

CALIFORNIA COASTAL COMMISSION

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March 28, 2007

Dr. David Kay
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Re: SCE letter of December 7, 2006 regarding compliance in 2005 with Condition B of the SONGS Permit No. 6-81-330-A

Dear David:

On October 23, 2006, the Coastal Commissions staff provided a review of SCE's 2005 Annual Marine Environmental Analysis and Interpretation Report for the San Onofre Nuclear Generating Station to assess compliance with Condition B of Coastal Development Permit No. 6-81-330-A. Essentially, the staff concluded that the operation of the Fish Chase procedure during 2005 was not consistent with the standards set forth for the target effectiveness of 10% reduction in impingement, and requested additional data and reporting. For ease in the following discussion, we refer to this October 23, 2006 letter as "CCC-BB-2005."

In its letter of December 7, 2006 responding to CCC-BB-2005, SCE raised a series of concerns. The purpose of this letter is to reply to those concerns and discuss the next steps that need to be taken to ensure continued compliance with Condition B.

First, SCE pointed out that there were errors in CCC-BB-2005 regarding impingement of marine mammals and sea turtles. We agree with those comments and apologize for the error.

A more fundamental issue is that SCE has suggested that there is no performance requirement for the Fish Chase Procedure and that SCE is in compliance with the permit simply by performing the procedure. This interpretation is consistent with point 3 of the conclusions and provisions for compliance with Condition B contained in the Commission staff report titled "*Executive Director's Determination that Fish Behavioral Barriers Tested at SONGS Are Ineffective*," dated September 22, 2000, which states:

"In accordance with item 6b of the September 14, 1994 letter, and acknowledging that SCE has made a good faith effort to satisfy Condition B of the SONGS operating permit, compliance with the requirements of Condition B of the SONGS permit will be satisfied at this time provided that SCE (1) continues to implement the Fish Chase procedure for the operating life of SONGS Units 2 and 3 and (2) utilizes the following monitoring requirements..."

However, the intent of Commission staff's evaluation of the effectiveness of the Fish Chase Procedure has never been with respect to point 3, above. Instead it has been used with respect

to point 4 of the same report, which addresses the possibility of implementing new behavioral barrier technologies at SONGS. Point 4 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 believe that it is the responsibility of Commission staff to evaluate the effectiveness of the current technology (i.e., the Fish Chase Procedure) relative to new technologies so as to make recommendations to SCE concerning new behavioral barrier testing at SONGS. Commission staff has used the measured effectiveness of the Fish Chase Procedure as an indication of the need to evaluate new technologies. Because the clear intent of the operating permit was that behavioral barrier devices reduce impingement by at least 10%, our trigger for assessment of new technologies was linked to performance of the Fish Chase Procedure. Specifically we have been interested in whether there is a 10% or greater reduction in impingement due to the prescribed operation of the Fish Chase Procedure during heat treatment. The effectiveness of the Fish Chase Procedure, as measured by SCE and its contractors using a SCE sampling design, has dropped below the 10% threshold for two consecutive years. This has led Commission staff to consider investigating new technologies to reduce impingement. The intent of our information requests was to give SCE the opportunity to provide a context and perhaps an explanation for the reduction in measured effectiveness of the Fish Chase Procedure. We hope that this clarification will help SCE understand our concerns (discussed below) about (1) the sampling design that SCE suggests may be inadequate and (2) the apparent reduction in performance of the Fish Chase Procedure.

Additionally, SCE had the following specific concerns:

- 1) Misapplication of a 10% target for the Fish Chase Procedure. The 10% target is the rate of savings from using the Fish Chase Procedure relative to annual impingement. SCE contends that no such target exists. Instead, SCE points to a 2 metric ton threshold that was developed to assess the effectiveness of behavioral barrier devices (BBD). For the purposes of evaluation of the possible utility of the BBD's, the Commission adopted the 2 metric ton standard **because it represented 10% savings in impingement.** This is clear from the language of our September 14, 1994 letter to SCE discussing the goals of the behavioral barrier requirement (CCC staff's recommended revisions to SCE's Behavioral Barrier mitigation plan):

At issue is what is "not sufficiently effective", as it is this criterion that potentially triggers removal and installation of alternative devices. The Commission staff's position is that a behavioral barrier device will be considered sufficiently effective if it reduces impingement of fish by at least an estimated 2 metric tons per year (this is consistent with recommendations by the MRC). We believe that this is a reasonable, attainable standard. At current levels this represents approximately a 10% decrease in annual fish impingement. It should be noted that (1) it is the hope of the CCC that there will be

substantially more than a 10% decrease in impingement and, (2) that monitoring required to assess the effectiveness of the devices decreases with increasing effectiveness of the devices.

This point is made explicitly in the letter from Commission staff to SCE dated July 1, 1994 (CCC response to SCE's proposal on Behavioral Barriers):

In the Revised Study Plan SCE states that the performance goal (criterion) for evaluating the effectiveness of the behavioral barrier device is "to reduce fish impingement by at least 2 metric tons a year." This is incorrect. As is correctly stated in section 5.3 of the Study Plan, there is no absolute performance criterion written in Condition B of the Permit. The effectiveness of the devices will be assessed by the Executive Director of the CCC and likely will be based upon the results of the CCC's post-installation monitoring program. It is important to note that "effectiveness" will be used to determine whether SCE has to install alternative devices. The figure that SCE refers to, 2 metric tons, was a recommendation the Marine Review Committee (MRC) made based on an estimate of fish killed of 20 metric tons per year. The intent was to reduce fish mortality by at least 10%.

Clearly the standard was intended to be a reduction in Fish Mortality by 10%. Moreover, as described above, Commission staff is using this value (10%) as an indication of the effectiveness of the Fish Chase Procedure relative to other new impingement reduction technologies.

The second argument used is that the Fish Chase Procedure was never considered to be a BBD by the Commission. We note that SCE has considered the Fish Chase procedure to be such a device but also acknowledge that the Commission has consistently maintained that the Fish Chase Procedure is not a BBD.

- 2) SCE contends that the methodology used to assess the effectiveness of the Fish Chase Procedure is inappropriate. Commission staff use the ratio of the fish saved by the Fish Chase Procedure / Fish lost to Impingement as the basis for evaluating the effectiveness of the procedure. This ratio has been used because: (a) it is the basis of the behavioral barrier target (see above) and (2) it represents the relative reduction in impingement mortality due to the Fish Chase Procedure. The methodology proposed by SCE (i.e., the ratio of total savings using the Fish Return System / Total Impingement), while interesting, is not relevant to the question of the effectiveness of the Fish Chase Procedure in reducing impingement mortality.
- 3) SCE notes that the estimates of the effectiveness of the Fish Chase Procedure as reported to the Commission may be severely underestimated. This claim is based on results of a much more intensive sampling program that was carried out in 2006, stating "...data shows that impingement values for 2006 are much lower than those reported for 2005 and they are more statistically accurate due to increased sampling frequency".

Commission staff is particularly concerned about this assertion; SCE is in essence suggesting that the typical sampling done by SCE since the adoption of the Behavioral Barrier Determination is insufficient to characterize the effectiveness of the Fish Chase Procedure. It is

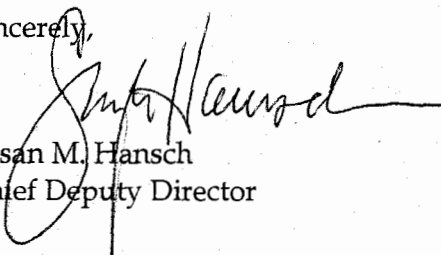
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worth noting that inadequate sampling is equally likely to yield an overestimate as an underestimate of the effectiveness of the Fish Chase Procedure. Importantly, inadequate sampling is also likely to yield a misrepresentation of unusual events, which require notification to the Executive Director together with an explanation for each event.

If the typical sampling is indeed inadequate as SCE suggests, then the Commission staff requests that all future sampling for impingement and the Fish Chase Procedure ("biological sampling" as described in the SCE response) follow the exact protocols used in the 2006 sampling that led to "more statistically accurate" results.

Long term compliance with Condition B of the SONGS operating permit is essential. We would like to work with SCE on next steps for investigating new technologies and for ensuring that accurate monitoring techniques are being employed. We believe that the most productive approach is to discuss these issues as a part of our scheduled April 23, 2007 meeting and attempt to agree on the next steps to maintain condition compliance.

Sincerely,



Susan M. Hansch
Chief Deputy Director

cc: Patrick Tennant