

Southern California Edison Company



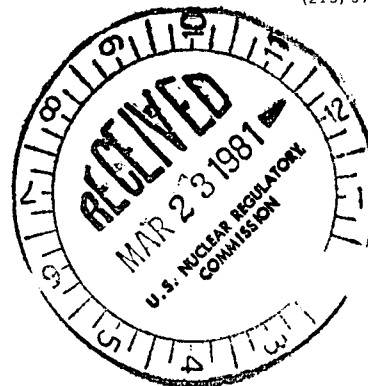
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March 18, 1981

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Director of Nuclear Reactor Regulation
Attention: D. M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555



Gentlemen:

Subject: Docket No. 50-206
SEP Topic II-2.A, Severe Weather Phenomena
San Onofre Nuclear Generating Station
Unit 1

By letter dated December 15, 1980, you forwarded a copy of the NRC staff's safety evaluation for the subject SEP topic. Your letter requested that we inform you if our as-built facility differs from the licensing basis assumed in the assessment. The results of our review of the facts defining San Onofre Unit 1 as well as additional comments on your assessment are provided as an enclosure to this letter. Delay of submittal of this information has been discussed with the NRC staff.

If you have any questions regarding the enclosed, please contact me.

Very truly yours,

WCM

Enclosure

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COMMENTS ON NRC SAFETY EVALUATION
SEP TOPIC II-2.A, SEVERE WEATHER PHENOMENA

1. The third paragraph of the safety evaluation suggests that the design wind speed for San Onofre Unit 1, defined as "the 'fastest-mile' windspeed at a height of 30 feet above ground level with a return period of 100 years" is 100 miles per hour. This is not correct. Although the containment was designed for 100 miles per hour wind, other structures were designed to the Uniform Building Code of the time which specified a value of 14 lb/ft^2 at ground level which corresponds to a wind speed of 77 miles per hour. Recent plant modifications were conservatively designed to 100 miles per hour as has San Onofre Units 2 and 3. This value was based on ASCE Paper No. 3269 which indicates that the 100 year return period wind is approximately 90 miles per hour. (See Section 3.3.1.1 of the San Onofre Units 2 and 3 FSAR). However, it is not appropriate to evaluate the original plant against this value just because it was adopted for later modifications. The appropriate design wind speed for reevaluation should be established based on an evaluation of meteorological conditions in the vicinity of the site. Section 2.3.1.2.9 of the San Onofre Units 2 and 3 FSAR provides estimates of the 100 year return period wind at various locations from various sources of historical data. These estimates vary from 47 miles per hour to 63 miles per hour. The report prepared for the NRC by the Texas Tech University Institute for Disaster Research (IDR) which was attached as part of the safety evaluation, cites on page 14 that the 100 year return period wind is from 44 to 55 miles per hour. The expected value in the IDR report is 49 miles per hour.
2. The last paragraph of the safety evaluation indicates that a design basis tornado with a maximum windspeed of 260 miles per hour is appropriate for the San Onofre site. Although this is the value which has been used for the design of plant modifications and San Onofre Units 2 and 3, this is considered to be an overly conservative value for the reevaluation of Unit 1. This is supported by the IDR report which calculates that the tornado with a hazard probability of 10^{-7} has a peak windspeed from 98 to 272 miles per hour with an expected value of 172 miles per hour. Based on this report, the 10^{-7} tornado windspeed for the San Onofre site should as a maximum be the expected value of 172 miles per hour. This is appropriate in light of the conservative assumptions made in the IDR report with respect to the occurrence of tornados in the San Onofre area. Specifically, although only two tornados in the F2 category (lower bound windspeed of 113 miles per hour) were identified in the data base used by the IDR, for calculational convenience they elected to assume five tornados in this category. This assumption results in conservative estimates of the frequency of the higher intensity tornados. Furthermore, use of the 10^{-7} tornado would appear to be an overly conservative tornado for use in the reevaluation of San Onofre Unit 1 in the SEP.

3. It would be useful if the NRC's safety evaluation would reference the source of the information included. It is more difficult to review and verify the facts with the present format.
4. The last reference on page 3 should be updated to be Section 2.3 of NUREG-0712, the NRC's Safety Evaluation Report for San Onofre Units 2 and 3.
5. The report prepared by the IDR lists coordinates for the site. In accordance with pg. 1-1 of the San Onofre Unit 1 Final Safety Analysis, the plant coordinates are: Latitude 33° 22' 10" N and Longitude 117° 33' 30" W.