

DEC 23 1976

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LICENSEE: SOUTHERN CALIFORNIA EDISON COMPANY

FACILITY: SAN ONOFRE, UNIT 1

SUMMARY OF MEETING HELD CONCERNING CONTAINMENT PRESSURE REANALYSIS

On December 9, 1976, representatives of SCEC and their consultants met with the regulatory staff and presented the methods and results of their reanalysis of the containment pressure-temperature response to the design basis LOCA.

A list of attendees is enclosed.

Significant highlights of the meeting are summarized below.

As a result of its review of the Sphere Enclosure Project the staff concluded in part (in the staff safety evaluation supporting Amendment No. 20, issued on April 20, 1976) that the sphere enclosure building should have essentially no impact on the pressure-temperature response of the design basis LOCA. However, in response to the staff's request the licensee committed to perform a containment pressure reanalysis using current analysis techniques to confirm that the enclosure building, which will be completed before the scheduled February 1977 post-refueling startup, will not adversely influence the pressure-temperature response of the design basis LOCA.

In the presentations, the licensee compared the sophisticated reevaluation techniques with the simplistic methods used for the containment pressure analysis in the Facility Safety Analysis (FSA) report. Consistent with current practice the licensee used in the reevaluation post-LOCA mass (energy release calculated in accordance with WCAP-8312 A, Rev. 2 (August, 1975) and calculated the containment pressure response in accordance with BW-TOP-3, "Performance and Sizing of Dry Pressure Containments" (December, 1972, latest revision).

For comparison, the calculated containment pressure was plotted against time after the design basis LOCA break for three cases investigated in the reevaluation. One case is for the steel containment sphere without the enclosure building. The second case (base case) is with the enclosure building in place, assuming radioactive heat transfer

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only from the sphere to the Shield building. The third case is for the "adiabatic sphere", assuming no heat transfer the sphere to the enclosure building. For all cases the calculated peak pressure is 49.4 psig. compared to the 46.4 psig containment design pressure in the FSA. For the adiabatic sphere case the pressure later in the transient, i.e., higher than that for the other two cases but always below 46.4 psig.

The licensee has recalculated the structural response of the steel sphere to the increased containment peak pressure. In the reevaluation of the strength of the containment the licensee had available measured mechanical properties of the containment shell material. The calculations which include the stresses due to the more severe ground motion (0.67g assumed in the seismic reevaluation) show that a pressure as high as 57 psig would meet the more stringent requirements in the stress reanalysis. The containment sphere was preoperationally tested to an internal pressure of 53 psig.

The licensee concluded that the containment is adequately designed since current day criteria would yield a design pressure of 49.4 psig and the "as built" containment meets the ASME pressure vessel code requirements for a 51 psig design pressure; comparison of the calculated pressures for the three cases that have been investigated show that the presence of the sphere enclosure building does not significantly affect the design basis LOCA pressure transient inside the containment sphere. In addition to presenting the results of the three cases investigated, the licensee also described plans for a more rigorous analysis of a "nominal case" (using known operating parameters and less conservative assumptions) expected to meet the FSA containment design pressure.

At the conclusion of the meeting the licensee agreed to submit as early as possible during January 1977: (1) the containment strength analysis, establishing the adequacy of the higher allowable containment design pressure (49.4 psig), including a discussion of the areas of structural discontinuities; (2) input data needed by the staff for an independent containment pressure computer run; and (3) revised Technical Specifications for containment leakage testing including the Type A test requirements (for retest of the containment before the scheduled February 1977 startup) at the higher 49.4 psig at a respecified acceptance leak rate of 0.09 percent/24 hours.

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With respect to the planned submittal of the "nominal case" analysis, the staff indicated that it was not in a position to judge the significance of the information that would be included and therefore left it up to the licensee to decide whether or not to proceed on this item.

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Alfred Burger, Project Manager
Operating Reactors Branch #1
Division of Operating Reactors

Enclosure:
Attendance List

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Docket
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Local PDR
ORB-1 Reading
NRR Reading

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Docket File

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LOCAL PDR

ORB#1 Reading

NRR Reading

B. C. Rusche

E. G. Case

V. Stello

K. R. Goller

D. Eisenhut

T. J. Carter

A. Schwencer

D. Ziemann

G. Lear

R. Reid

R. Clark

L. Shao

R. Baer

W. Butler

B. Grimes

Project Manager

Attorney, OELD

OI&E (3)

S. M. Sheppard

Participants (NRC)

R. Fraley, ACRS (16)

T. B. Abernathy

J. R. Buchanan

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ATTENDANCE LIST

MEETING WITH SOUTHERN CALIFORNIA EDISON COMPANY

SAN ONOFRE UNIT 1

SOUTHERN CALIFORNIA EDISON COMPANY

D. F. Pilmer
D. E. Nunn
K. P. Baskin

BECHTEL

J. E. Dempsey

WESTINGHOUSE

T. Zordan

NRC - STAFF

A. Burger
B. Grimes
C. Grimes
D. Shum
M. Wohl
J. Slider
A. Schwencer
G. Bagchi
J. W. Shapaker
C. G. Tinkler
C. Berlinger

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