

DESCRIPTION OF PROPOSED CHANGE
AND SAFETY AND ENVIRONMENTAL ANALYSIS
PROPOSED CHANGE NO. 86 TO THE TECHNICAL SPECIFICATIONS
PROVISIONAL OPERATING LICENSE DPR-13

This is a request to delete Technical Specification 3.1.2.a(1)A, "Plankton Studies" from the Appendix B Technical Specifications of Provisional Operating License DPR-13.

REASON FOR PROPOSED CHANGE

The purpose of the plankton studies program is to determine whether the operation of San Onofre Unit 1 has any significant effect upon the receiving water plankton resources. That purpose has been accomplished; results of fifteen (15) years of monitoring, including 5 years of ETS (1975-79), have indicated no significant effect. Accordingly, the technical specification requiring this study for Unit 1 should be deleted.

EXISTING SPECIFICATIONS

Environmental Technical Specification 3.1.2.a(1)A "Plankton Studies" currently reads as follows:

"Objective: To determine the effects of the Station on the marine resources in the vicinity of the Station.

Specifications: A. Plankton Studies

Zooplankton and phytoplankton will be sampled bimonthly and at least 5 times per year from at least 2 stations in Zone 0A, 2 stations in Zone 1A, 2 stations in Zone 2A, and 1 in Zone 6. Replicate zooplankton sampling will be conducted at all stations twice per year. Sampling will be conducted to obtain representative zooplankton taxonomic groups throughout the entire water column. The plankton composition and numbers of organisms per unit volume obtained at stations in Zones 0A, 1A and 2A will be compared to similar data collected at control stations in Zone 6. For phytoplankton at least 2 whole water samples near surface and near bottom in the water column will be taken at each station. A zooplankton net with a mesh size not greater than 363 nor less than 153 microns will be used to collect zooplankton samples. A detailed description of the plankton study program shall be submitted for Directorate of Licensing approval concurrent with the first Semi-annual Operating Report."

PROPOSED SPECIFICATION

Environmental Technical Specification 3.1.2.a(1)A would appear as DELETED.

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ENVIRONMENTAL AND SAFETY ANALYSIS

The purpose of the receiving water plankton studies program has been accomplished; that is to determine if the operation of SONGS Unit 1 has any significant effect upon the nearshore plankton resources. The results of fifteen (15) years of monitoring are summarized chronologically as follows:

1. Reports from studies conducted by Marine Advisors and Intersea Research Corporation from 1963 to 1972 (summarized in the Thermal Effect Study, EQA & MBC 1973), have consistently indicated no deleterious effects upon the plankton resources. There was no significant difference in absolute abundance or species composition of plankton between preoperational and operational periods attributable to generating station operation.
2. The plankton in the receiving waters of the San Onofre Nuclear Generating Station is typical of nearshore plankton of Southern California (LCMR, 1974).
3. Analysis of four years of bi-monthly ETS Data collection, beginning in 1975, have repeatedly concluded that the variability inherent within the plankton component of the ecosystem far exceeds any differences attributable to Unit 1 operations (LCMR 1975; LCMR 1976; LCMR 1977; LCMR, BC & MBC 1978).
4. Very localized (up to 500 m from the discharge) changes in the vertical distribution of some species has been observed and attributed to the entrainment and upward transport of near bottom water by the Unit 1 discharge plume (MRC, 1979). The total abundance in the area, however, was unchanged.
5. The four ETS/PMP Plankton Survey Technical Summary Reports of 1979 (Jan., Mar., May, & July) completed to date collectively state that onshore - offshore distributions of plankton are consistent with recognized patterns for nearshore marine ecosystems. No upcoast-downcoast pattern was evident, thus indicating that any effect of Unit 1 operations was negligible compared to natural variability within the area around SONGS.

The results of fifteen (15) years of monitoring have indicated no significant effect of SONGS 1 operation upon the plankton resources. Although very localized changes, which would be expected, have been observed, the overall distributions of plankton in the area were unchanged. The high natural variability of plankton populations far exceeds any effects attributable to station operation. The plankton in the receiving waters of SONGS

is typical of nearshore plankton of Southern California. Accordingly, the objective of the study has been fulfilled, and therefore, the program should be discontinued.

Deletion of the ETS study requirement will not result in any significant loss of environmental data. Receiving water plankton studies are continuing for the SONGS Units 2 & 3 Pre-operational Monitoring Program. The two-year baseline studies in progress for Units 2 & 3 will be completed in mid-1980. Future operational monitoring will be directed toward any potential effects of Units 1, 2 & 3 combined when Units 2 & 3 become operational.

This action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Final Environmental Statement.

COST-BENEFIT ANALYSIS

Deletion of the ETS study requirement will not result in any significant loss of environmental data. Future operational monitoring for Units 2 and 3 will examine potential effects of all units combined. Since the study objective has now been achieved, a savings of \$130,000 in 1980 or \$778,000 over a 5-year period (1980-1984) can be realized by terminating the Unit 1 receiving water plankton study.

LITERATURE CITED

- Environmental Quality Analysts, Inc. (EQA) and Marine Biological Consultants, Inc. (MBC) 1973. Thermal Effect Study, Final Summary Report, San Onofre Nuclear Generating Station Unit 1, Volume One. August, 1973. 55 p.
- Lockheed Center for Marine Research (LCMR) 1974. SONGS Semi-annual Marine Environmental Monitoring Report. January - June 1974. Prepared for Southern California Edison Company, Rosemead, CA. 211 p.
- Lockheed Center for Marine Research (LCMR) 1975. San Onofre Nuclear Generating Station Unit 1 Annual Analysis Report, Environmental Technical Specifications. January-December, 1975. 257 p.
- Lockheed Center for Marine Research (LCMR) 1976. San Onofre Nuclear Generating Station Unit 1, Environmental Technical Specifications Annual Operating Report. Volume IV, Biological Data Analysis - 1976. January-December, 1976. 128 p.
- Lockheed Center for Marine Research (LCMR) 1977. San Onofre Nuclear Generating Station Unit 1, Environmental Technical Specifications Annual Operating Report, Volume III, Biological Data Analysis - 1977. January-December 1977.
- Lockheed Center for Marine Research (LCMR), Brown and Caldwell (BC), and Marine Biological Consultants, Inc. (MBC) 1978. Annual Operating Report San Onofre Nuclear Generating Station Volume IV. Biological, Sedimentological, and Oceanographic Data Analyses 1978. Environmental Technical Specifications Unit 1, Construction Monitoring Program Units 2 and 3, Preoperational Monitoring Program Units 2 and 3. Prepared for Southern California Edison Company, Rosemead, CA.
- Lockheed Center for Marine Research (LCMR) (1979) San Onofre Nuclear Generating Station, Unit 1 ETS, Units 2 and 3 Preoperational, Plankton Survey Technical Summary Report. (Reports for Jan., March, May and July 1979).
- Marine Review Committee (MRC) 1979. Interim Report to the California Coastal Zone Commission. Part 1: General Summary of the Findings, Predictions and Recommendations Concerning the Cooling System of the San Onofre Nuclear Generating Station. 20 p.

Description of Proposed Change and Safety Analysis
Proposed Change No. 87 to the Technical Specifications
Provisional Operating License DPR-13

This request would revise Section 4.4.E. of the Appendix A Technical Specifications for San Onofre Unit 1.

Reason for Proposed Change

These changes are submitted in response to NRC Staff requests contained in Enclosure 1 to a November 15, 1979 letter from D. G. Eisenhut to J. H. Drake. These requests were based on the NRR Bulletins and Orders Task Force review of operating reactors in light of the accident at Three Mile Island, Unit 2.

Existing Specifications

The existing Specifications are constituted in Section 4.4 of Appendix A Technical Specifications for Provisional Operating License DPR-13.

Proposed Specifications

Technical Specification 4.4.E. would be revised to read as follows:

"E. Auxiliary Feedwater System

1. At least every fourteen (14) days when the reactor coolant system pressure is greater than 500 psig, the auxiliary feedwater pumps shall be started to demonstrate satisfactory operation.
2. At least once every thirty-one (31) days when the reactor coolant system pressure is greater than 500 psig, the electric driven auxiliary feedwater pump shall be started and the normal flow path motor operated discharge valve shall be opened using the automatic and the remote manual actuation circuitry. This testing may be done in conjunction with 4.4.E.1 above.
3. When the reactor coolant system pressure remains less than 500 psig for a period longer than fourteen (14) days, a flow test shall be performed to verify the normal flow path from the condensate storage tank to each steam generator using the motor driven auxiliary feedwater pump prior to increasing reactor coolant system pressure above 500 psig. The flow test shall be conducted with the auxiliary feedwater system valves in their normal alignment. As soon as steam becomes available, the steam driven auxiliary feedwater pump shall be started to demonstrate satisfactory operation.
4. At least once every thirty-one (31) days when the auxiliary feedwater system is required to be operable, an inspection shall be made to verify that manual valves in the auxiliary feedwater system suction piping and the normal path from the auxiliary feedwater pumps to the main feedwater header that could interrupt all AFW flow are locked open.

5. At least once every eighteen months, all normally closed manual valves in the alternate auxiliary feedwater system suction line and in the emergency flow path from the auxiliary feedwater pumps to the steam generator feedwater lines shall be demonstrated operable."

Safety Analysis

The proposed revisions to the Technical Specifications require additional surveillance verifications of AFW system valve positions and component operability. This surveillance activity is intended to decrease the probability that equipment failure or system misalignment will go undetected while the AFW system is required to be in standby status.

Accordingly, it is concluded that (1) the proposed change does not involve an unreviewed safety question as defined in 10CFR50.59, nor does it present significant hazards considerations not described or implicit in the Final Safety Analysis, and (2) there is a reasonable assurance that the health and safety of the public will not be endangered by the proposed change.

DESCRIPTION OF PROPOSED CHANGE AND SAFETY ANALYSIS
PROPOSED CHANGE NO. 88 TO THE TECHNICAL SPECIFICATIONS
PROVISIONAL OPERATING LICENSE DPR-13

This is a request to revise Appendix A Technical Specifications 3.5.2, CONTROL GROUP INSERTION LIMITS. This revision is to assure that the objective of the Technical Specifications is met with the loading of the reactor core for Cycle 8 operation and to remove cycle dependent limits in this specification.

Reasons for Proposed Change

Cycle 8 of San Onofre Unit 1 has been evaluated to demonstrate that the core reload will not adversely affect the safety of the plant. As a result of this evaluation it has been determined that the basis for Technical Specification 3.5.2 should be changed to reflect maximum fuel centerline temperatures calculated in "Reload Safety Evaluation, San Onofre Nuclear Generating Station, Unit 1," January, 1980. In addition, in order to avoid the need to revise this Technical Specification based on cycle dependent safety evaluation results, the analysis provided in the Westinghouse Topical Report, WCAP-7588, Revision 1-A, January, 1975, will be used as a basis for the revised Technical Specification inasmuch as these methods have been approved by the NRC.

Existing Specification

The Basis for Technical Specification 3.5.2 currently reads, in part:

"3. The maximum ejected rod worth is limited to 0.21% $\Delta\rho$ at HFP-BOL, 0.68% $\Delta\rho$ at HZP-BOL, 0.15% $\Delta\rho$ at HFP-EOL, and 0.58% $\Delta\rho$ at HZP-EOL. The resulting maximum fuel centerline temperatures are 4787°F, 2747°F, 4719°F and 1231°F, respectively. The rod insertion limits restrict ejected rod worths to less than the above values."

Proposed Specification

The Basis for Technical Specification 3.5.2 would be revised to read, in part:

- "3. The worst case ejected rod accident (8) covering HFP-BOL, HZP-BOL, HFP-EOL and HZP-EOL shall satisfy the following accident safety criteria:
- a) Average fuel pellet enthalpy at the hot spot below 225 cal/gm for nonirradiated fuel and 200 cal/gm for irradiated fuel.
 - b) Fuel melting is limited to less than the innermost 10% of the fuel pellet at the hot spot."

Added to the references for Section 3.5 will be the following:

- "(8) An Evaluation of the Rod Ejection Accident in Westinghouse Pressurized Water Reactors Using Spatial Kinetics Methods, WCAP-7588, Revision 1-A, January, 1975."

The balance of the basis for Technical Specification 3.5.2 would remain as constituted in Appendix A to Provisional Operating License No. DPR-13.

Safety Analysis

During the reload design and evaluation for each cycle, all appropriate safety parameters are evaluated. The proposed changes to the Technical Specification described herein are set in consideration of the safety evaluation for the Cycle 8 core loading. The evaluation for Cycle 8 is presented in the report, "Reload Safety Evaluation, San Onofre Nuclear Generating Station, Unit 1, Cycle 8," January, 1980.

The Basis for this Technical Specification is being modified to place a limit on the maximum enthalpy and melting for the fuel in accordance with the criteria included in the NRC approved Westinghouse Topical Report entitled, "An Evaluation of the Rod Ejection Accident in Westinghouse Pressurized Water Reactors Using Spatial Kinetics Methods," WCAP-7588, Revision 1-A, January, 1975. The use of this criteria provides sufficient margin to the significant safety parameters calculated in the Reload Safety Evaluation to preclude the need for cycle dependent limits for this Technical Specification. It should be noted that the analysis results produce absolute margins to physical performance limits which will vary from cycle to cycle; however, the safety margins used for licensing purposes should not be affected.

Based upon the analysis provided in the two reports discussed above, it is concluded that (1) the proposed change does not involve an unreviewed safety question as defined in 10CFR50.59, nor does it present significant hazards considerations not described or implicit in the Final Safety Analysis, and (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change.