

CALIFORNIA COASTAL COMMISSION

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July 6, 2009

Dr. David Kay
Southern California Edison Company
P.O. Box 800
Rosemead, CA 91770

Re: Compliance with Condition B of the SONGS Permit No. 6-81-330-A: SCE's 2007 Annual Marine Environmental Analysis Report

Dear David:

On October 12, 2000, the California Coastal Commission concurred with the Executive Director's determination regarding the fish behavioral barriers required by Condition B of the coastal development permit for the San Onofre Nuclear Generating Station Units 2 and 3 (No. 6-81-330-A, formerly 183-73). (See staff report entitled *Executive Director's Determination that Fish Behavioral Barriers Tested at SONGS are Ineffective*, dated September 22, 2000.) As part of that permit compliance action, the Executive Director specified continuing monitoring requirements, which included submission of a written report of the Fish Chase procedure used at the plant.

As required, SCE submitted the 2007 Annual Marine Environmental Analysis Report for the San Onofre Nuclear Generating Station. Chapter 4 of the report contains an assessment of in-plant fish, which includes data and analysis of the Fish Chase procedure.

Specifically we note the following:

- (1) The impingement for the year was about 11,069 kg (680,172 individuals), which is considerably below the long-term average of about 26,407 kg.
- (2) The Fish Chase procedure resulted in 8,868 kg of fish returned live to the ocean, which is greater than the long term average of 6,250 kg.
- (3) For the year 2007 the Fish Chase effectiveness relative to impingement was 80%, which is substantially better than the 10% target value. In addition, the long term average now exceeds 20%.
- (4) Impingement for 2007 and 2006 were among the lowest since sampling initiated. In particular the numbers are vastly lower than in 2005. This seems due to two things. First, there has been a substantial reduction in sardines and anchovies that have been impinged, perhaps because they are in lower numbers or because they are further offshore. Second, as noted by SCE, accuracy was almost certainly higher for 2007 due to the increase in sampling effort (to biweekly) for part of 2007 that occurred as part of SCE's 316B sampling plan. This was also true for 2006.

- (5) While the reduction to quarterly sampling could result in inaccurate estimates of biomass saved by the Fish Chase procedure, we will be compelled to assume that any future failure to meet the standard of 10% savings is due to an actual failure of the Fish Chase procedure rather than sampling error.
- (6) There was a clear discussion concerning methods, results and interpretation of results.
- (7) Species of special interest were impinged in 2007 (which is typical). [Note: impingement is based on extrapolation of sampled impingement during normal operation + actual impingement during heat treatments. This was not done in earlier reports]. Species included:

Species	Status	Impinged and killed	Returned alive
California halibut	Important sport and commercial fish	201	4
Cabazon	Species of special concern	292	8
Bocaccio	Species of special concern	180	0
Giant seabass	Protected in CA	1	6
Kelp bass	Important recreational fish	133	63
White seabass	Important sport and commercial fish	123	9

Species	Mammals and Turtles	Found Dead	Returned Alive
California sea lion	Marine mammal protection act	33	8
Harbor seal	Marine mammal protection act	10	18
Green sea turtles	Endangered species act	0	2

- (8) Mortality rates (defined as “the biomass of fish killed during a heat treatment divided by the biomass of fish entrained (fish impinged plus fish returned alive via the FRS)) during the fish chase procedures were not unusually high during 2007. Higher than normal mortality is

defined as (1) a sequence of three or more heat treatments where the mortality rate exceeds 50%, (2) more than 50% of heat treatments in a given year have more than a 50% mortality rate, or (3) mortality rate for the year exceeds 50%.

Hence, the results of Chapter 4 indicate that the operation of the Fish Chase procedure during 2007 was consistent with the standards enumerated in the Executive Director's determination.

The Commission staff is concerned about the sampling change that occurred during 2007. As SCE notes, the accuracy of the impingement assessment has increased over the last two years (2006-2007) because of the increased sampling that occurred as part of the 316B study. We note that in the 2 years preceding 2006-2007, estimated impingement was higher and the estimated effectiveness of the Fish Chase Procedure was lower than 10%. We are concerned that SCE's return to the former quarterly sampling may lead to inaccuracies in future assessments and potentially spurious conclusions concerning the effectiveness of the Fish Chase Procedure and the need to consider new approaches to behavioral barriers.

We understand that SCE is currently waiting for a federal ruling on water quality that effectively sets the level of fish losses allowed for cooling systems of power plants. Given the potential for less accurate assessments coupled with the requirements of the Executive Director's determination for Condition B compliance, we would like to see SCE take a proactive role in developing new technologies at SONGS that will meet the stricter standards currently proposed by the federal government.

Thank you for your continuing cooperation with the Commission staff in addressing the Commission's behavioral barriers permit condition.

Sincerely,



Susan M. Hansch
Chief Deputy Director

cc: Patrick Tennant

