoint.

Q.16 With respect to Contention 2.C, have you examined procedures established by offsite response organizations for dissemination of information to the public within the plume exposure pathway EPZ on a periodic basis as to how the public will be notified and what its initial action should be in the event of an emergency?

A. Yes. WUREG 0654/FEMA REP-1, Rev. 1, planning standard II.E was applied to the plans. Procedures are identified that the utility will provide informational disseminations through mailings on a periodic basis. Additional coverage through motels, recreation areas, and other transient locations is planned.

Q.17 With respect to Contention 2.C, do the procedures which you have described in response to Question 16 above, meet planning standard 10 C.F.R. Section 50.47(b)(7)?

A. Yes. Jurisdictions have included procedures to the extent identified in the informal plan review cited in Question 10.

Q.18 With respect to Contention 2.D, have you examined the arrangements made by offsite response organizations for medical services for contaminated and injured individuals?

A. Yes. NUREG-0654/FEMA REP-1, Rev. 1. Standard L was applied to the plans. Some local hospitals have been identified and have received some training for handling patients subject to radiation contamination.

Q.19 Do the arrangements for medical services made by offsite response organizations for contaminated and injured individuals described in response to Question 18 above meet planning standard 10 C.F.R. Section 50.47(b)(12).

A. To a limited extent, yes. Some specific actions were cited as not observed in the informal plan review. Reference the citation of informal plan review in the response to Question 10.

Q.20 With respect to Contention 2.E, have you examined provisions of the principal offsite response organizations to provide transportation and communications equipment during an emergency and to establish emergency operations centers.

A. Yes. Provisions of NUREG 0654/FEMA REP-1, Rev. 1, Standards II.C, E, F, H, J, and L were applied to the plans reviewed. Emergency Operating Centers and the transportation and communications assets of the two counties and two cities, the U.S. Marine Corps, and the State and Federal organizations are available to support an emergency.

Q.21. Do the emergency operation centers established by the principal offsite response organizations and their commitment of transportation or communications equipment described in your response to Question 20 above meet planning standard 10 C.F.R. Section 50.47(b)(8)?

A. Yes, Orange and San Diego counties have established and operational EOC's with required emergency response plan and equipment to respond to transportation and communications most likely to occur.

Q.22 With respect to Contention 2.F, have you examined the capability of the principal offsite response organizations to respond to an emergency and to augment any initial response on a continuous basis?

A. Yes. Provisions of HUREG 0654/FEMA REP-1, Rev., 1, standards A and C were applied to the plans reviewed. The capability to respond was demonstrated through past demonstrated disaster response and through planning oriented to principles of mutual aid and redundant staffing.

Q.23 Does the capability of each principal offsite response organization to respond to an emergency and to augment this initial response on a continuous basis described in your response to Question 22 above meet planning standard 10 C.F.R., Section 50.47(b)(1)?

A. Yes. The basic planning of the jurisdictions, coupled with the State and local mutual aid agreements, and Federal support through the FEMA Organization provide the necessary response capability.

Q.24 With respect to Contention 2.G, have you examined radiological emergency response training that has been provided to offsite response personnel who may be called on to assist in an emergency?

A. Yes. Training has been reviewed under NUREG-0654/FEMA Rep-1, Rev. 1, standard 0 and said standard applies to response plans. Training provided to response personnel has been limited. Additional training has been identified as being needed. Local jurisdictions have teams identified who have had training given by the State such as the RDO, RDIW, and RM courses and associated courses, provided by county offices. Medical radiological courses were presented by the utility. Additional training is felt necessary to improve proficiency and expand on the specific techniques of power plant field monitoring and ingestion pathway sampling, as well as the vision of basic radiation concepts training to all participants. Training plans and procedures are being developed at this time as a result of the exercise evaluation findings.

Q.25 Does the radiological emergency response training of offsite personnel which you have described in your response to Question 24 above meet planning standard 10 C.F.R., Section 50.47(b)(15)?

A. To some degree. Reference informal plan review and exercise evaluation findings documents cited in Question 10 above. Additional training is recommended.

Q. 26 With respect to Contention 2.H, have you examined the methods, staffing, systems and equipment available to the offsite response organizations for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition within the plume exposure pathway EPZ for SONGS 1 and 2?

A. Yes. NUREG 0654/FEMA REP-1, Rev. 1, standard I was applied to plans reviewed. System and equipment exists in limited quantities, while staffing has been designed to meet plan requirements. Methods for assessment and monitoring are being expanded through SOP's.

Q. 27 Do the methods, staffing, systems and equipment available to the offsite response organizations for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition, described in your response to Question 26 above, meet planning standard 10 C.F.R., Section 50.47(b)(9)?

A. Generally speaking, yes. Some equipment is presently not on hand which would enhance the response capability of the local jurisdictions. SOP's are being developed to address procedures for response. Staffing from local, State and Federal organizations is being refined and training is being developed to improve the response capability. Reference informal plan review and exercise evaluation cited in Question 10 above.

Q.28 With respect to Contention 2.I, have you examined the physical design, communications equipment and operating procedure for interim Emergency Operations Facility (EOF)?

A. The facilities of the interim EOF were examined relative to NUREG 0654/FEMA REP-1, Rev. 1. The permanent offsite EOF has not been established at this time. An interim facility at the San Clemente City EOF is currently being used for the EOF. The design, equipment and procedures are being reviewed and updated as a result of an exercise; as of May 13. They reflected a shortfall from perceived requirements.

Q.29 Do the physical design, communications equipment and operating procedures for the interim EOF described in your response to Question 28 above meet planning standards 10 C.F.R. Sections 50.47 (b)(3) and (b)(3)?

A. The design, communications equipment, and operating procedures for the interim EOF were reviewed in the exercise on May 13, 1981. The findings resulting from that exercise evaluation identify the current state of operations and suggested corrective actions. Reference the exercise evaluation findings cited in Question 10 above. At this time, there is additional work being accomplished regarding facilities, equipment and procedures. Upon completion of these actions, a demonstration should be conducted to allow for verification of facilities and capabilities.

Q.30 With respect to Contention 2.3, have you examined the methods, staffing, systems and equipment available to offsite response organizations for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition within the ingestion pathway EPZ for SONGS 2 and 3?

A. Yes, to the extent that they are covered by NUREG 0654/FEMA RFP-1, Rev.1 standard's II.C.3, 4 and J-11. There has been no ingestion pathway response capability demonstrated.

Q.31 Do the methods, staffing, systems and equipment available to offsite response organizations for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition described in your response to Question 30 above meet planning standard 10 C.F.R. Section 50.47(b)(9)?

A. As yet the methods, staffing and systems and equipment relating to ingestion pathway response have not been clearly identified or demonstrated. The State of California has a draft proposal for ingestion pathway response and has indicated a draft plan will be submitted in the next two to three months.



# FEDERAL EMERGENCY MANAGEMENT AGENCY

Region IX

211 Main Street, Room 220

San Francisco, CA 94105

## PROFESSIONAL QUALIFICATIONS

KENNETH W. NAUMAN, JR.

Emergency Management Specialist  
Plans and Preparedness Division  
Federal Emergency Management Agency  
Region IX, San Francisco, California

I am an Emergency Management Specialist in the Plans and Preparedness Division of the Federal Emergency Management Agency, Region IX, San Francisco, California, and a Radiological Emergency Preparedness Site Project Officer for the San Onofre Nuclear Generating Station (SONGS). I was also the principal coordinator of findings of the SONGS Exercise Findings and Plan Review documents developed in 1981.

I participated in the NRC/FEMA Radiological Emergency Response Planning (RERP) Course, Radiological Emergency Preparedness Planners, and the DOE Emergency Response Course at the Nevada Test Site in 1979 and 1980.

I received a Bachelor of Arts Degree in Political Science from the University of Oregon in 1965. I attended the McGeorge College of Law, University of the Pacific, Sacramento, for 1½ years prior to a call to military service.

I served in the United States Air Force as a pilot, operations officer, plans officer, and Disaster Preparedness Officer during a tour of active duty from 1967 to 1973. From 1973 to date, I have served with the United States Air Force Reserve, serving in the above duties, and as a Base Disaster Preparedness Augmentation Officer, McClellan AFB, California. I attended the USAF Disaster Preparedness Course, Lowry AFB; Senior Officer's Disaster Preparedness Course, Disaster Preparedness Refresher Course, and numerous seminars, training meetings, and conferences dealing with radiological and emergency planning. During Air Force duty, I served as Evaluation Team Chief, team member and instructor of emergency response programs, as well as participating in two actual disaster/accident response events.

Prior to employment with the Federal Emergency Management Agency, I served as an Emergency Mobilization Plans Officer (Civilian) with the U.S. Army for 2½ years. Duties included planning, management, and execution of functions related to emergency movement and control (handling) of up to 15,000 personnel in various types of situations.

Professional Qualifications  
Kenneth W. Nauman, Jr.

Service with the Federal Emergency Management Agency included planning, development, policy implementation, and liaison work with local, State, and Federal governments as well as private enterprise. Areas of involvement included program management and development relating to Crisis Relocation Planning and general emergency planning. Further work included course development, management, and instruction of radiological defense training, and development of radiological defense plans. I have attended, directed, and instructed in radiological defense courses (RDO-I, Radiological Monitoring, and Radiological Instructor Training) developed by the Defense Civil Preparedness Agency. I have written numerous plans regarding general and specific disaster response, both in the Air Force and in DCPA/FEMA. Further, I have completed the FEMA Career Development Phase Courses II and III, and the Air Force Command and Staff College Course.

Most recent assignment is to the Radiological Emergency Preparedness Program as project officer for offsite planning for SONGS and evaluation Team Chief for exercises within Region IX. Additional duty involvement with the program began in 1980 with primary duty beginning in February 1981.