

Dockets

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Docket Nos. 50-~~877~~
and 50-~~272~~ 362

Southern California Edison Co.
ATTN: Jack B. Moore
Vice President
2244 Walnut Grove Avenue
P. O. Box 800
Rosemead, California 91770

Gentlemen:

The Nuclear Regulatory Commission staff has reviewed your proposed preoperational monitoring program for San Onofre Nuclear Generating Station Unit Nos. 2 & 3 transmitted to us on February 17, 1976, and the following comments are provided for your information and appropriate action. With certain exceptions, the proposed preoperational monitoring program is acceptable. It is recommended, however, that you consult Regulatory Guide 4.8 and amend your proposed program to ensure that the preoperational environmental programs, analytical sensitivities, format, etc., as expressed in Regulatory Guide 4.8 are adequately addressed.

We are concerned that your proposed program makes no mention of meteorological monitoring. In our reviews of Unit No. 1 and Unit Nos. 2 & 3, we have taken the position that the data collected on the existing onsite meteorological tower are not acceptable to us. Because in the OL review we will also be performing an Appendix I evaluation, we must emphasize that good quality onsite meteorological data are of the utmost importance. Thus to prevent delays in the OL review schedule, this issue must be resolved before we begin our OL review of Unit Nos. 2 & 3.

On May 6, 1976, we transmitted to you guidance on the preparation of your proposed technical specifications for Unit Nos. 2 & 3, from which some indication of the necessary preoperational radiological monitoring data can be obtained. We are specifically concerned that you

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update the locations of animals giving milk for human consumption. If any animal (cow or goat) is located within 5 miles of the site, then sampling and analysis of milk should be initiated at the worst calculated dose locations (See Regulatory Guide 4.8). Also, evaluation of the air-vegetable-pathway at the locations of highest calculated dose should be made, and green leafy vegetable sampling and analysis performed. A garden census should be initiated as recommended in Regulatory Guide 4.8.

We also find that the programs designed to monitor construction impacts do not describe procedures to limit the impacts to acceptable levels. This inadequacy should be corrected.

The proposed plankton studies should be modified to provide a program with more statistical validity, and which can account for the generally random distribution of plankton. Additional nekton sampling should be provided, and the need for ichthyoplankton studies should be addressed.

Further details on these and additional comments and recommendations are provided in the attached detailed comments.

Sincerely,

Original signed by
P. H. Leech

B. J. Youngblood, Chief
Environmental Projects Branch 2
Division of Site Safety and
Environmental Analysis

Enclosure:

Detailed Comments on SCE Proposed
Preoperational Monitoring Program

cc: Rollin E. Woodbury, Vice President
and General Counsel
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STAFF COMMENTS, SCE PROPOSED PREOPERATIONAL MONITORING
PROGRAM FOR SAN ONOFRE NUCLEAR GENERATING STATION UNIT NOS. 2 & 3

1. As noted in Regulatory Guide 4.2, Preparation of Environmental Reports for Nuclear Power Stations, the Preoperational Monitoring should describe the preoperational meteorology monitoring program. Provide a description of this program.
2. In our reviews of San Onofre Unit No. 1 and Unit Nos. 2 & 3, we have taken the position that data collected on the San Onofre meteorological tower located at the coastal bluff are not representative of atmospheric conditions over the San Onofre site. Regulatory Guide 1.23, Onsite Meteorological Programs, recommends that in cases with complex terrain (such as San Onofre) more than one meteorological tower be used to collect onsite data. Thus, to obtain data useful for dispersion calculations, we have also taken the position that you install an additional tower, or towers, at the San Onofre site, which will provide data representative of the air layer in which the plant effluent would travel.

Because in our Operating License Environmental Review we will be characterizing atmospheric transport processes out to distances of 50 miles (Appendix I evaluations), good quality onsite meteorological data is of the utmost importance. Thus, this issue must be resolved before you submit Unit Nos. 2 & 3 for the Operating License Review.

3. In general the applicant's program is satisfactory. However, he should consult Regulatory Guide 4.8 in order to augment or update the existing Unit No. 1 Environmental Radiological Monitoring Program as required to provide an adequate preoperational program for Unit Nos. 2 & 3.

It is recommended that these revisions be made to reflect the Regulatory Guide 4.8 operational environmental radiological monitoring programs, analytical sensitivities, reporting format and reporting requirements.

Two specific areas of interest are as follows:

The locations of animals giving milk for human consumption should be updated. If any animal (cow or goat) is located within 5 miles of the site, then sampling and analysis of milk should be initiated at the worst calculated dose locations (See Regulatory Guide 4.8).

Evaluation of the air-vegetable-pathway at the locations of highest calculated dose should be made, and green leafy vegetable sampling and analysis performed. A garden census should be initiated as recommended in Regulatory Guide 4.8.

4. Temperature, Turbidity and Dissolved Oxygen Baseline Studies

The preoperational monitoring programs described involve adding stations to the already existing operational monitoring programs for Unit No. 1. We assume that the techniques, instrumentation, reporting procedures, etc., will be similar to that used for the Unit No. 1 operational program, and that the Unit No. 1 program will not be curtailed during this program. Under these circumstances, we find the programs adequate for the purpose of establishing baseline data for Unit Nos. 2 & 3 operation.

The applicant states that additional ocean current studies are not necessary since model studies indicate that the thermal plume will meet all state and Federal regulations, even under the most adverse conditions. We find this approach (assuming the worst possible currents in model studies rather than comprehensively measuring actual currents for more realistic model input) acceptable.

5. Construction Monitoring Program

Erosion Control During Construction - The applicant proposes a bi-weekly visual inspection, with documentation provided and corrective action taken when significant erosion is observed. To assure that an orderly inspection is carried through, we recommend that documentation be kept of all erosion inspections. Furthermore, we recommend that the applicant quantitatively define significant erosion.

Construction Dewatering Discharge, Construction Monitoring of Conduit Construction and Sand Disposal - With the exception of turbidity measurements, the monitoring programs described by the applicant are adequate if proper record keeping systems are used. However, procedures to assure that construction impacts are kept within acceptable limits are not described. The applicant should state what the limitations are and how the impacts will be controlled to remain within these limits. Descriptions of turbidity determinations during conduit placement (or related activities) are lacking, and the frequency and extent of these determinations, including aerial photography, should be specified.

6. Plankton Studies

It is unclear how the proposed plankton studies will be used. Considering the infrequency of sampling, the few sampling stations, the movement and mixing of water in the area and the size of the Pacific Ocean, pre and post operational comparisons drawn from this study would be statistically valid at a very low confidence level. Observed effects would probably not be of adequate significance to support a conclusion that the plant was exerting an unacceptable environmental impact. Accordingly, we find the proposed phyto and zooplankton monitoring programs incapable of yielding meaningful results or providing insight into the plant-environment relationships. We recommend that the program be replaced with one of modified scope for which the applicant can provide a justified basis of statistical validity.

7. Nekton Studies

Gill netting, while an effective sampling method, may be selective. We recommend an additional sampling method that will compensate for some of the sample bias that occurs from using only this single method. Specifically, we should be sampling bottom fishes both as adults and juveniles. Since the FES did not specifically determine the use of the San Onofre area for spawning nor did it discuss the abundance of fish eggs and larvae in the immediate zone of influence of the plant, a sampling program to monitor ichthyoplankton distribution and abundance should be developed to address these questions unless there is documentation that such a study is unnecessary.

8. General, Aquatic Biology

The program, to the extent possible, should provide for simultaneous sampling of physical, chemical, and biological parameters at the same station. For example, Figure 1 indicates a scatter of sampling sites where some of the parameters measured may be causally related. These causally related factors should be measured concurrently. Also, sampling stations and sampling dates should be identified for all programs, and a definition of "non-destructive sampling" adequate to permit staff appraisal should be provided.

A monitoring program should be developed for the kelp beds, a unique habitat possibly subject to modification by plant operation. The study should be adequate to determine changes in the structure of the kelp community. At a minimum, water quality, kelp growth success and fish and macroinvertebrate populations should be monitored for comparison with post-operation observations.

9. Terrestrial Resources

The FES indicates staff determination that terrestrial impacts of construction and operation from this plant will be relatively minor. The staff has accordingly recommended only a few requirements for terrestrial monitoring. These are as follows:

- (1) Assurance of good practice (paragraph 7C of licensing conditions).
- (2) Gathering of additional site vegetation data (Section 6.2.1).
- (3) Gathering of additional data on transmission line rights of way including (1) photographic mapping, (2) additional baseline biotic data, and (3) determination of erosion patterns (Section 6.2.1).

The applicant's preoperational program proposes (1) visual monitoring and control of erosion on site and in transmission corridors, and (2) additional on site biotic investigations for a period of one year.

The applicant's erosion studies are partially responsive to requirements 1 and 3. The assurance of good practice requirement normally includes, in addition to erosion control, a commitment to control to the extent practical dust, noise, and fumes, to clean up chemical and petroleum spills, to reseed and otherwise restore the site, to safely dispose of wastes and other similar practices. Visual inspection at some reasonable interval is the only monitoring requirement. It is recommended that the applicant include a full commitment to good practice and a visual inspection routine in the preoperational program in order to fully implement paragraph 7C of the FES.

The applicant's program for gathering additional biotic data on site appears to be responsive to requirement 2. Nothing additional is recommended.

The applicant declines to make further studies of transmission lines other than those related to erosion. Requirement 3 from the FES also specifies a need for additional baseline biotic data and aerial photographic monitoring. Thus the applicant's program is not fully responsive to requirement 3. The applicant's reasons for not pursuing additional studies appear technically valid on brief review. No additional environmental benefits are likely to accrue from the performance of these studies provided that the erosion inspection and control program is fully implemented. However, we recommend that the applicant provide the following data to justify that a preoperational study of the SCE San Onofre-Santiago transmission line route is no longer necessary.

- (a) The 'initial biological investigation' conducted in the Fall of 1974.
- (b) Detailed maps of the San Onofre-Santiago transmission line route which have been marked to show the Orange County paved road, the Camp Pendleton firebreak, and the aggregate borrow pit.
- (c) A description of the relationship (if any) between the aggregate borrow pit and San Onofre Unit Nos. 2 & 3 construction activities.

10. Water Quality

The Unit No. 1 Semiannual Operating Report for July-December 1975 (p. 17) shows an accumulation of copper and chromium in bottom sediments. The Unit Nos. 2 & 3 preoperational monitoring program should include a study of sediments in the area to be affected by the discharged cooling water to provide a baseline for measuring the possible buildup of these metals during Unit Nos. 2 & 3 operation.