

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



October 23, 2006

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 2005
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, on August 3, 2006, SCE submitted the 2005 Annual Marine Environmental Analysis and Interpretation 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 2005 was about 120,083 kg (10,173,873 individuals), which was 65,839 kg more than in 2004 and much more than the long-term average of about 27,725 kg (which has been increasing in the last two years (see Figures 1-2). SCE suggests that this might be an artifact associated with infrequent sampling coupled with a very large estimate of impingement for one of the sample days (at each unit). Since there is no way to verify if this lead to a biased estimate, the staff must conclude that the best estimate of impingement for 2005 is 120,083 kg.
- (2) The Fish Chase procedure resulted in 9204 kg of fish returned live to the ocean, an increase of 2616 kg from 2004 (Figure 2). However, the return for 2005 (9204 kg) was much more than the long term average of 4440 kg. This increase mirrored the large increase in impingement noted above.
- (3) For the year 2005 the Fish Chase effectiveness relative to impingement was 7.6%, **which does not meet the 10% target value.**

- (4) There was a clear discussion concerning methods, results and interpretation of results.
- (5) Anchovies and sardines together comprised greater than 80% of all impingement by weight and number (89.4 and 82.2% respectively). This was a pattern similar to 2004 but with a large increase in total number and weight. By contrast with overall impingement, anchovies and sardines were much rarer during the heat treatments (about 37 and 66% respectively).
- (6) Species of special interest were impinged in 2005 (which is typical). These included:

Species	Status	Impinged and killed	Returned alive
California halibut	Import sport and commercial fish	108	9
Cabazon	Species of special concern	19	5
Bocaccio	Species of special concern	50	0
Giant seabass	Protected in CA	5	29
Kelp bass	Important recreational fish	199	242
White seabass	Import sport and commercial fish	21	4
California sea lion	Marine mammal protection act	5	22
Harbor seal	Marine mammal protection act	20	14
Green sea turtles	Endangered species act	3	0

- (7) By contrast to 2004 mortality rates during the fish chase procedures were not unusually high during 2005. (Mortality rates are 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).") 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 of the 2005 report indicate that the operation of the Fish Chase procedure during 2005 was not consistent with the standards enumerated in the Executive Director's determination because, as for 2004, the target effectiveness of the fish chase procedure, 10%, was not attained.

We note that provision C-4 of the *Executive Director's Determination that Fish Behavioral Barriers Tested at SONGS are Ineffective*, dated September 22, 2000 states:

"If in the future new technologies or techniques for fish protection are developed which either (1) become accepted industry standards or (2) are required by the Commission in other power plant regulatory actions and which, if implemented at SONGS, would meet the permit goals for reducing impingement losses, SCE shall make every effort to test, and if found feasible, install such devices at SONGS Units 2 and 3. SCE should continue its leadership to facilitate the reduction of fish losses throughout the industry."

We also note that this is the second consecutive year that the performance of the Fish Chase procedure was less than the stated performance goals (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)). To assist us in assessing the importance of the sub-standard performance of the Fish Chase procedure during the year 2005, we request the following.

- (1) All impingement and heat treatment data used in Chapter 4 (including appendices) in electronic format (preferably excel format) for the year 2005 and all subsequent years.
- (2) The *Proposal for information collection* for SONGS (October 2005), prepared by EPRI Solutions Inc. that was submitted in compliance with Clean Water Act section 316B Phase II requirements. Much of the information in that document and data collected under the impingement and entrainment sampling would be useful in our assessment.
- (3) An interim report for the year to date that includes:
 - a. Results of fish chase procedure for 2006.
 - b. All impingement data.
- (4) Notification to the Executive Director of any changes to entrainment or impingement sampling or reduction technologies within 30 days of their implementation.
- (5) A meeting as soon as possible to discuss the possibility of implementing new technologies that could significantly reduce losses due to heat treatments and normal impingement. The best meeting would include the San Diego Regional Water Quality Control Board.

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Please provide the requested information directly to Pete Raimondi, of our Scientific Advisory Panel, as well as to our contract scientists Steve Schroeter, Dan Reed and Mark Page, and to Commission staff John Dixon and Jonna Engel and myself. We look forward to working with you on this important matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Susan M. Hansch", with a long horizontal flourish extending to the right.

Susan M. Hansch
Chief Deputy Director

cc: Patrick Tennant

Figure 1: Units 2 and 3 Impingement

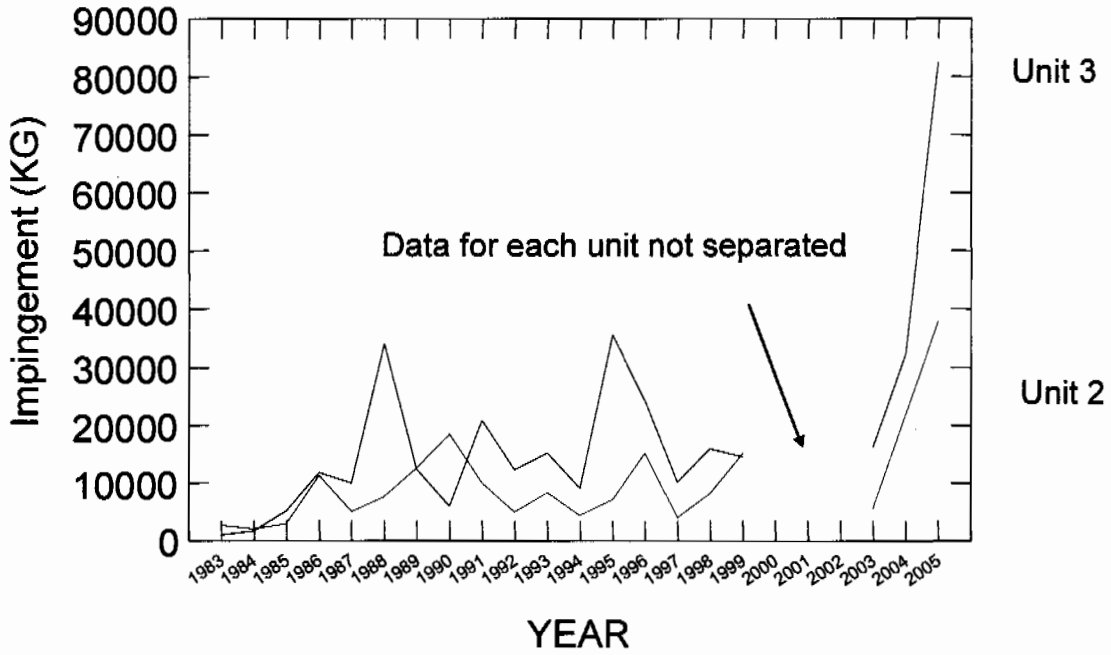


Figure 2: Total and average Impingement

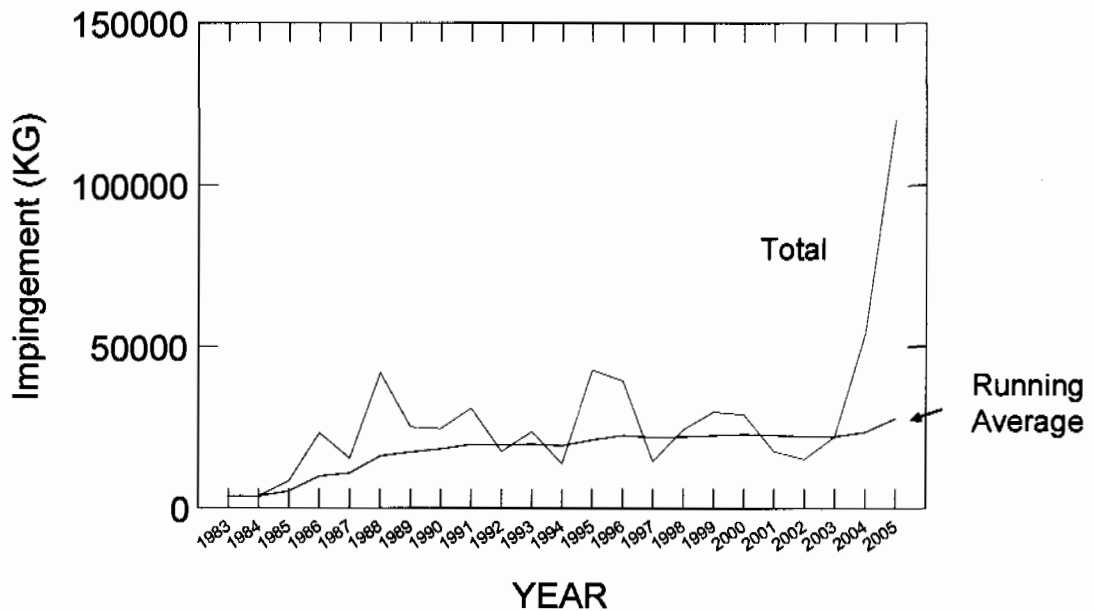


Figure 3: Impingement reduction due to Fish Chase

