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April 13, 2010

Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95184

Subject: **Proposed Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling**

Dear Ms. Townsend,

Mirant California, LLC (Mirant) indirectly owns three power plants in the San Francisco Bay Area that are subject to the proposed "Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling" ("OTC Policy"): (1) the Potrero Power Plant in San Francisco, owned and operated by Mirant Potrero, LLC; (2) the Pittsburg Power Plant in Pittsburg, owned and operated by Mirant Delta, LLC; and (3) the Contra Costa Power Plant near Antioch, also owned and operated by Mirant Delta, LLC (the Pittsburg and Contra Costa plants are collectively referred to as the "Delta Plants").

Mirant appreciates the efforts State Board staff have put into the development of the OTC Policy. Mirant generally supports the latest revisions to the OTC Policy and requests one important clarification as discussed in Section I. Section II discusses revisions made to the Draft Final Substitute Environmental Document (SED) that directly relate to Mirant's Delta Plants and identifies factual inaccuracies that need to be corrected in Section 2.3.2 regarding threatened, endangered and protected species.

I. OTC Policy

Use of Recycled Water

Mirant suggests that provision 3(A)(2) be revised to replace the word "available" with "feasible". Section 3.10 of the SED indicates that State Board staff's intent is to recommend a requirement in the OTC Policy to consider the "feasibility" of using recycled wastewater for power plant cooling. "Alternative 2" in Section 3.10 is described as "Require that power plant owners consider the *feasibility* of using recycled wastewater for power plant cooling", and the Staff Recommendation states, "Staff recommends Alternative 2: Require that power plant owners consider the *feasibility* of using recycled wastewater for power plant cooling, either to supplement OTC or as makeup water in a closed-cycle system, when developing their implementation plans." (SED at p. 77) (emphasis added). "Feasible" is a commonly understood term and is more consistent with Staff's apparent intent than "available", which is subject to multiple interpretations and could lead to uncertainty and uneven application.

II. SED

"Take" Estimates of Listed Aquatic Species

Mirant disputes Staff's conclusion that the Delta Plants have "been shown to entrain" over 49,000 delta smelt and 29,000 longfin smelt per year and that the Pittsburg Plant has "been shown to impinge" 48 delta smelt and 12 longfin smelt (see SED at p. 36). The SED fails not only to note that its figures are estimates but also to document the basis for those estimates. The SED cites to the Mirant Delta, LLC Entrainment and Impingement Monitoring Plan for IEP, Annual Report Nov. 2007-Oct. 2008 Contra Costa and Pittsburg Power Plants, July 2009, but that report in no way reaches such conclusions. There is absolutely no evidence that the Delta Plants actually entrain or impinge delta and longfin smelt at the rates suggested in the SED, and the SED's apparent methodology for calculating those estimates is demonstrably flawed and statistically invalid. Mirant does not dispute that the Delta Plants may entrain and impinge delta and longfin smelt, and for several years Mirant has been working closely with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish and Game (DFG) in their individual capacities as well as under the overall Interagency Ecological Program for the San Francisco Bay/Sacramento-San Joaquin Estuary (IEP), to evaluate the potential impacts of the Delta Plants on threatened and endangered aquatic species.

In consultation with the IEP, Mirant developed and implemented a two-year monitoring program (the "IEP Monitoring Plan") starting in 2007 to collect entrainment and impingement data at its Delta Plants. The purpose of the IEP Monitoring Plan was to supplement and complement the IEP trawl data by providing information regarding the timing, distribution and abundance of fishes subject to entrainment and impingement at the Delta Plants. The Plan was designed to collect year-round data, regardless of whether or not the Delta Plants were operating, to provide a picture of timing, distribution and abundance at the intakes relative to data collected at established DFG trawl monitoring stations. The IEP Monitoring Plan has provided valuable data that greatly improve the Agencies' understanding of Delta species as well as the potential impacts of operations of the Delta Plants on those species. Sampling under the IEP Monitoring Plan has coincided with DFG trawls precisely in order to supplement and complement the IEP data set and provide information about abundance in the vicinity of the intakes relative to Delta-wide populations.

An important feature of the IEP Monitoring Plan is that it required Mirant to conduct monitoring throughout the year irrespective of whether or not the Delta Plants were actually generating power. For example, to collect impingement data to coincide with a February survey conducted by DFG in its Spring Kodiak Survey, Mirant would operate its circulating water pumps solely for the purpose of collecting data, with no associated power generation. Similarly, to collect entrainment data to coincide with CDFG's Smelt Larvae Survey, Mirant would collect data in front of the plant intakes regardless of whether or not the plants were operating. Thus, the data collected under the IEP Monitoring Plan provides valuable year-round data about the presence of aquatic species at the intakes of the Delta Plants but is not representative of actual entrainment and impingement of aquatic species associated with normal Delta Plants operations.

Accordingly, there are several fundamental flaws in Staff's attempt to generate "take estimates" based on the IEP Monitoring Plan data. First, it is inappropriate to apply a conventional volume-based extrapolation approach to the delta and longfin smelt for either entrainment or impingement data given the species relative lack of abundance. Precisely quantifying entrainment and impingement estimates is complicated by the nature of operations at the Delta Plants, highly variable smelt populations, and logistical constraints associated with larval sampling, especially of listed species that may be in very low abundances. While special designs have been developed for sampling listed species that are sparsely distributed, these designs are not applicable in the case of entrainment, for example, where the objective is to estimate entrainment at a single location over time. Any entrainment sampling program for a species in low abundances will result in data with numerous zero-values. At other power plants in California, data from fishes in low abundances are not even analyzed since the high variability of the data make any estimates of entrainment or models based on entrainment essentially meaningless.

The population of delta and longfin smelts in the source water around the Delta Plants changes throughout the year as larvae that are transported into the areas around the Delta Plants mature and move into other areas of the Bay-Delta. Due to their sparse distribution and lack of abundance, it is unrealistic to project the consistent concentration of smelts across time periods at a single location based on a single data point. For example, if 5 delta smelt were collected in one survey, it would be inappropriate to assume that delta smelt would be present at the same concentration every day of the month in which the survey occurred. While this approach may be appropriate for abundant species and is commonly used in OTC studies, it is not appropriate for scarce species like the delta and longfin smelts, much less when the raw data points are in the low single digits.

Furthermore, since many of the data represent periods in which the Delta Plants were not actually generating power, they are not representative of actual operating conditions, and it is both inappropriate and inaccurate to attempt to estimate annual "take" figures based on those data. The Delta Plants operate primarily during August and September, when power demand is at its peak and when delta smelt are least likely to be in the vicinity of the intakes, and rarely operate during the times of year that smelt are most likely to be present.

In entrainment sampling conducted from January to July 2008 under the IEP Monitoring Plan, a total of 3 delta smelt and 4 longfin smelt were collected at the Pittsburg Plant, and a total of 13 delta smelt and 3 longfin smelt were collected at the Contra Costa Plant; from January to July 2009, a total of 15 delta smelt and 23 longfin smelt were collected at the Pittsburg Plant, and a total of 8 delta smelt and 5 longfin smelt were collected at the Contra Costa Plant.[1] In impingement sampling conducted from November 2007 through October 2008 under the IEP Monitoring Plan, 2 delta smelt and 3 longfin smelt were collected at the Pittsburg Plant, and no delta or longfin smelt were collected at the Contra Costa Plant; from November 2008 through October 2009, a single delta smelt was collected at the Contra Costa Plant, no delta smelt were collected at the Pittsburg Plant, and no longfin smelt were collected at either Plant.

[1] The SED also notes that the Contra Costa Power Plant "has been known to entrain Chinook salmon." See SED at p. 36. This statement is based on a single, 30-year-old data point and disregards the data collected under the IEP Monitoring Plan, in which not a single salmonid species was collected in either entrainment or impingement sampling. This data point is no longer relevant and should be deleted from the SED.

The vast majority of these data were collected during periods when the Delta Plants neither were operating nor are likely to operate in the future. The SED nonetheless simplistically extrapolates these isolated data, which are unrepresentative of actual plant operations, to summarily conclude that the Delta Plants entrain and impinge tens of thousands of delta and longfin smelt per year.

As discussed above, there is no statistically or scientifically sound basis for this conclusion. Accordingly, the SED should be revised to acknowledge take of delta smelt and longfin smelt by the Delta Plants but to delete the hypothetical take numbers.

Mirant also supports the comments submitted by the California Council for Environmental and Economic Balance.

If you have any questions, please contact me at (925) 427-3567 or peter.landreth@mirant.com.

Sincerely,

Peter W. Landreth
Director, California Environmental Policy