

Docket No. 50-206

AUGUST 23 1978

MEMORANDUM FOR: D. L. Ziemann, Chief, Operating Reactors Branch #2,
DOR

FROM: D. K. Davis, Chief, Systematic Evaluation Program
Branch, DOR

SUBJECT: SEP SAFETY ASSESSMENT INPUTS - SAN ONOFRE 1

Attached are the San Onofre 1 draft evaluations for the following topics:

Topic II-1.A Exclusion Area Authority and Control

Topic II-1.B Population Distribution

These evaluations are to be included in the Safety Assessment for the San Onofre Unit 1 plant at the completion of the Systematic Evaluation Program.

Please forward these initial evaluations to the licensee with a request that he examine the facts upon which the staff has based its conclusions. The licensee should respond either that the facts describing the plant are correct or in error. If in error, the correct information should be supplied. Additionally, the licensee should be encouraged to supply any other material that might affect the staff's evaluation.

Original Signed by
Don K. Davis

Don K. Davis, Chief
Systematic Evaluation Program Branch
Division of Operating Reactors

Attachments:
As stated

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Docket Files 50-206
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SEP Reading
HFontecilla
LSoffer
DKDavis
AAB Branch Chief

*Stella
Everhart
Branch Members
A. Burger*

*SEE ATTACHED YELLOW FOR PREVIOUS CONCURRENCE.

OFFICE →	DOR:SEPB/S&P	DSE:AAB	DOR:SEP/C			Item 4 CCP
SURNAME →	HFontecilla	LSoffer	DKDavis			
DATE →	8/4/78*	8/10/78*	8/23/78			

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DATE >	8/14/78	8/10/78	1/1			



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

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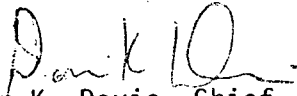
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Don K. Davis, Chief
Systematic Evaluation Program Branch
Division of Operating Reactors

Attachments:
As stated

cc w/attachments:
V. Stello
D. Eisenhut

SAN ONOFRE UNIT 1

Topic II-1.A Exclusion Area Authority and Control

The safety objective of this topic is to assure that appropriate exclusion area authority and control is maintained by the licensee.

The San Onofre Nuclear Generating Station is located on the Southern California coast about 62 miles southeast of Los Angeles and 51 miles northwest of San Diego. The exclusion area as well as the low population zone and population center distance have been modified during the course of licensing proceedings on Unit 1 and Units 2 and 3 since Unit 1 received a construction permit in 1963. The original minimum exclusion distance for Unit 1 was 2 miles. This subsequently was reduced to 0.5 mile at the operating license stage and, as a result of an issue related to the licensee's control of activities within the Station's exclusion area, it was further reduced to its present size. The exclusion area for the Station is shown in Figure 1. It should be noted that the exclusion area for Unit 1 is the same exclusion area as for Units 2 and 3. The minimum exclusion area distance for Unit 1 is 283 meters measured from the edge of the Unit 1 containment building to the nearest point on the exclusion area boundary.

The San Onofre Station is located entirely within the boundaries of the U. S. Marine Corps Base, Camp Pendleton. The exclusion area boundary is also the plant property line. The site is comprised of 83.63 acres of which 11.7 acres are occupied by the Unit 1 power block. The licensee's authority to control all activities within the exclusion

area was acquired in 1964 by grant of easement from the United States of America made by the Secretary of the Navy under the authority of Public Law 88-82. The original grant of easement was amended on September 18, 1975, with the purpose of removing any ambiguities with respect to the licensee's authority to control activities within the exclusion area. All mineral rights in the land portion of the exclusion area are held by the United States Government.

The exclusion area is traversed by Interstate Highway 5, old U. S. Highway 101, the Atchison, Topeka & Santa Fe Railroad, and improved walkway (the beach passageway) along the seawall on the ocean side of the Station, and by the Pacific Ocean. Arrangements have been made with agencies of the state and local governments to control the movement of people on the transportation routes through the exclusion area in the event of a plant emergency. These arrangements are documented in the Emergency Plan for the San Onofre Nuclear Generating Station and are applicable to all three nuclear units on the site. Chain link fences extending along and from both ends of the beach passageway in addition to surveillance by plant security personnel and by remotely monitored television cameras will be used to control the use of the passageway and the beach portion of the exclusion area.

We conclude that the licensee has the proper authority as required by 10 CFR Part 100 to determine all activities within the exclusion area

and that appropriate and effective arrangements have been made to control traffic on the transportation routes and portions of the exclusion area accessible to the public in the event of an emergency. This completes the evaluation of this SEP topic. Since the plant design conforms to current licensing criteria, no additional SEP review is required.

SAN ONOFRE UNIT 1

Topic II-1.B Population Distribution

The safety objective of this topic is to assure the appropriate definition of the Low Population Zone (LPZ) as required by 10 CFR Part 100.

Information on the population distribution in the region surrounding the San Onofre Nuclear Generating Station has been updated several times since the issuance of a construction permit for Unit 1 primarily as part of the licensee's application to construct and operate Units 2 and 3. The most current estimates of the population for the San Onofre site are contained in the Units 2 and 3 FSAR. Both the population center and low population zone distances have been revised during the course of the licensing proceedings.

Oceanside, California, some 17 miles southeast of the site was originally considered to be the closest community to the site which met the definition of a population center in 10 CFR Part 100, i.e., a densely populated center containing more than about 25,000 residents. The original low population zone for Unit 1 was specified as extending to a radius of 4 miles. Subsequently, San Clemente (1969 estimated population of 18,000) was designated as the nearest population center based on projected population growth which indicated that San Clemente population would exceed 25,000 some time in the 1970's. The population of San Clemente was approximately 23,000 in 1976 and is currently estimated by the Chamber of Congress to be about 25,000. The distance from the Unit 1 reactor to the nearest corporate boundary of San Clemente is

approximately 2.5 miles. The distance to the nearest residence within the city, that of former President Richard Nixon, is approximately 0.1 mile further. As the city of San Clemente is bordered on the south by Naval Reservation property, further residential development closer to the site is effectively precluded.

The low population zone for the site, which is the same for Units 1, 2 and 3, is specified in the Units 2 and 3 FSAR as having an outer boundary of 1.95 miles measured from the Unit 2 reactor. The distance to the outer boundary of the low population zone, measured from the Unit 1 reactor, is approximately 1.8 miles. The population center distance of 2.5 miles for Unit 1 is slightly greater than one and one-third times the low population distance of 1.8 miles and, therefore, is in conformance with the guidance given in 10 CFR Part 100.

The changes in the population distribution in the vicinity of the San Onofre Nuclear Power Station have been well documented as the result of the licensing activities on Units 2 and 3, and we conclude that the population center distance and low population zone for Unit 1 have been properly revised so that Unit 1 is currently in conformance with the distance requirements of 10 CFR Part 100. This completes the evaluation of this SEP topic. Since the plant design conforms to current licensing criteria, no additional SEP review is required.