



12 September 2017

California State Water Resources Control Board
c/o Jeanine Townsend, Clerk to the Board
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Subject: OTC Policy: Diablo Canyon Plant Draft Determination

Dear Ms. Townsend:

The following are my comments related to the subject above.

Related to past hearings (such as 18 November 2014) representatives of the California Department of Fish and Wildlife have indicated to SWRCB and other agencies that an estimated 1.5 billion larvae of coastal species are seriously damaged or killed during passage through Diablo Canyon's final turbine-cooling system.

Taking together that estimate, and the plant's known water flow of about 2 billion gallons per day, we can estimate the density of damaged/killed larvae. In a 365-day year, $1,500,000,000/365$ implies about 4,110,000 larvae being affected daily, as 2 billion gallons of water flow through the plant. The inverse density of damaged larvae is thus $2 \text{ billion}/4.11 \text{ million}$ or about one larva lost per 480 gallons of water.

The coastal marine density of larvae is far higher, as is the density consumed by natural coastal predators. Over the decades of Diablo canyon operation, local fisheries have seen no declines in catches and current local fisherman volunteer statements like "fishing has never been better" when asked. I encourage SWRCB members to perform such queries, if they wish first-hand opinions from those most exposed to Diablo's OTC.

In addition a local marine biologist studied the coastal region for many years, finding no marine detriments from Diablo Canyon operations. He verbally related his study results at the 5 August 2016 public meeting held by the US NRC local to the plant. He passed away recently, but SWRCB staff may be able to uncover some of his work and analyses by contacting knowledgeable residents, citizens groups*, or NRC and plant staff.

OTC-elimination estimates for cooling-tower additions, as from Bechtel, add billions of dollars in costs for no apparent benefit to the coastal environment. PG&E should be allowed to continue a policy of paying modest yearly fees (of a few \$millions) to help construct artificial reefs, etc., as determined by relevant California agencies to be needed to ensure the region of robust coastal marine life.

PG&E already fulfills its obligation to protect some miles of coast near the plant. Adding huge, unnecessary expenses, as for cooling towers, could well induce plant closure, countywide loss of about \$1 billion of economic benefit, loss of about 20% of California's clean energy, and opening of now-protected coastal land and environments to un-environmental development.

Some of the filings by Californians for Green Nuclear Power (CGNP.org) in the CPUC proceeding re Application A.16-08-006 may be relevant to the SWRCB. I am one of several expert witnesses for CGNP. A complete record of our testimony can be found at the links below**. Scope Sections 2.2 and 2.6 may be most relevant for SWRCB.

Sincerely,

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* e.g., MothersForNuclear.org, CGNP.org

** Note Scope Sections 2.2 and 2.6 in particular...

http://www.cgnp.org/CGNP-OpeningBrief-A1608006_05-26-17.pdf

<http://cgnp.org/CGNP-Reply-Brief-A1608006.pdf>

http://www.cgnp.org/CGNP-OpeningBrief-A1608006_05-26-17.pdf

http://www.cgnp.org/CGNP_Direct_Testimony_01-27-17.pdf

http://www.cgnp.org/CGNP_Rebuttal_Testimony_03-17-17.pdf

http://www.cgnp.org/CGNP_Direct_Testimony_Workpapers_01-28-17.pdf

http://www.cgnp.org/CGNP_Rebuttal_Testimony_Workpapers_03-17-17.zip