UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

November 17, 1983

Docket No. 50-206
LS05-83-11-032

LICENSEE: Southern California Edison Company

FACILITY: San Onofre Generating Station, Unit No. 1

SUBJECT: SUMMARY OF NOVEMBER 8, 1983 MEETING

On November 8, 1983, members of the NRC staff met with representatives of Southern California Edison Company (SCE). The purpose of the meeting was to discuss SCE's approach to return San Onofre Unit No. 1 to power operation. Enclosure 1 is a list of attendees.

BACKGROUND

By letter dated June 15, 1982, following several meetings with the NRC staff, SCE committed to keep San Onofre Unit No. 1 shutdown until the seismic capability of the plant was upgraded. On August 11, 1982, the NRC issued an order confirming SCE's commitment. Subsequently, SCE ceased most work on upgrading the facility pending their development of a long-term integrated backfit program that would include regulatory initiated and station betterment capital improvements. This program is under development and several meetings with the NRC staff have been held. Concurrently, SCE is developing a plan for the return to power of San Onofre Unit No. 1. The November 8, 1983 meeting dealt with this latter plan.

SUMMARY

Enclosure 2 is a copy of the handout used by SCE during the meeting. The licensee indicated that about $100 million was spent on seismic upgrade work during the current shutdown. In addition, about $50 million has been spent on other items such as TMI modifications. SCE indicated that an additional $70 million would be required to finish the seismic upgrade work and they want to do this work as part of the long-term program. With regard to restart, SCE's plan is to demonstrate that the facility can safely return to power. The licensee stated that they want to assure that San Onofre Unit No. 1 has the capability to reach hot standby (Mode 3) in the event of a 0.67g earthquake. As indicated in Enclosure 2, the licensee is proposing to establish acceptability criteria to be used in judging the availability of safe shutdown systems following a 0.67g earthquake. These acceptability criteria will consider, among other things use of higher damping for all sizes of piping, an alternative

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method to the use of broadened response spectra in piping analysis, functionality stress limits for piping and pipe supports, etc. Further, the licensee stated that they would propose that the acceptability criteria be applicable for the remaining term of the license.

The licensee proposed additional meetings to discuss the proposed return to power plan. Subsequently, a management meeting has been scheduled for November 29, 1983 and a meeting to discuss the details of the plan has been scheduled for December 15, 1983.

Original signed by

Walter A. Paulson, Project Manager
Operating Reactors Branch #5
Division of Licensing

Enclosures:
1. Attendance list
2. SEC Handout

DISTRIBUTION
Docket
NRC PDR
Local PDR
ORB #5 Reading
DCrutchfield
WPaulson
OELD
EJordan
JTaylor
ACRS (10)
NRC Participants
NSIC
cc list

DL:ORB #5
WPaulson:jc
11/16/83

DL:ORB #5
DCrutchfield
11/17/83

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San Clemente, California 92672

Chairman
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Radiological Health Section
714 P Street, Room 498
Sacramento, California 95814

U. S. Environmental Protection Agency
Region IX Office
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San Francisco, California 94111

John B. Martin, Regional Administrator
Nuclear Regulatory Commission, Region V
1450 Maria Lane
Walnut Creek, California 94596

ATTENDANCE LIST

NOVEMBER 8, 1983 MEETING

NRC STAFF & SOUTHERN CALIFORNIA EDISON CO.

Name	Affiliation
W. Paulson	NRC
D. Crutchfield	NRC
C. Grimes	NRC
F. Miraglia	NRC
K. Baskin	SCE
M. Medford	SCE
R. Krieger	SCE

Enclosure 2

RETURN TO SERVICE PLAN

SAN ONOFRE UNIT 1

NRC MEETING

NOVEMBER 8, 1983

AGENDA

INTRODUCTION	K. BASKIN
CURRENT PLANT STATUS	R. KRIEGER
RETURN TO SERVICE PLAN	R. KRIEGER
SCHEDULE	R. KRIEGER

CURRENT PLANT STATUS

MODIFICATIONS PRIOR TO 1982

- REACTOR COOLANT LOOP EQUIPMENT SUPPORTS INSTALLED
- CONTAINMENT OKAY AS IS
- NEW SPHERE ENCLOSURE BUILDING
- NEW DIESEL GENERATOR BUILDING
- NEW DIESEL GENERATORS AND AUXILIARY SYSTEMS
- NEW AUXILIARY FEEDWATER DISCHARGE PIPING
- SERVICE WATER RESERVOIR OKAY AS IS
- ELECTRICAL EQUIPMENT ANCHORAGES HAVE BEEN MODIFIED
- CONTROL BUILDING, REACTOR AUXILIARY BUILDING, SEAWALL OKAY AS IS

CURRENT PLANT STATUS

MODIFICATIONS SINCE 1982

- TURBINE BUILDING STRUCTURAL MODIFICATIONS INSTALLED (SOUTH TURBINE EXTENSION NOT COMPLETED)
- MODIFICATIONS TO MASONRY WALL CONNECTIONS IN THE VENTILATION BUILDING & FUEL BUILDING INSTALLED. ADDITIONAL MODIFICATIONS TO MASONRY WALLS INSTALLED IN THE TURBINE BUILDING
- MASONRY WALL TEST PROGRAM SUCCESSFULLY COMPLETED
- STRENGTHENING BRACE ADDED TO THE FUEL BUILDING AT THE EAST WALL OF THE NEW FUEL ROOM
- STRENGTHENING BEAM ADDED TO THE INTAKE STRUCTURE PUMP WELL WALLS
- IN-SITU SOIL CONDITIONS MAPPED AND DEFINED
- APPROXIMATELY 1,800 OF 4700 PIPING SUPPORTS MODIFIED OR INSTALLED
- APPROXIMATELY 400 OF 600 CABLE TRAY MODIFICATIONS INSTALLED OR MODIFIED
- APPROXIMATELY 1300 OF 1500 MODIFICATIONS TO CONDUIT SUPPORTS INSTALLED OR MODIFIED
- APPROXIMATELY 300 OF 600 CABLE TRAY TIEDOWN LOCATIONS MODIFIED
- A NEW SEISMICALLY QUALIFIED CONTROL ROOM CEILING INSTALLED
- A NEW AUXILIARY FEEDWATER TANK CONSTRUCTED
- CONTAINMENT SPRAY RINGS MODIFIED

RETURN TO SERVICE PLAN

- SEISMIC HAZARD

THE SEISMIC HAZARD HAS BEEN GIVEN UNDUE EMPHASIS AT THE SAN ONOFRE SITE. SEISMIC SHOULD NOT BE A SIGNIFICANT CONCERN FOR THE PLANT AS A WHOLE.

- SAFE SHUTDOWN

ALL STRUCTURES, SYSTEMS AND COMPONENTS REQUIRED TO SAFELY SHUT DOWN FOLLOWING AN EARTHQUAKE WILL BE INDIVIDUALLY EVALUATED TO ENSURE THEIR AVAILABILITY FOLLOWING A 0.67G EARTHQUAKE.

SEISMIC HAZARD

- GROUND MOTION
- EARTHQUAKE EXPERIENCE
- ANALYSIS MARGINS
- SEISMIC RISK

GROUND MOTION

THIS TASK CONSISTS OF ASSEMBLING INFORMATION WHICH DEMONSTRATES (1) THAT THE SONGS 1 PGA OF 0.67G REPRESENTS A TWO STANDARD DEVIATION EVENT, AND (2) INSTRUMENTS USED TO MEASURE EARTHQUAKE DATA TEND TO OVERESTIMATE GROUND ACCELERATION. IN ADDITION, INFORMATION PERTAINING TO EARTHQUAKE RETURN PERIODS WILL BE ASSEMBLED FOR SEISMIC RISK STUDIES.

EARTHQUAKE EXPERIENCE

THIS TASK CONSISTS OF ASSEMBLING INFORMATION PERTAINING TO THE EXPERIENCE OF STRUCTURES AND POWER PLANTS IN RECENT EARTHQUAKES.

ANALYSIS MARGINS

THIS TASK CONSISTS OF DOCUMENTING THE VARIOUS MARGINS WHICH EXIST IN THE SEISMIC ANALYSES OF STRUCTURES AND COMPONENTS. SPECIFIC MARGINS PERTAINING TO SONGS 1 ANALYSES WILL BE IDENTIFIED. PLANT SPECIFIC APPLICABILITY OF MARGINS WILL BE ADDRESSED.

SEISMIC RISK

THIS TASK CONSISTS OF AN ATTEMPT TO ASSESS THE SEISMIC RISK AT SONGS 1 BASED ON THE RESULTS OF PROBABLISTIC RISK ASSESSMENTS DONE AT OTHER PLANTS. SITE SPECIFIC EARTHQUAKE RECURRENCE DATA WILL BE UTILIZED.

SAFE SHUTDOWN

- SAFE SHUTDOWN SYSTEMS
- ACCEPTABILITY CRITERIA
- SYSTEM REVIEW

SAFE SHUTDOWN SYSTEMS

THIS TASK CONSISTS OF IDENTIFYING A MINIMUM LIST OF SYSTEMS AND EQUIPMENT WHICH WOULD BE REQUIRED TO SAFELY SHUT DOWN THE PLANT FOLLOWING AN EARTHQUAKE.

ACCEPTABILITY CRITERIA

THIS TASK CONSISTS OF DEVELOPMENT OF CRITERIA CONSISTENT WITH ANALYSIS MARGINS AND EARTHQUAKE EXPERIENCE TO BE USED IN RETURN TO SERVICE EVALUATION. THE ACCEPTABILITY CRITERIA WILL CONSIDER THE FOLLOWING:

1. USE OF HIGHER DAMPING FOR ALL SIZES OF PIPING.

2. ALTERNATIVE METHOD TO THE USE OF BROADENED RESPONSE SPECTRA IN PIPING ANALYSIS.

3. FUNCTIONALITY STRESS LIMITS FOR PIPING AND PIPE SUPPORTS.

4. USE OF TEST DATA.

5. REDUCTION FACTORS ASSOCIATED WITH SSI AND OTHER STRUCTURE RESPONSE CONSERVATISMS AS APPROPRIATE.

6. USE OF INELASTIC CRITERIA FOR THE EVALUATION OF STRUCTURES.

SYSTEM REVIEW

THIS TASK CONSISTS OF REVIEWING EACH OF THE SAFE SHUTDOWN SYSTEMS ON A "LINE BY LINE" BASIS TO ENSURE THEIR AVAILABILITY IN THE AS-IS CONDITION FOLLOWING A 0.67G EARTHQUAKE BASED ON THE ACCEPTABILITY CRITERIA.

SCHEDULE

NOVEMBER 8	NRC MANAGEMENT MEETING
NOVEMBER 22	PRELIMINARY RESULTS FOR NRC TECHNICAL MEETING
DECEMBER 15	FINAL RESULTS FOR NRC TECHNICAL MEETING