

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200



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Energy and Ocean Resources Unit

Staff: SMH, JJJ—SF

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Condition Compliance and Status of SONGS Mitigation Program

In April 1997, the Commission approved amendments to the mitigation conditions in Southern California Edison's coastal development permit for the San Onofre Nuclear Generating Station (SONGS) Units 2 and 3. The conditions originally were adopted by the Commission in 1991 to mitigate the adverse impacts of the power plant on the marine environment.

This report highlights the progress made toward compliance with the mitigation conditions. The attached chart summarizes all of the mitigation conditions as revised in 1997 and shows their status toward compliance.

Condition A: Wetland Restoration Mitigation

The permittee is required to create or substantially restore a minimum of 150 acres of wetlands to mitigate for impacts to fishes caused by the operation of SONGS. In 1992 the Commission accepted the permittee's choice of San Dieguito River Valley as the site for wetland mitigation. In April 1997, the Commission reaffirmed its 1992 approval of the San Dieguito River Valley as the site for the wetland restoration project and established October 9, 1997 as the new deadline for submission of a preliminary wetland mitigation plan.

The permittee submitted the preliminary plan on time. Following some revisions, in November 1997 the Commission approved the revised preliminary plan as being largely in conformity with the minimum standards and objectives stated in the permit.

The permit requires the final restoration plan and CEQA/NEPA documentation within twelve months of Commission approval of the preliminary plan, i.e., by November 1998. The EIR/S process is approximately six months behind schedule. Part of the delay resulted from the hydrological modeling studies conducted to determine the effects of various restoration alternatives on stream flow, sediment transfer and tidal hydrology. Additionally, delays occurred with planning this restoration concurrent with the permittee's restoration requirements from its 1993 settlement with Earth Island Institute.

As a result of the studies and various informal meetings over the past several years and of the Commission's mitigation requirements for SONGS, five alternatives were

developed for inclusion in the joint EIR/EIS. The "Mixed Habitat" alternative is the permittee's proposed alternative. Other alternatives include: Maximum Tidal Basin, Maximum Salt Marsh Habitat, Reduced Levee, and No Action.

The Notice of Preparation and Notice of Intent for the EIR/S were issued June 1 and June 3, respectively, and a public scoping meeting conducted June 15, 1998. The San Dieguito River Valley Regional Open Space Park Joint Powers Authority is the lead agency for CEQA and the U.S. Fish and Wildlife Service is the lead agency for NEPA. The draft EIR/S is expected to be completed by December 1998.

Condition B: Fish Behavioral Mitigation

The permittee is required to install and maintain behavioral barrier devices at SONGS to reduce fish impingement losses. Although the permittee has been responsive to the staff's concerns, progress on this condition is slow.

The 1991 permit condition required the permittee to submit, within six months of the effective date of the permit, an installation plan for behavioral barrier devices for the Executive Director's approval and to install the devices within three months of that approval. In March 1992, the permittee submitted a plan, but because the Commission did not have a staff scientist for the SONGS project until late 1992 staff review was delayed until January 1993. The staff did not accept the plan, primarily because of deficiencies in statistical design. The permittee submitted a revised study plan in April 1994 which formed the basis of discussions on what constitutes compliance and how to attain it. The issues were resolved in October 1994.

Following initial experiments on light and sound devices, the permittee considered the light experiments to be the more promising and had further experimental testing of lights conducted in 1996 and 1997. The permittee submitted a new installation plan in October 1997, and after further modifications the plan was approved. Currently, the permittee is determining the critical light environment needed to attract fish and developing methods for reproducing this light environment in the screenwells of SONGS Units 2 and 3. Installation of lights can begin following review and approval of the engineering and construction design, which is scheduled for September 1998.

Condition C: Kelp Reef Mitigation

In 1991, the Commission adopted a condition which required the permittee to construct a 300 acre artificial reef as compensation for a 200 acre loss of the San Onofre kelp forest community caused by the operation of SONGS. In April 1997, the Commission found that the size of the mitigation kelp reef can be reduced consistent with the Coastal Act because scientific evidence showed SONGS impacts on the San Onofre kelp bed were smaller than initially determined. The Commission therefore reduced the permittee's kelp forest mitigation requirement to: (1) an artificial reef that will produce 150 acres of medium to high density kelp and associated kelp forest biota and (2) a payment of \$3.6 million to the State's Ocean Resource Enhancement and

Hatchery Program (OREHP) to fund a mariculture/marine fish hatchery to provide compensation for resources not replaced by the artificial mitigation reef.

Reef: The artificial reef will consist of an experimental reef and a larger mitigation reef. The experimental reef must be a minimum of 16.8 acres and the mitigation reef must be of sufficient size to ensure establishment of a total of 150 acres of medium to high density kelp. The purpose of the experimental reef is to determine what combination of substrate type and substrate coverage will best achieve the performance standards specified in the permit. The design of the mitigation reef will be contingent on the results of the experimental reef.

At the time of the Commission's action to amend the permit conditions in April 1997, the Department of Fish and Game indicated that the experimental reef would require only a negative declaration under CEQA/NEPA, and the timing of the conditions for submitting a final plan and coastal development permit application for the experimental reef was based on that conclusion. However, the State Lands Commission, as lead agency for CEQA, determined that an EIR is necessary. As a result, the experimental reef project is behind the schedule anticipated in the Commission's April 1997 permit action.

The permittee submitted a preliminary plan on June 16, 1997, which was approved by the Executive Director and forwarded to state and federal agencies for review. The permittee also submitted a coastal development permit application on time, on June 30, 1997, but the application cannot be filed until the completion of the EIR and final plan, expected in Fall 1998.

Hatchery Program: The permittee's requirement to pay \$3.6 million to OREHP for the mariculture/marine fish hatchery is complete. Following establishment of an interest-bearing account in June 1997, and the execution of a Memorandum of Agreement between the Commission, Department of Fish and Game and Ocean Resources Enhancement Advisory Panel directing the expenditure of the funds, the permittee deposited \$3.6 million plus \$83,979 accrued interest with DFG.

Condition D: Administrative Structure

This condition establishes the administrative structure to fund the independent monitoring and technical oversight of the mitigation projects. The condition enables the Commission to retain scientists and technical staff to assist the Commission in carrying out its oversight and monitoring functions, provides for a scientific advisory panel to advise the Commission on the design, implementation, monitoring and remediation of the mitigation projects, assigns financial responsibility for these functions to the permittee, and provides for periodic public review of the mitigation projects.

In November 1997 the Commission approved a two year budget and work program for calendar years 1998 and 1999 which include costs for the monitoring and oversight program up to the commencement of independent monitoring of the wetland

restoration and kelp reef mitigation projects. Additional funds for the monitoring will be requested when the monitoring plans are approved. To date, the permittee has made the required quarterly payments.

Condition E: MRC Data Maintenance

The permittee is required to provide funding to allow public use of the scientific data collected by the Marine Review Committee. The data were initially stored and maintained by the Commission's scientific staff. In 1996, using funds provided by the permittee, the data were converted into a more user friendly format for public access. The data is provided to individual requesters on computer CDs. A hard copy manual explaining the data is also available. There have been several requests for the data which the staff has provided.

Condition F: Marine Fish Hatchery

In 1991 when the Commission adopted the mitigation package, it directed the staff to explore the possibility of a fish hatchery program for ocean release. In 1992, the Commission required the permittee to provide \$1.2 million toward the construction of a marine fish hatchery. The condition also requires a Memorandum of Agreement with the Department of Fish and Game and OREHP to direct how the funds will be spent and to assure that important protocols for the marine fish hatchery are implemented.

Following execution of the MOA, the permittee deposited \$1.2 million in an escrow account. Construction of the hatchery at Agua Hedionda was undertaken by Hubbs-Sea World Research Institute under the direction of DFG and completed in Spring 1997. All funds, including accrued interest, were spent and the permittee's obligation is complete. The Commission staff continues to participate on a Joint Panel that oversees the evaluation of the hatchery program and genetic quality assurance program.

Conclusion/Next Steps

It is clear that the permittee is behind schedule on the mitigation conditions for wetland restoration, fish barriers and experimental reef, and that some of the deadlines specified in the permit will not be met. Consequently, it will be necessary for the permittee to submit an amendment request that modifies the due dates and provides specific milestones for complying with the conditions. The Commission's scientific team and staff will continue to work actively with the permittee and other agencies to keep the mitigation projects progressing smoothly and to speed up the process wherever possible.

COMMISSION APPROVED CONDITIONS AS REVISED APRIL 1997	ACTION/STATUS	DATE	COMPLIANCE ACHIEVED
Condition A: Wetland Restoration Mitigation			
<p>Permittee shall create or substantially restore 150 acres of coastal wetland habitat and maintain tidal flushing, of which up to 35 acres of enhancement credit may be approved for permanent inlet maintenance at the San Dieguito site.</p> <p>Site Selection Within 9 months of effective date of [1991] permit, submit proposed site to Commission.</p>	<p>Permittee proposed San Dieguito River Valley. Commission approved selection of San Dieguito River Valley. Commission reaffirmed site selection.</p>	<p>12/20/91 6/11/92 4/9/97</p>	<p>Yes</p>
<p>Preliminary Restoration Plan Within 6 months of approval of [1997] permit amendment, and no later than October 9, 1997, submit preliminary restoration plan to Commission.</p>	<p>Permittee submitted preliminary plan. Permittee submitted revised preliminary plan. Commission approved revised preliminary plan as being largely in conformity with the minimum standards and objectives.</p>	<p>9/30/97 10/31/97 11/5/97</p>	<p>Yes</p>
<p>Final Restoration Plan Within 12 months of Commission approval of preliminary plan [no later than November 5, 1998], submit final restoration plan and CEQA/NEPA documentation to Commission.</p>	<p>Permittee has developed its preferred plan and the agencies have developed 4 alternatives. CEQA/NEPA is proceeding using these 5 alternatives. Public scoping meeting originally scheduled for mid-December 1997 was conducted June 15, 1998. The draft EIR/S is expected to be completed by December 1998.</p>		<p>In progress; behind schedule</p>
<p>Monitoring and Management Plan Concurrent with preparation of restoration plan, develop monitoring and management plan. (CCC responsibility under Condition D; funded by permittee.)</p>	<p>Commission staff scientists drafting plan for Commission review and approval. Commission action will be scheduled concurrently with review and approval of the final restoration plan.</p>		<p>In progress</p>
<p>Pre-Restoration Site Monitoring Conduct pre-restoration site monitoring to collect baseline data on wetland attributes to be monitored. (CCC responsibility under Condition D; funded by permittee.)</p>	<p>Commission staff scientists are conducting pre-restoration site monitoring throughout summer 1998. Current focus is on sampling of water quality, invertebrates, fish and salt marsh plants.</p>		<p>In progress</p>
<p>Wetland Construction Within 6 months of Commission approval of final plan, subject to obtaining necessary permits, commence construction phase of the wetland restoration project.</p>			
<p>Construction Monitoring Conduct construction monitoring during and immediately after each stage of construction to ensure work is conducted according to plans. (CCC responsibility under Condition D; funded by permittee.)</p>			

COMMISSION APPROVED CONDITIONS AS REVISED APRIL 1997	ACTION/STATUS	DATE	COMPLIANCE ACHIEVED
Post-Restoration Monitoring and Remediation Conduct monitoring to measure success of wetland in achieving restoration goals and performance standards. If goals or standards are not achieved, prescribe remedial measures. (CCC responsibility under Condition D; funded by permittee.) Implement any remedial measures.			
Funding Option Permittee has option of satisfying conditions by paying into a trust fund in accordance with Condition D.	Permittee declined funding option.		n/a
Condition B: Fish Behavioral Mitigation			
Permittee responsible to install fish behavioral barrier devices within the power plant in order to reduce fish losses due to impingement, and monitor effectiveness.	Permittee progress towards compliance is slow. Currently, permittee is determining the feasibility of various light arrays at the plant. Installation of lights can begin following engineering and construction design approval, scheduled for September 1998.		In progress; behind schedule
Condition C: Kelp Reef Mitigation			
Permittee shall construct 150-acre artificial reef designed to grow kelp and establish a productive kelp bed ecosystem and provide \$3.6 million to fund OREHP for the purpose of funding a mariculture/marine fish hatchery program. Experimental Reef Site Assessment Select at least three sites and conduct pre-construction site assessments.	Permittee completed site assessment study.	11/93	Yes
Experimental Reef Final Site Selection Select site based on specified criteria.	Permittee selected San Clemente site in preliminary plan. Alternative sites are being evaluated in EIR. Final site approval will be concurrent with approval of final plan.	6/97	In progress
Experimental Reef Design And Final Plan Submit preliminary plan to Executive Director. Following Executive Director's approval, but no later than June 30, 1997, apply for coastal development permit for construction of the experimental reef. Include a final reef plan for the experimental reef	Permittee submitted preliminary plan. Executive Director approved plan. Executive Director submitted plan to state and federal agencies for review and additional permitting. Permittee submitted permit application, which was incomplete; filing of application pending completion of EIR. Permit schedule assumed a Negative Declaration because of small area of experimental reef; State Lands Commission determined EIR is necessary. EIR is in progress and expected to be completed Fall 1998. Permit action will follow completion of EIR and final plan.	6/16/97 6/26/97 6/27/97 6/30/97	In progress; behind schedule

COMMISSION APPROVED CONDITIONS AS REVISED APRIL 1997	ACTION/STATUS	DATE	COMPLIANCE ACHIEVED
Experimental Reef Construction Construct experimental reef within 12 months of approval of the coastal development permit. Conduct post-construction survey to demonstrate construction according to approved specifications. If Executive Director so determines, modify reef to meet approved specifications within 90 days of the post-construction survey.			
Experimental Reef Monitoring Monitor experimental reef, including monitoring and management of any additional experiments deemed necessary by the Executive Director, for 5 years.	Commission staff submitted draft monitoring plan to State Lands Commission for inclusion in EIR and to permittee and resource agencies for comment.	5/98	Plan in progress
Mitigation Reef Design and Planning Within 6 months of completion of experimental reef monitoring, submit preliminary plan for mitigation reef to Executive Director. Within 1 month following Executive Director's determination that preliminary plan meets specified criteria, initiate development of final plan and CEQA/NEPA documentation. Within 12 months of Executive Director's approval of preliminary plan, submit final mitigation plan to Commission in form of coastal development permit application.			
Mitigation Reef Construction Within 6 months after Commission approval of coastal development permit, construct reef in accordance with final plan in approved permit. Conduct post-construction survey to demonstrate construction according to approved specifications. If Executive Director so determines, modify reef to meet approved specifications within 90 days of the post-construction survey.			
Reef Monitoring Develop monitoring plan within 6 months of approval of coastal development permit. (CCC responsibility under Condition D; funded by permittee.) Conduct monitoring to assess whether performance standards have been met. If standards are not achieved,			

COMMISSION APPROVED CONDITIONS AS REVISED APRIL 1997	ACTION/STATUS	DATE	COMPLIANCE ACHIEVED
prescribe remedial measures. (CCC responsibility under Condition D; funded by permittee.) Implement any remedial measures.			
Funding Requirement for Mariculture/Fish Hatchery Program No later than June 8, 1997, establish interest-bearing account in the amount of \$3.6 million for mariculture/marine fish hatchery program. CCC, DFG and Ocean Resources Enhancement Advisory Panel enter into MOA to direct expenditure of funds. Within 30 days of notice from the Executive Director, deposit entire \$3.6 million plus accrued interest as directed.	Permittee established appropriate account. Commission and other parties entered into MOA that details how the funds will be spent and that assures important protocols for the hatchery program are implemented. Permittee deposited \$3.6 million plus \$83,979 accrued interest with DFG for the hatchery program.	6/8/97 10/20/97 11/18/97	Yes Yes Yes
Funding Option for Kelp Reef Mitigation Permittee has option of satisfying conditions by paying into a trust fund in accordance with Condition D.	Permittee declined funding option.		n/a
Condition D: Administrative Structure			
Permittee must pay for Commission retention of independent scientists to oversee and monitor the wetland and artificial reef mitigation projects; and public opportunity to review and comment on progress of mitigation projects. Permittee has option of satisfying conditions by paying into a trust fund.	Commission approved a 2-year budget for calendar years 1998 and 1999. Previous budgets have been approved since 1992. Permittee provides funds quarterly. Permittee declined funding option.	11/5/97	Ongoing n/a
Condition E: MRC Data Maintenance			
Permittee is required to provide adequate funding to make MRC's valuable scientific data available for public use.	With funds provided by permittee, CCC staff have converted MRC's scientific data for public use.	1996	Yes
Condition F: Marine Fish Hatchery*			
Permittee is required to provide \$1.2 million toward the construction of a marine fish hatchery. A memorandum of agreement with Department of Fish and Game and others is required to assure that important protocols for the marine fish hatchery are implemented.	Permittee deposited \$1.2 million into an escrow account. MOA was executed by the parties. Construction of the hatchery was completed by Hubbs-Sea World Research Institute under direction of DFG.	9/94 4/94 5/97	Yes

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* The Marine Fish Hatchery condition was mislabeled as Condition E when approved. The Marine Fish Hatchery condition should actually be Condition F.