

4 November 2014

To: State Water Resources Control Board

Re: Comment for Board hearing on 18 November

Dear Sirs/Madams:

Regarding exempting PG&E's Diablo Canyon nuclear plant from the requirement to insert evaporative/convective cooling before its present seawater coolant discharge, I wish to make these four comments to the Board...

a) The present seawater flow through the plant's final waste-heat discharge system has been carefully monitored for decades and is about 1/3 the original flow contemplated when the site was scheduled to support 6 reactors, including a desalination system for municipal water use.

b) As a result of the plant's cooling-system design, the temperature of effluent seawater is not detrimental to coastal sea life, as has been established by many years of marine-biological monitoring. In addition, the effluent is naturally less dense than local coastal waters and outside the discharge bay it remains near the sea surface while it cools naturally to ambient temperature.

c) Installation of water/air (cooling-tower) convective cooling systems would not only be unnecessary environmentally, it would result in unnecessarily-added failure modes, especially if the towers and added plumbing were to be located where their failures could damage essential safety systems already built into/on the site.

d) The use of seawater in such an evaporative system also adds long-term failure modes to the overall plant, as from airborne salt corrosion, as winds move in from all compass points over the years. This includes not only added cooling-structure damage, but damage to existing structures, especially to electrical systems -- the 500kV output lines to the external power grid would be unnecessarily threatened with damage and increased electrical power loss, due to salting of their crucial insulator surfaces.

As a scientist and engineer my self, I see no environmental benefit to installation of cooling towers at Diablo Canyon. But, I do see clear reasons to avoid their addition to a plant that has functioned so well over decades, providing our state with clean, inexpensive electrical power. Money and effort can be more wisely spent elsewhere.

Sincerely,

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