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Department of Navigation and
Ocean Development
Department of Parks and Recreation
Department of Water Resources



Air Resources Board
Colorado River Board
San Francisco Bay Conservation and
Development Commission
State Lands Commission
State Reclamation Board
State Water Resources Control Board
Regional Water Quality Control Boards

THE RESOURCES AGENCY OF CALIFORNIA

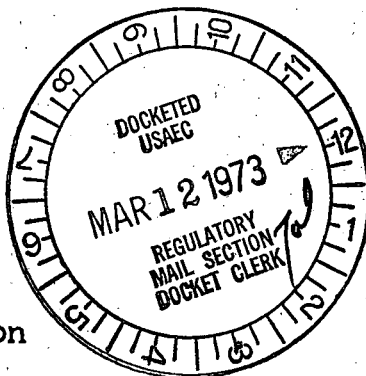
SACRAMENTO, CALIFORNIA

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Mr. Daniel R. Muller
Assistant Director of
Environmental Projects
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, DC 20545



Dear Mr. Muller:

The State of California has reviewed the Draft Environmental Statement prepared by the Directorate of Licensing, United States Atomic Energy Commission, related to the proposed San Onofre Nuclear Generating Station, Units 2 and 3, for the Southern California Edison Company and San Diego Gas and Electric Company and "Amendment No. 1, to Supplement to Applicant's Environmental Report, Construction Permit Stage", which were submitted to the Office of Intergovernmental Management (State Clearinghouse) within the Governor's Office. The review accomplished by the State fulfills the requirements under Part II of the U. S. Office of Management and Budget Circular A-95 and the National Environmental Policy Act of 1969.

The Draft Environmental Statement and the Amendment No. 1 were reviewed by the State Departments of Justice, Commerce, Food and Agriculture, Public Works (Division of Highways), Housing and Community Development, Public Health, Fish and Game, Navigation and Ocean Development, Parks and Recreation, and Water Resources; The Reclamation Board; Air Resources Board; and the Public Utilities Commission. The State's general comments are given in the following paragraph and specific comments are attached hereto:

As indicated in the attached specific comments, which are an integral part of this letter, the Statement presents conclusions about the biological impact costs of the project that are either unsupported or based on insufficient evidence. It also presents

Mr. Daniel R. Muller

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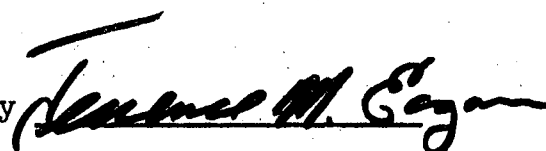
thermal plume characteristics which may be based on temperature data that is of questionable value. The attached comments also point out several statements in the document that contain errors which should be corrected.

Thank you for the opportunity to review this Draft Environmental Statement.

Sincerely yours,

N. B. LIVERMORE, JR.
Secretary for Resources

By

A handwritten signature in dark ink, appearing to read "Thomas M. Egan", written over a horizontal line.

Attachments

SPECIFIC COMMENTS
DRAFT ENVIRONMENTAL STATEMENT
San Onofre Nuclear Generating Station, Units 2 and 3

The following specific comments are an integral part of the State's comments:

Page 2-1, Section 2.1 - In addition to the acreage to be occupied by the new facilities as constructed, it appears that there may be some 24 or 25 acres of land required for "laydown" and stockpiling purposes during the 6-year construction period, which would otherwise be available for recreational purposes. The impact of this additional land, and its removal from recreational use for such a period of time, should receive full discussion.

Pages 2-3 and 2-10 - The existing unit of the State Park System in the vicinity of the power generation facilities is San Onofre State Beach. At several places in the text of the Draft Environmental Statement (Draft E. S.), the unit is referred to as a "State Park". Correction in all instances should be made so that this reads "State Beach". This difference in classification is provided by law.

Page 2-8, Section 2.2.2 - The reference to "2,700 acres" in the San Mateo Creek Canyon should be corrected to read "2,400 acres".

Page 2-11, paragraph 3 - The figure giving average daily attendance would be better placed in a different form. It would be preferable to state that during the first year of operation, the total attendance at the State Beach was 197,715 people.

Page 3-1, Section 3.1 - Some discussion should be made relative to the esthetic impact of the construction of the new plant. The new structures proposed will definitely create additional artificial intrusions on the natural scene, as viewed from the upcoast and downcoast portions of San Onofre State Beach which is already in operation. It appears that there will also be some loss occasioned by the grading out and elimination of interesting cliff configurations along the ocean front, and their replacement by a sea wall. No mention is made of these factors.

Page 3-8, Section 3.3.11 - There have been intensive programs designed to measure dispersion of heated effluent from Unit 1 at San Onofre. Such programs have provided the background against which assessment of Unit 1's effects are considered and discussed (page 3-17, Section 3.3.8) and they also serve as a basis for assessing the capabilities of models to define the thermal influence of Units 2 and 3 (page 3-37, paragraph 2).

We believe that a serious question has been raised about the interpretation of such measurements. Our attention was first directed toward this problem in a letter from Intersea Research Corporation (successor company to Bendix Marine Advisor, Inc.) to Southern California Edison Company dated 8-10-72. That letter is devoted to a discussion of natural surface or ambient sea water temperature measurements, how they are derived and the rationale for correcting a so-called error detected in a measurement published in the Oceanographic Monitoring Program - July 1963 to September 1969 (reference 10, page 3-68, AEC Draft EIS). A detailed analysis of that letter indicated that determination

of ambient or background ocean surface temperature, for the purpose of defining thermal plume areal influence, is accomplished on a subjective basis.

We found that derived measurements of ambient temperature were designed to identify the plume in a manner much different than would be of interest from a biological point of view. It is the biological point of view that is relevant in measuring temperature increases above the ambient or natural water surface temperature and that the graphic presentations offered in the Draft E. S. are not necessarily portraying that item of interest. This problem should be examined and clarified.

Pages 3-63 and 3-64 - The power to be conveyed by the new generating facilities will be carried on new transmission lines, to be extended inland along rights-of-way already owned by the applicants, and already occupied by other transmission lines. The addition of new and increased facilities along these rights-of-way will also create additional esthetic impact, and this should be discussed in the Draft E. S. This impact will perhaps be particularly severe along Interstate 5, which follows the coastline and is in an area of considerable scenic interest. Additional impact will occur in San Mateo Creek.

Page 5-8, paragraph 1 - The sentence reading: "A well-known fact that fish are attracted to warm-water discharges ..." should be amended to read "some fish are attracted".

Page 5-10, paragraph 2 - Several references offered on Page 5-5, Section 5.3, are establishing that entrainment mortality of planktonic life forms would be of a low order. References 46, 48, and 127 in fact all refer to the same source document, i.e., "Temperature-Time Effects on Marine Plankton Passing Through the Cooling Water System at San Onofre Generating Station, Marine Biological Consultants, Inc., 1971". We have examined the cited document and find that this evidence is based on two sampling days in November at Huntington Beach and three days of effort in December at San Onofre. The authors' own conclusions at the termination of that study included the following: (1) the extremely limited results obtained cannot be extrapolated to any other time or place and (2) the study needs to be conducted at other times of the year to assess the impact on fish eggs and larvae.

In light of these comments, we request that the Draft E. S. should specifically indicate the limitations of those studies and the conclusions that can be drawn from such investigations to date.

Page 5-10, last paragraph - A major concern rests with this statement reading as follows: "The San Onofre area is not a regular migratory pathway for juvenile fish, nor is it a heavy spawning ground for any species, page 2-20, Section 2.8. The entrainment of eggs, larval fish, and juvenile fish should not be great".

However in Section 2.8 of the Draft E. S. there is no evidence to support such a statement. The CalCOFI stations cited in part, and which may have served as the basis for such comments on the presence of fish eggs and larvae, are located in an area at least 5 miles offshore and therefore are not necessarily relevant to the subject at hand. In addition, evidence exists that young anchovies do migrate through this area.

Heat treatment checks by the Department of Fish and Game show that the preponderance of entrained fish killed by heat treatments are juveniles or small adults. Represented are at least 54 species, very many of which are, to a greater or lesser extent, migratory.

Page 5-30, paragraph 2 - It is shown in the Draft E. S. that red tides are attributed to Gonyaulax catenella. This sentence should be corrected to read Gonyaulax polyedra.

Page 5-31, paragraph 3 - Damage to giant kelp, including sloughing, occurs when water temperatures reach 66°F and above for extended periods, not 68°F as stated in the Draft E. S.

Therefore the figure indicated in the Draft E. S. should be corrected because 2°F rise in water temperature could be critical to the giant kelp.

Documentation on this subject can be found in Reference No. 120, shown on page 5-77 of the Draft E. S., and in article called "Artificial Habitat in the Marine Environment", by Carlisle, John G., Jr., Charles H. Turner and Earle E. Ebert, published in 1964, in Bulletin No. 124, page 93, by the Department of Fish and Game, State of California.

Page 5-38, paragraph 4 - The Draft E. S. calls kelp bass a minor commercial species. It has been illegal to take kelp bass, or other species of the genus Paralabrax commercially in California waters since 1953. That statement should be deleted.

Page 13-4, Section 13.2.4 - We feel that the entire problem of entrainment and mortality of fishes, as well as larval forms of important sport and commercial marine organisms needs to be thoroughly examined with appropriate on-site studies, and treated in the Draft E. S. as a significant problem.

Only one aspect of the entrainment problem is briefly discussed in this section. It is indicated that the entrainment of large fish will be reduced from 60 - 80% by the installation of a proposed fish return system. On page 5-12, however, it is stated that "at this time the staff is unable to provide any assessment of the effectivity of this system in reducing the mortality of entrained fish, but concedes that it could be 60 to 80% effective". Some rationale for this concession needs to be provided since the range of effectiveness for that system seems to provide the only basis for the discussion of impact costs at present.

Also, it is implied that losses for the entire range of animals likely to be entrained have been estimated. In fact, such estimates have only been considered for the larger, nonplanktonic forms of fish. This deficiency should be clearly addressed in this section. We recognize that there is insufficient data available to make any meaningful assessments about the impact costs of that kind of entrainment and that comment should also be made.

Finally, it is alleged that entrainment losses will be offset, since organisms killed during entrainment will be available as food for other organisms.

The precise meaning of this comment is unknown. It is believed that it is intended to convey the idea that larger fishes entrained and killed during normal and heat treatment operations will be ground up and returned to the ocean. The Regional Water Quality Control Board, San Diego Region, has disallowed that former practice. Fish killed by entrainment are now hauled to inland dumps. That comment, therefore, should be deleted from the Draft E. S.

Page 13-5, Section 13.3.2

It is indicated that it has not been determined that any recreational benefits exist with an alternative fossil-fired plant. We submit that the improved bonito fishing resulting from their attraction to thermal discharges from the applicant's fossil-fired plants at Seal Beach and Huntington Beach is a well-known occurrence. The Draft E. S. should reflect this benefit of the alternative project.

Amendment No. 1, Page 2-7.2, Section 2.7.1.1.2 - Regarding the Construction Permit Stage, there is a discussion of the effect of the riprap at the intake (in actuality an artificial reef) in attracting lobsters and improving sport-fishing. No mention is made of the fact that the riprap will subject fishes thus attracted to far greater danger of entrainment and subsequent death during heat treatments. In no way can this be interpreted as beneficial.

Accordingly, we believe the first part of the comment on page 5-10 should be struck from the Draft E. S. unless adequate support for its retention is offered.