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 AUTH. NAME: AUTHOR AFFILIATION
 DRAKE, J.H. ~~SACRAMENTO MUNICIPAL UTILITY DISTRICT~~ SCEC
 RECIP. NAME: RECIPIENT AFFILIATION
 REGAN, W.H. ENVIRONMENTAL PROJECT BRANCH 2

SUBJECT: IN RESPONSE TO 790301 REQUEST, FORWARDS COMMENTS FROM VARIOUS
 GOVT AGENCIES RE DRAFT EIS REVIEW. ALSO FORWARDS RESPONSES TO
 COMMENTS OF INTERVENORS.

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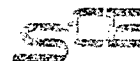
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Southern California Edison Company



P. O. BOX 800

2244 WALNUT GROVE AVENUE

ROSEMEAD, CALIFORNIA 91770

J. H. DRAKE
VICE PRESIDENT

March 12, 1979

TELEPHONE
213-572-2258

Director, Office of Nuclear Reactor Regulation
Attention: William H. Regan, Jr., Chief
Environmental Projects Branch 2
Division of Site Safety and Environmental Analysis
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Subject: San Onofre Nuclear Generating Station
Units 2 and 3
Docket Nos. 50-361 and 50-362

The Southern California Edison Company, in behalf of the Applicants and in accordance with your request of March 1, 1979, has reviewed the comments from other agencies regarding the Draft Environmental Statement (DES) related to the operation of San Onofre Nuclear Generating Station, Units 2 and 3. Enclosed are the responses generated from this review. Also enclosed are responses to the comments of the Intervenorors that were received from their attorney.

Should you have any questions or require clarification regarding these responses, please contact me.

Very truly yours,

Enclosure

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RESPONSE TO COMMENTS
ON THE
DRAFT ENVIRONMENTAL STATEMENT
RELATED TO THE OPERATION OF
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3
DOCKET NOS. 50-361 AND 50-362

PREPARED BY THE

SOUTHERN CALIFORNIA EDISON COMPANY
SAN DIEGO GAS & ELECTRIC COMPANY

MAR 12 1979

INTRODUCTION

The Draft Environmental Statement (DES) in this proceeding was issued and circulated for comment. Comments were submitted to the NRC by various governmental entities as well as certain Intervenorors in the licensing proceeding.

Southern California Edison Company and San Diego Gas & Electric Company ("applicants"), pursuant to letter of March 1, 1979, from Wm. H. Regan to Applicants, hereby submit their response to said comments.

TABLE OF CONTENTS

Response	Agency	Page
DOA-1	Soil Conservation Service	1
DOA-2		1
DOI-1	Department of the Interior	3
DOI-2		3
CAR-1	Anaheim and Riverside	4
NMFS-1	National Marine Fisheries Service	5
NMFS-2		5
NMFS-3		6
PHS-1	Public Health Service	7
PHS-2		7
PHS-3		7
EPA-1	Environmental Protection Agency	8
EPA-1A		8
EPA-1B		9
EPA-1C		9
EPA-1D		9
EPA-2		12
EPA-3		14
EPA-4		16
EPA-5		17
EPA-6		17
EPA-7		18
EPA-8		18
EPA-9		18
EPA-10		19
EPA-11		19
EPA-12		19
IC-1	Intervenors	20
IC-2		21
IC-3A		22
IC-4		22
IC-5		23
IC-6		23
IC-7		24
IC-8		24
IC-9		24
IC-10		25

RESPONSES TO THE DEPARTMENT OF AGRICULTURE,
SOIL CONSERVATION SERVICE COMMENTS ON THE DES

DOA-1 EROSION HAZARD

The Soil Conservation Service, Department of Agriculture suggests that an erosion control plan be developed to adequately address the erosion hazard both during the following construction.

The Applicants have developed an erosion control program to monitor areas of cut and fill associated with construction of the plant and transmission lines to detect significant erosion. Erosion damage will be controlled by implementing appropriate corrective action when any significant instances of erosion is observed. The program for the plant site was initiated at the start of construction and will continue until full operation of Units 2 and 3. The program for the transmission lines will continue until the vegetation in the areas around the transmission towers return to an equilibrium condition. The erosions control program was established to assure that construction activities conform to the environmental conditions set forth in the NRC Construction Permit.

The Applicants have also initiated a program to prevent erosion and to stabilize the bluff-canyon area as part of conditions set forth in the California Coastal Commission's Construction Permit.

DOA-2 PRIME LAND

The Soil Conservation Service states that mitigation or projected impacts from the loss of prime land were not adequately discussed in the DES.

The location of the transmission line was selected to minimize impacts on the overall environment. Paralleling the existing line with a new line generally reduces impacts from access roads, since the existing road will serve both lines in many places.

Agricultural uses total approximately one mile of the 15.1 mile line. In San Onofre and San Mateo Creek, the line will cross agriculture, whereas in San Juan Creek there is no agriculture in the Right of Way. Prime agricultural soils probably are found in these alluvial valleys.

In paragraph 5.4.1 of the DES, it states that 12.6 acres will be lost to access roads and tower bases. None of the new access roads are in agricultural areas. Where the line is in agricultural fields, the continued use of the area for agriculture typically is permitted. Applicants consider DES discussion of this issue to be adequate.

RESPONSES TO DEPARTMENT OF THE INTERIOR COMMENTS ON THE DES

DOI-1 RECREATION RESOURCES

The DOI states that, " it is unclear to DOI how such a significant impact, the loss of recreational and scenic open space could have been overlooked during the earlier planning stages" and that "the intended plan to construct an eight-foot chain-link fence extending over three-fourths of a mile along the beach quite objectionable."

The issues of alleged loss of recreational and scenic open space and the controls to be exercised over the exclusion area are discussed in Comment 5-36, Applicants' Comments on the DES dated February 2, 1979, and response to the comment of Intervenor IC-3A infra. The issues of anticipated beach usage, walkway and were considered in detail and at length during public hearing conducted by the ASLB as part of the Construction Permit proceedings. The ASLB approved the proposed controls over the Exclusion Area and considered the impact of these controls to be acceptable.

DOI-2 CULTURAL RESOURCES

The DOI states, "that the applicant allow enough flexibility in its planning to actually take the results of these surveys into account in its final placement of tower bases, access roads, and proposed substations."

The construction program involves transmission lines and the reconductoring of existing corridors that were originally established in the early 1960's, as well as, access roads existing as of that date. The original transmission lines from the San Onofre site were completed in 1965.

RESPONSE TO CITIES OF ANAHEIM AND
RIVERSIDE/COMMENT ON THE DES

CAR-1 NEED FOR STATION

Applicants agree that the Cities of Anaheim and Riverside may become part owners of San Onofre Nuclear Generating Station Units 2 and 3 and that it may be appropriate to reflect such a possibility in the FES. Applicants do not believe such a transfer of ownership to have any effect on either the "Need for the Station" or any other portion of the DES. Each of the Cities presently purchase all of its capacity requirements and most of its energy requirements from SCE. In preparing its submittals in support of this application, SCE has included the requirements of both Cities as part of its showings with respect to the need for the station.

RESPONSES TO DEPARTMENT OF COMMERCE, NATIONAL MARINE
FISHERIES SERVICE COMMENTS ON THE DES

NMFS-1 IMPACTS ON THE AQUATIC ENVIRONMENTS

The National Marine Fisheries Service, Department of Commerce states, "Data developed by Jay Quast of the then U.S. Bureau of Commercial Fisheries, and included in that publication, indicate that in his studies he found more than twenty commercially important fish species occurring in the kelp beds off southern California. According to those studies the relationship of many of those species to the kelp habitat was more extensive than indicated by the final sentence of the subject paragraph. This should be reflected in the text of the final EIS."

In the Concluding Discussion, (page 256, paragraph 2) J. Quast (1968), it was stated, "The plant (Macrocystis) does not appear to be an indispensable habitat requirement for any of the fish species studied. In fact, opaleye schools prefer moderate stands to dense groves. Blacksmith seem to avoid dense kelp, while the population densities of kelp bass are about the same in sparse and dense stands. Diversity of fish species is not altered significantly by presence or absence of kelp. A highly varied bottom topography appears to be important for extensive fishlife and to be of greater significance in this respect than kelp." One adult species, the kelp clingfish is considered to be obligate to kelp plants. All other fish species will persist in the environment with or without kelp plants present (Feder, et al. 1974).

Kelp beds are not directly important to recreationally or commercially important fishes, thus the DES need not be changed.

NMFS-2 AQUATIC BIOLOGICAL MONITORING

The National Marine Fisheries Service states, "The concept of continuing a kelp study program into the operational stage of SONGS is a good one."

In the Applicants' comments on the DES, dated February 2, 1979, Comment 6-3 states kelp monitoring discussed in the DES (page 6-3, section 6.2.1.6, number 2) for the preoperational period is unwarranted because assessment of effects on kelp using actual field temperatures will predict no significant adverse effects and appropriate kelp monitoring studies are already being conducted. Kelp studies conducted during the operational

stage of Units 2 and 3 should consider the probability of adverse effects occurring and the results of preoperational studies. Both of these will be considered by the applicants in the development of proposed Unit 2 and 3 Environmental Technical Specification studies on kelp which will be submitted to the NRC in the near future.

NMFS-3 SUMMARY OF BENEFIT-COST

The National Marine Fisheries Service states that, "The potential additional cost of compensating for loss of biological resources due to the operation of SONGS 2&3 should be addressed."

Any costs of compensation or mitigation of biological resources lost due to the operation of SONGS 2&3 are believed to be minimal and have no impact on the Benefit-Cost Summary in the DES.

RESPONSES TO PUBLIC HEALTH SERVICE COMMENTS ON THE DES

PHS-1 Radiological Impacts

The PHS indicates that 40 CFR 190 became effective in January 1979 and, therefore, the FES should indicate that San Onofre Units 2&3 will meet this regulation.

40 CFR 190 will become effective on December 1, 1979, the Applicants will address this regulation at such time that it becomes effective and the NRC has developed guidance for compliance with this regulation.

The third paragraph indicates that the FES should address alternatives for disposal of TRU and HLW since burial at a Federal Repository is not presently available.

The environmental consequences of short term waste storage at a temporary site or a Federal Repository are both insignificant and the DES has adequately addressed the environmental consequences of TRU and HLW storage.

PHS-2 Radiological Monitoring Program

No comment.

PHS-3 Environmental Impact of Postulated Accidents

The PHS requested a discussion of arrangements among the state and local authorities relative to emergency planning.

Arrangements among the state and local authorities to cope with accidents involving radioactivity will be appropriately discussed by the NRC in its Safety Evaluation Report (SER) rather than the DES.

RESPONSES TO EPA COMMENTS ON THE DES

EPA-1 WATER QUALITY COMMENTS

The EPA states, "When evaluating thermal discharges, all effects of Units 2 and 3 should be considered in conjunction with the effects of Unit 1."

San Onofre Unit 1 is classified as an existing discharge for purposes of application of the State Thermal Standards, and as such, is essentially exempted from the standards that will govern Units 2 and 3, which are classified as new discharges. Unit 1 is not required to meet either the 20°F delta T standard nor the 4°F isotherm standards which are applicable to Units 2 and 3. In any event, Unit 1 will not cause Units 2 and 3 to violate the State Thermal Standards. This was demonstrated in one phase of the Applicants' modeling study (R. C. Y. Koh, "Hydraulic Test of Thermal Dispersion for Unit 1 of the San Onofre Nuclear Power Plant" W. M. Keck Laboratory of Hydraulics and Water Resources, Progress Report No. 6 to Southern California Edison Company Tech. Memo 73-7, July 31, 1973.), which is summarized on pages A-24 to A-34 in Keck Lab Report KH-R-30, January 1974 and on pages 87 and 88 of Keck Lab Report KH-R-31, November, 1974.

The conclusion of these studies is that the effect of recirculation of a portion of Unit 1 discharge through Unit 3 is 0.1°F and the effect of entrainment of Unit 1 discharge by Unit 3 discharge is 0.5°F.

EPA-1A WATER QUALITY COMMENTS

The EPA states, "Since the waters in the vicinity of the intakes for Units 2 and 3 are close to the discharge structures for these units, it is possible that these intakes waters are already heated beyond their natural temperature. Some evaluation of this effect must be included in the FEIS."

The evaluation the EPA calls for, of this possible concern, appears in the Applicants' modeling work, where it is concluded that recirculation of Unit 2 and 3 discharge will not occur and recirculation of Unit 1 discharge into the Unit 2 and 3 intakes would result in an increase in temperature less than 0.1°F (Keck Lab Report KH-R-30, January, 1974, Table A-7, pg A-35 and also KH-R-31, November, 1974, Section 4.4, pg. 55).

The EPA also states, "In addition, the intake and discharge facilities and their depths and how temperature stratification profiles relate to the 20°F requirement should be discussed."

The intake and discharge facilities are described in the SONGS Unit 2 and 3 Environmental Report-OLS Section 3.4 and temperature stratification is discussed in the FES, Construction Phase, March 1973, page 3-18 and fig. 3.19. Since that time, this specific question has come before the State Water Resources Control Board (SWRCB), the agency having jurisdiction over this issue. After thorough review, the SWRCB did not determine that a violation existed. As a result, the NPDES permit adopted by the San Diego Regional Water Quality Control Board on June 14, 1976, stands as a legally effective and binding NPDES permit.

EPA-1B WATER QUALITY COMMENTS

The EPA states, "Figure 5.3 of the DEIS represents projected incremental increases above natural surface temperatures for the study area. This figure should be changed in the FEIS to include the Unit 1 intake and discharge structures and the increase of surface temperatures already caused by Unit 1 discharges in conjunction with those of Units 2 and 3 as to compare the increases with the true natural surface water temperature."

Figure 4.2, on page 50, of Applicants submittal (Keck Lab Report KH-R-31, November, 1974) shows the maximum observed limit of the 4°F isotherm from Unit 1. Superimposed on this figure are the locations of Units 2 and 3 diffusers.

In addition, it is noted that the NRC staff's modeling study did, at all times, consider the operation of Unit 1 along with Units 2 and 3. Figures 5.7 through 5.22 show ambient flow and excess temperature plots resulting from the operation of all three units. It is unnecessary and inappropriate to change Figure 5.3 to include Unit 1 effects.

EPA-1C Water Quality Comments

Refer to comments 5-7 and 5-8 of Applicants' Comments on the DES dated February 2, 1979.

EPA-1D Water Quality Comments

There are three aspects of this EPA comment the applicants wish to address. First, the EPA appears to be questioning whether the DES has determined that San Onofre Units 2 and

3 comply with the State Thermal Plan and Section 316(a) of the FWPCA. The DES addresses these regulations on Page 5-24, paragraphs 7 and 8 regarding State and EPA regulations. San Onofre Units 2 and 3 have a valid NPDES permit (Order No. 7621, NPDES No. CA 0003395) issued by the California Regional Water Quality Control Board, San Diego Region. It is the function of this permit to set effluent limitations which will assure that the State (Thermal Plan) and Federal (FWPCA, 316(a), etc.) regulations will be met. The State, which is acting under the auspices of the EPA, has by issuing the permit, made the determination of compliance with these regulations.

The NPDES permit specifically addresses Section 316(a) as follows:

Under the Environmental Protection Agency's effluent guidelines and standards, the San Onofre Nuclear Generating Station, Units 2 and 3 power plants, are classified as generating units and are subject to a "no discharge of heat" limitation.

The Environmental Protection Agency has approved a waiver of the "no discharge of heat" limitation for Units 2 and 3, pursuant to Section 423.13(L)4 of the Environmental Protection Agency's effluent guidelines and standards which provides for such a waiver when insufficient land is available to construct a recirculating cooling system. Because of the waiver of the "no discharge of heat" limitation, the thermal components of the discharges from Units 2 and 3 are subject only to regulation by the Thermal Plan.

Prior to the revision of the Thermal Plan, on July 31, 1972 the discharger requested and the Regional Board granted an exception to the specific water quality objectives of the Thermal Plan for the purpose of heat treatment to control marine organisms in the cooling water system and fish handling system conduit. The State Water Resources Control Board conditionally approved the exception to the Thermal Plan, contingent upon the discharger completing studies which would permit the Regional Board to set precise limits on the frequency, degree and duration of heat treatment.

The revised version of the Thermal Plan requires that exceptions be granted only in accordance with Section 316(a) of the Federal Water Pollution Control Act of 1972 and subsequent federal regulations. Therefore, final resolution of the exception request for Units 2 and 3 must be made pursuant to Section 316(a), which requires the discharger to demonstrate that the proposal would assure the protection of the aquatic communities of the receiving waters.

On November 28, 1975, the discharger formally requested to utilize the studies, identified in Finding No. 15 above, which are being conducted in accordance with the State Water Resources Board Order No. 73-5, as a basis for a 316(a) demonstration. The discharger proposed to submit the final report on the 316(a) demonstration. The discharger proposed to submit the final report on the 316(a) study on December 29, 1978, at least on year prior to the anticipated commercial operation of Units 2 and 3. On July 28, 1975, representatives of the Environmental Protection Agency informed the State Water Resources Control Board that the scope of the studies was consistent with the requirements of Section 316(a). On December 22, 1975, staff of the Regional Board informed the discharger that the studies were acceptable as a 316(a) demonstration.

These studies have been completed and submitted to the State and EPA. The Applicants have also submitted these studies to the NRC by letter from K. P. Baskin to V. A. Moore dated February 26, 1979.

It is our understanding that the results of these studies will be considered in the FES. It is the applicants opinion that the DES and FES has and will properly considered compliance with the State Thermal Plan and FWPCA including Section 316(a).

Secondly, the EPA appears to be suggesting that the NRC must specifically use the 316(a) criteria of "protection of balanced indigenous populations" as its basis for evaluating effects on the aquatic environmental in the DES and FES. The applicants do not agree that the NRC is obligated to use these specific 316(a) criteria in its own evaluation of effects.

Finally, the EPA states, "All of these statements indicate that the indigenous populations will be altered, giving no specific documentation that these effects will be minimal or acceptable. A detailed evaluation of how the aquatic ecosystem will be affected, over what area each species or type of fauna may be influenced, and what constitutes a significant adverse effect should be made and presented clearly in the FEIS."

It is the applicants opinion that a detailed evaluation of effects on the aquatic ecosystem has already been made by the NRC and is combined in the FES-CP (Section 5.3 Biological Effects) and the DES (Section 5.4.2 Impacts on the Aquatic Environment). The evaluation contained in the DES and FES-CP is based on a large body of information, much of which is site specific (i.e. ER-OLS, San Onofre Unit 1 Environmental

Technical Specification Studies) with the remainder being relevant generic literature or the results of other power plant effect studies. The DES and FES-CP include 136 reference to literature regarding effects on the aquatic ecosystem.

EPA-2 Water Quality Comments

EPA has suggested that documents originally submitted to the California State Water Quality Control Board as part of a 316(a) demonstration under the Federal Water Pollution Control Act of 1972 and which were also submitted to the NRC staff for its consideration in its NEPA review for SONGS 2 & 3 must be circulated, with an assessment to all recipients of the DES. EPA also contends that a review and comment period must be allowed with respect to such documents prior to incorporation in the FES. Applicants believe such a procedure is unnecessary.

10 CFR 51.20(a) requires that Applicants' Environmental Report include a "description of the proposed action, a statement of its purposes, and a description of the environment affected..." This section also requires discussion of the following considerations: "(1) The probable impact of the proposed action on the environment; (2) Any probable adverse environmental effects which cannot be avoided should the proposal be implemented; (3) Alternatives to the proposed action; (4) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and (5) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented"

10 CFR 51.21 requires discussion at the operating license stage of the same matters described in Section 51.20 "but only to the extent that they differ from those discussed or reflect new information in addition to that discussed in the final environmental impact statement prepared by the Commission in connection with the construction permit."

It can be seen from the foregoing discussion that nothing in the language of the pertinent NRC regulations requires incorporation of a 316(a) demonstration (Study) in the DES or a supplement thereto and distribution of the Study to recipients of the DES.

The Council on Environmental Quality, ("CEQ") regulations are in fact, "guidelines to Federal departments, agencies, and establishments for preparing detailed environmental statements on ... major Federal actions significantly affecting the quality of the human environment as required by Section 102 (2) (c) of NEPA." (40 C.F.R. § 1500.1(a).) For purposes of this memorandum, it is assumed that Staff pursuant to Section 51.23 (d) of the NRC Regulations will be "guided" by the CEQ Regulations.

Section 1500.8 of the CEQ Regulations contains the provisions governing "Content of Environmental Statements." Thus, one would expect these provisions require consideration and discussion of the issues specified in Section 51.20(a) of the NRC Regulations, described above.

However, Section 1500.8(b) of the CEQ Regulations gives significant guidance as to the form in which the issues discussed should be conveyed to the public (emphasis added):

"(b) In developing the above points, agencies should make every effort to convey the required information succinctly in a form easily understood, both by members of the public and by public decisionmakers, giving attention to the substance of the information conveyed rather than to the particular form, or length, or detail of the statement. Each of the above points, for example, need not always occupy a distinct section of the statement if it is otherwise adequately covered in discussing the impact of the proposed action and its alternatives--which items should normally be the focus of the statement. Draft statements should indicate at appropriate points in the text any underlying studies, reports, and other information obtained and considered by the agency in preparing the statement including any cost-benefit analysis prepared by the agency, and reports of consulting agencies under the Fish and Wildlife Coordination Act, 16 U.S.C. 661 et seq., where such consultation has taken place. In the case of documents not likely to be easily accessible (such as internal studies or reports), the agency should indicate how such information may be obtained. If such information is attached to the statement, care should be taken to ensure that the statement remains an essentially self-contained instrument, capable of being understood by the reader without the need for undue cross reference."

The foregoing provision suggests that the DES is not to be encumbered with lengthy reports attached to the DES just because the report is referenced, or even relied on by the agency preparing the DES. At most, the agency need only reference where the report may be available for public scrutiny.

The Staff may ignore the Study to the extent that Study contains environmental information which is merely cumulative. However, the proper procedure for Staff consideration of the impact of the Study is the FES, not as a supplement to the DES. Section 1500.10 of the CEQ Regulations, in pertinent part, provides (emphasis added):

"(a) Agencies should make every effort to discover and discuss all major points of view on the environmental effects of the proposed action and its alternatives in the draft statement itself. However, where opposing professional views and responsible opinion have been overlooked in the draft statement and are brought to the agency's attention through the commenting process, the agency should review the environmental effects of the action in light of those views and should make a meaningful reference in the final statement to the existence of any responsible opposing view not adequately discussed in the draft statement, indicating the agency's response to the issues raised. All substantive comments received on the draft (or summaries thereof where response has been exceptionally voluminous) should be attached to the final statement, whether or not each such comment is thought to merit individual discussion by the agency in the text of the statement."

Nothing in the CEQ Regulations or the NRC Regulations (which are clearly based on the CEQ Regulations) requires incorporation and distribution of the Study as part of the DES, or the FES.

EPA-3 Water Quality Comments

The EPA states, "The FEIS should include a comparison of effluent concentrations with the State Standards contained in the Water Quality Control Plan for the Ocean Waters of

California (1978 Ocean Plan), Table B and Footnote 11, should appear in the FEIS."

Section 5.4.2.2 of the DES gives an "applicant estimate" of chlorine concentration no greater than 1.5 ppm as total residual before discharge to the ocean. This was given as an illustrative point in the Applicants' Environmental Report - Operating License Stage (ER-OLS) assuming no chlorine demand in the condenser, discharge pipe or associated structures. It was not posed as a real possibility. As indicated in the ER-OLS, p. 3.6-3, the hypochlorite pumps are set so the maximum concentration of free residual chlorine during any chlorination is less than 0.5 mg/liter. This maximum concentration of 0.5 mg/liter is measured at the condenser outlet. Chlorine demand in the discharge pipe will result in a lower concentration at the end of the pipe.

Although chlorine concentration measurements at the end of the pipe have not been made, measurements in the SONGS Unit 1 discharge bubble have been made coincident with inplant measurements at the outlet of the condenser. Table 5.3-1 in the ER-OLS lists the maximum values monitored in 1975. Values listed under "Receiving Waters" are values measured in the bubble. Furthermore, as indicated in the ER-OLS p. 5.3-3, chlorine monitoring by Scripps Institution of Oceanography has measured surface chlorine concentration maximums of .005 ppm at a distance of 50 to 100 ft. from the discharge bubble while inplant, coincident, maximum values of 0.3 ppm were measured. Taking this information into consideration, it is estimated that the maximum concentration of 0.5 ppm at the discharge of the condenser will be reduced to 0.1 ppm at the end of the discharge pipe by chlorine demand. This effluent concentration of 0.1 ppm can be compared to the 1978 Ocean Plan requirements.

The receiving water limiting concentration for chlorine at the completion of initial dilution, as given in Table B and Footnote 11 of the 1978 Ocean Plan is:

$$\log y = -0.328 \log X - 0.905$$

where: y = the water quality objective to apply when chlorine is being discharged;
X = the duration of uninterrupted chlorine discharge in minutes

since $X = 15$ minutes
 $\log y = -0.328 \log 15 - 0.905$
 $\log y = -1.29$
 $y = .05$

The effluent limitation for chlorine, as determined by footnote 10 of the 1978 Ocean Plan is

$$C_e = C_o + D_m (C_o - C_s)$$

Where: C_e = the effluent concentration limit
 C_o = the concentration to be met at the completion of initial dilution (same as y above)

C_s = background seawater concentration,
 D_m = minimum probable initial dilution expressed as parts seawater per parts wastewater

given that:

$$C_o = y = .05$$

$$C_s = 0$$

$$D_m = 8 \text{ (the dilution is 8 to 1, conservatively estimated by both the applicants' hydraulic modeling and the NRC's mathematical model)}$$

then:

$$C_e = .05 + 8 (.05 - 0)$$

$$C_e = .45 \text{ ppm}$$

The above effluent concentration limit of 0.45 ppm can be compared to the estimated 0.1 ppm end of pipe concentration given above. Further, it should be noted that the above Ocean Plan formulation takes into consideration a reduction in concentration only by dilution of the discharge into the receiving waters. The concentration of chlorine would be further reduced by the chlorine demand between the point of discharge and the point of initial dilution.

EPA-4 Water Quality Comments

The EPA indicates that there is no assessment of potential seismic effects of nearby faults.

Regulatory Guide 4.2 (Revision 2) "Preparation of Environmental Reports for Nuclear Power Stations" does not require applicants to address seismic design in their Environmental Reports. Therefore, the DES does not contain a discussion of the Applicants' seismic design basis. The seismic design basis for San Onofre Units 2 and 3 is discussed in detail in Section 2.5 of the FSAR, as required by the NRC's Standard Format and Standard Review Plan and will be addressed by the NRC's Safety Evaluation Report (SER).

EPA-5 Radiological Comments - Beach Regulation

The EPA alleges that the DES provides little detail on anticipated beach population.

The response to the issue of anticipated beach usage in front of the station within the exclusion area is documented in the response to Intervenor's Comment IC-3A, which is also enclosed in this submittal.

The EPA requests that a reference be made to the Applicant's Emergency Plan (EP) relative to the transient population.

The Applicants' EP considers and provides for the protection of the transient population in the event of an emergency and this issue will be appropriately addressed by the NRC staff in its SER.

EPA-6 Radiological Comments - Environmental Dose Commitments

Item 2 of the EPA comment on Environmental Dose Commitments requests that "The actual maximum individual dose from present operation of Unit 1 should be described. This dose should be added to those being projected for Units 2 and 3 (from all pathways). This, in turn, should be compared with the 25 millirem per year limit (75 millirem per year to the thyroid) of the Uranium Fuel Cycle Standard (40 CFR 190)."

The above EPA request is not consistent with 10 CFR 50 Appendix I which indicates that dose analysis should be done on a per unit basis rather than on a per site basis. It should also be noted that 40 CFR 190 will not be effective until December 1, 1979. The Applicants will address this regulation at such time that the regulation is effective and the NRC has developed criteria for compliance with this regulation.

EPA-7 Radiological Comments - Environmental Monitoring

Item 1 of the EPA comment on Environmental Monitoring indicates that the analysis frequency for iodine is not sufficient to allow detection of the incidences of sporadic contamination.

The analysis procedure is designed to determine the average iodine levels over the sampling period and is sufficient to indicate any significant buildup of iodine over the sampling period.

Item 2 indicates that it is not clear why a minimum of only ten 7-day air particulate samples are required per quarter.

The San Onofre Units 2 and 3 Preoperational Radiological Monitoring Program as approved by the NRC states that continuous 7-day samples totaling at least 70 days per calendar quarter are required. This allows for possible instrument failures or maintenance during the calendar quarter.

Item 3 indicates that it would be desirable to include TLD's at locations for the walkway along the seawall.

The Preoperational Radiological Monitoring Program as approved by the NRC has a TLD station on the southwest corner of the site which is at one end of the walkway. No TLD stations exist along the walkway since the concrete seawall provides sufficient protection from any radiation source making this dose pathway insignificant.

Comments EPA-8 through EPA-12

The following EPA comments are generic questions relating to nuclear reactor facilities and are not specifically addressed to SONGS 2&3. Applicants do not consider it appropriate to comment on such generic concerns in the context of a DES directed to a specific operating license proceeding.

EPA-8 Radiological Comments - Reactor Accident

No comment.

EPA-9 Radiological Comments - High-level Waste Management

No comment.

EPA-10 Radiological Comments - Transportation

No comment.

EPA-11 Radiological Comments - Fuel Cycle and Long-term Dose Assessments

No comment.

EPA-12 Radiological Comments - Decommissioning

No comment.

RESPONSES TO THE INTERVENORS COMMENTS ON THE DES

IC-1 Thermal Discharge

The Intervenor state, "The evaluation of cooling water discharge impacts is inaccurate and misleading." This statement is completely unsupported as no specific evidence is presented of inaccuracies nor "misleading" statements.

Several statements are made regarding the State Thermal Standards including:

"... violations of the state standards will occur."

"... however, in light of recent findings as a result of studies presently being performed by the Marine Review Committee (MRC) at the request of the California Coastal Commission, it has been determined that the State Thermal Standards will not be met."

"The net result of this ruling is that the state thermal discharge limitation will be exceeded by operation of SONGS Units 2&3."

These statements and the references to the State Water Resources Control Board (SWRCB) refer to the State Thermal Standards discharge limitation of a maximum of 20°F temperature increase above the receiving waters.

No evidence is presented which in anyway disputes the DES regarding the accuracy of its descriptions of natural temperatures or predicted temperature increases related to operation of San Onofre Units 1, 2 and 3. The intervenors suggestions that violations of the State Thermal Standards will occur are based solely on their interpretation of that standard as they would apply it to San Onofre Units 2 and 3.

This precise issue was thoroughly ventilated before the SWRCB, the agency having jurisdiction over this issue. After thorough review, the SWRCB did not determine that a violation existed. As a result, the NPDES permit adopted by the San Diego Regional Water Quality Control Board on June 14, 1976 stands as a legally effective and binding NPDES permit.

The Intervenor also state, "On page 5-7 of the DES it is stated: "The staff concludes that although there exists a remote possibility that State Thermal Standards be violated

by the operation of Units 2&3, violations would, at worst, be infrequent and for short periods. There is no evidence in available draft data to indicate that such an occurrence would take place during the summer when thermal impacts would be most severe." This conclusion was apparently based on applicants' "worst case" modeling theory."

This section of DES refers to the 4°F at 1000 feet limitation of the State Thermal Standards and is not based on the applicants' modeling studies, but rather on the NRC Staff's mathematical model. As indicated in the Applicants' comments to the DES dated February 2, 1979 (comment 5-10) there is no technical justification for the staff's conclusion that even a remote possibility exists of a violation of the State Thermal Standards. The intervenors appear to have mistakenly related these DES comments on the 4°F isotherm to the 20°F maximum delta T standard.

The Intervenors state, "It is clear that since the state thermal discharge limitations will be exceeded during normal operation of SONGS 2&3, the staff's conclusion (regarding kelp) was based on a faulty premise."

First, there is no evidence presented, as discussed above, that state thermal discharge limits will be exceeded. Secondly, the staff's conclusions regarding long-term thermal impacts are not based on whether the State Thermal Standards would or would not be met. The intervenors present no substantiation for their comment nor any evidence to refute the staff's conclusion.

"Discharges normal plant operation will result in continuous high temperature discharge approximately the worst case conditions and resulting in both short and long term thermal impacts on the San Onofre kelp beds."

No evidence is presented to support these statements.

IC-2 316(a) Demonstration

Applicants have alleged that the DES is inadequate with respect to its Section 316(a) demonstration discussion because it "...discusses the thermal exception studies as related only to periodic heat treatment to control fouling organisms. The DES fails to consider the 316(a) exception required for continuous high ambient temperature discharges during the normal operation of Units 2 and 3." (Intervenors comment, p. 4).

The intervenors also inappropriately state that "in view of recent earthquake fault discoveries near the San Onofre site and the existence of dewatering well cavities found beneath the site a full discussion of failures more severe than those required for consideration in the design bases of protective systems and engineered safety features. (Class 9) is warranted."

Regulatory Guide 4.2 (Revision 2) "Preparation of Environmental Reports for Nuclear Power Stations" does not require that seismic design basis be discussed in the Environmental Reports submitted by applicants. Therefore, the NRC's DES does not contain a discussion of the applicant's seismic design basis. The seismic design basis for San Onofre Units 2&3 is discussed in detail in Section 2.5 of the FSAR, as required by the NRC's Standard Format and Standard Review Plan and the issues of both seismic activity and dewatering wells will be addressed by the NRC's Safety Evaluation Report (SER).

IC-5 Postulated Accidents

The intervenors incorrectly allege that the DES is inadequate in that it fails to discuss environmental impacts to the region in the event of an accidental release of radiation requiring evacuation.

Table 7.2 (which appears on page 7-3) of the DES summarizes the radiological environmental impact of postulated accidents, including the estimated whole body dose resulting from such accidents calculated at the site boundary. The DES has adequately addressed accidents involving releases in accordance with Regulatory Guide 4.2 (Revision 2) "Preparation of Environmental Reports for Nuclear Power Stations."

The adequacy of plans to cope with accidents more severe than those postulated for environmental assessment purposes will be addressed in the Staff's SER.

IC-6 Seismic Design Basis

The intervenors indicate that the DES fails to reassess the seismic design basis for SONGS 2&3 in light of (a) the dewatering well cavities and (b) the recent earthquakes and faults discovered since the current design basis was established.

Regulatory Guide 4.2 (Revision 2), "Preparation of Environmental Reports for Nuclear Power Stations" does not require applicants to discuss the seismic design basis in the Environmental Report. Therefore, the NRC's DES does not contain a discussion of the applicant's seismic design basis. The seismic design basis for San Onofre Units 2 and 3 is discussed in detail in Section 2.5 of the FSAR, as required by the NRC's Standard Format and Standard Review Plan and the issues of both seismic activity and dewatering wells will be addressed by the NRC's SER.

IC-7 Fuel Costs

The suggestion that the cost benefit analysis contained in the DES is inadequate because it does not "provide consideration for the greatest possible escalation of uranium prices based on recent occurrences" fails to recognize that estimates of long-range inflation rates should not be made on the basis of isolated occurrences but rather on the longer term data and on the economics related to production, supply, and demand. The DES utilizes a reasonable long-term inflation rate and gives recognition to the fact that the inflation rate for the oil fuel alternative will be at least as great as that for nuclear fuel. Thus, the Intervenor's arguments are invalid and no change is warranted in the cost benefit analysis contained in the DES.

IC-8 Decommissioning

The intervenors incorrectly allege that Section 9.4 of the DES is inadequate in that it fails to discuss decommissioning cost escalation.

The discussion in Section 9.4 of the DES is intended to put decommissioning cost into perspective in comparison with electrical generating costs. Section 10.3 of the DES adequately addresses decommissioning costs including escalation for purposes to comply with NEPA.

IC-9 Temporary Storage of Nuclear Waste Material

The intervenors incorrectly allege that the DES fails to discuss the temporary storage of nuclear waste materials, including the interim storage of spent fuel, on site.

Section 3.2.3 of the DES provides a detailed discussion of the waste handling and treatment systems used to process the gaseous and liquid radioactive wastes which are produced from

normal operation. Section 3 of Table 7.3 of the DES indicates that the radiological consequences of release of the contents of either a liquid storage tank or waste gas storage tank are a small fraction of 10 CFR 20 limits. Section 7 of Table 7.2 of the DES summarizes the environmental risks associated with storage of spent fuel on site.

IC-10

The intervenors indicate that the "DES fails to discuss the issue of plant security."

The DES is not the appropriate document to address plant security. Plant Security will be addressed by the NRC in their SER.

The intervenors also indicate that "the DES fails to provide assurances that all nuclear material will remain accounted for."

Procedures and policies which will be used to maintain proper management and safeguard accounting control over the nuclear materials used in conjunction with the operation of San Onofre Units 2&3 will be designed to meet the guidelines established by the NRC and this issue will be appropriately addressed by the NRC in their SER.

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