

ACRS 57-0175
POR 2/22/80

October 5, 1978

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ACRS Members

SUMMARY OF SEISMIC MEETING ON SAN ONOFRE UNITS 2 AND 3, SEPTEMBER 28 AND 29, 1978

The NRC Staff met with representatives of Southern California Edison Company on September 28 and 29, 1978 in Bethesda, MD to discuss new seismic related information made available since the construction permits were issued in October 1973. The new information presented was in response to NRC questions related to the following:

Question 361.35 - Tectonics of Capistrano Embayment

The Applicant indicates that an exhaustive investigation has been performed which reinforces their conclusions reached at the CP review

Question 361.34 - Offshore E Fault

Applicant indicates that based on new high resolution seismic reflection data this fault does not exist.

Question 361.33 - Hypothesized Offshore Zone of Deformation

The Applicant indicates it is not reasonable to call this continuous or capable but they are unable to prove it.

Information presented in response to these questions by the Applicant will be provided in writing within the next few months.

It appears the NRC Staff's main concern at this time is the need to define a reasonable offshore earthquake for the 240 KM long Hypothesized Offshore Zone of Deformation which comes within 5 miles of the site and extends from Newport - Inglewood fault zone to the north to Rose Canyon fault to the south (Santa Monica Mountains to at least Baja, California). The NRC

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Staff at the construction permit stage stated that a 0.67 g DBE was reasonably conservative. The Licensing Board found 0.67 g DBE with an Intensity X event conservative. Unfortunately, no one at the CP stage bothered to assign a specific earthquake magnitude to the 240 KM Hypothesized Offshore Zone of Deformation and to attenuate it to the site. The NRC Staff is concerned that they do not have any technical basis per the requirements of 10 CFR 100, Appendix A for the 0.67 g DBE.

The NRC Staff attempted several times at the September 27th and 28th meeting to get the Applicant to assign a magnitude for the largest possible earthquake which could occur on the Hypothesized Offshore Zone of Deformation but the Applicant refused, telling the NRC Staff that the 0.67 g DBE and Intensity X were NRC values assigned at the CP stage. The Applicant said at the CP stage, and still believes, that it is not reasonable to say that the Hypothesized Offshore Zone of Deformation is capable or continuous for 240 KM; however, they admit that they cannot prove that there has been no movement along this zone for longer than 7,000 to 18,000 years since the features are capped with marine sediments only 7,000 to 18,000 years old. The Applicant also claims that many of the features in the zone do not represent sea floor faulting but rather gentle folds not characteristic of faults. The Applicant noted that in recorded history a magnitude 6.5 seismic event is the largest earthquake that could be associated with the site's tectonic region, which would be considerably less than the 0.67 g DBE. The NRC Staff did not appear to be concerned that the 0.67 g DBE assigned at the CP stage was too small, but rather that there was no real technical basis for assigning that particular DBE value.

The Applicant discussed several recent seismic events, geological features discovered, and investigations performed since the construction permits were issued. It appeared to be the opinion of the Applicant and the NRC Staff that there were no significant problems. The NRC Staff has requested additional investigation on several onshore lineaments trending in the direction of the site discovered in some high altitude photographs. The Applicant claims they have investigated these features and have found that none are capable faults. The NRC Staff is requesting the details of this investigation.

I suggest the San Onofre Units 2 and 3 Subcommittee meet with the Applicant well in advance of the presently scheduled operating license review (scheduled for the February 1979 ACRS meeting) to look at some of the site related items. Items which the Subcommittee could look at early include the following:

1. Seismic events occurring in the area of the San Onofre Site since the CP review.
2. "A" and "B" geology features found during excavation for Units 2 and 3.

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3. New information on onshore and offshore features.
4. Investigation of faults found in the vicinity of the San Onofre Site.
5. Dewatering well cavities.

Several ACPS consultants over the past 4 years have been involved with most of these items.

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