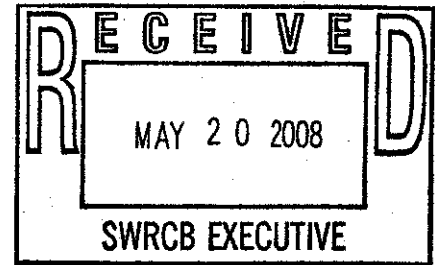


May 20, 2008

TO: Ms. Tam Doduc, Chair and Board Members  
State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95814

Via Email: [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)



The Coastal Alliance on Plant Expansion/Es (CAPE) has reviewed and analyzed the draft Scoping Document: Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling prepared by the State Water Resources Control Board/California Environmental Protection Agency, and dated March 2008 and is submitting comments to same. Please note these comments are being submitted in two Parts - Part A and Part B.

#### PART A

##### COMMENT re Page 3:

Table 3, Flow and Power Production Summary for OTC Power Plants shows that for the years 2000, 2001, 2002, 2003, 2004, and 2005, OTC average flow was 12.6, 13.5, 11.0, 10.3, 10.0, 9.4 (BGD) respectively.

This chart should include the years 2006, 2007 and 2008 to give a more accurate picture of the conditions today.

##### COMMENT re Page 5:

For this analysis, Capacity Utilization Rate (CUR) was used to calculate utilization for all OTC power plants except combined cycle power plants. Also, gross plant output data were used (see Table 3) instead of net plant output data to compute the utilization.

CUR for this document should be the net capacity not the gross because using the gross capacity gives a false picture of the real or actual capacity of this aging fleet. For instance, in Table 3, the Morro Bay Power Plant is listed as 1002 MW even though two of its four units are mothballed - meaning, as Dynegy itself has admitted, that they will almost certainly never be used again and the other two units are limited by air pollution restrictions. These units have run only about 6% of the time over the past few years and are not expected to operate at a significantly higher level in the future.

##### COMMENT re Page 12:

Under Biological and Cumulative Impacts from Once through Cooling -- Entrainment And Impingement, it states, Impacts associated with OTC include impingement, entrainment, and thermal effects. The biological impacts of OTC may not be adequately known since modern quantitative studies are difficult and costly. Seawater, however, is not just cool water but a highly productive and diverse aquatic habitat.

This section totally reinforces the need to get rid of OTC as soon as possible. The SWRCB staff recognizes here that, as high as the percentages are for entrainment and impingement, they are not accurate representations of the true damage caused by OTC.

##### COMMENT RE Page 35:

The staff sets out two alternatives for how New and Existing Power Plants should be defined:

1. Use the existing definitions as defined by USEPA in the Phase I federal regulations, or
2. Create new definitions of new and existing power plants.

It is critical that the SWCB direct staff to choose Alternative #2 -- to create new definitions of New and Existing Power Plants in order to require use of BTA. For instance, the current definitions allow new plants built on existing power plant locations to claim the full, permitted intake capacity of the plant being replaced even when the old plant has not been operating at full, permitted capacity for many years. The result is the replacement or new plant is allowed to use far more water than the old one used historically. This not only skews a determination of what fair mitigation should be, but it allows a major loophole for what is in effect a new power plant to circumvent the intent of the CWA Section 316(b) regulations and use more ocean water than it would have been able to otherwise. The definitions should be revised so that BTA is required for both new or existing power plants.

##### COMMENT re Page 46:

In the section entitled Restoration as an Interim Measure, SWRCB staff recognizes that in RiverKeeper II, the Second Circuit Court of Appeals reached the conclusion that under CWA Section 316(b) restoration measures, such as restoring habitat or restocking fish, could not be considered BTA.

Staff acknowledges that, it is clear that restoration to comply with CWA 316(b) is not BTA a statement we agree with and believe to be correct. But then staff makes the unsupported leap to Restoration of habitat, however, is valuable and should be encouraged as an offset during the interim until BTA is fully complied with. We vehemently disagree with this conclusion on the contrary, we believe that restoration of habitat not only should not, but cannot, be used as an interim (or any other) measure.

In the first place, this is directly opposed to the court's holding in the Riverkeeper II decision. Riverkeeper II is the legal standard that needs to be followed starting now, not waiting until BTA is complied with. The nature of BTA is that it is constantly changing, constantly evolving it assumes that technology will constantly evolve into something better. To wait until BTA is complied with is to wait forever.

Furthermore, as illustrated below, there are clear cases of the ecosystems being undervalued for mitigation purposes, thereby making it cheaper from a bottom line standpoint for energy companies not to conform to BTA. For them, the benefit of using cold marine water is far greater than the cost of habitat restoration. As your staff states on page 12 of this report, The biological impacts of OTC may not be adequately known since modern quantitative studies are difficult and costly. This statement again underlines our concern with using restoration as an interim measure. Trying to use the formula used by Staff in this section (17% x 2000 acres = 340 acres) without knowing the full biological impacts of OTC is another example of this devaluation of the ecosystem. Also, as difficult as it is to quantify all the impacts of OTC, it is just as hard to evaluate the benefits of restoration.

Though we believe the true value of estuarine and ocean waters as cooling agents for the plants is incalculable, it is clear that, besides being contrary to the Riverkeepers II holding, the current formula is inadequate. A better (though still insufficient) method might be to charge the power plant companies a portion of the percentage of their income resulting from the continued use of OTC. The formula to do this might be: Mean Energy Penalty for Dry Cooling vs. OTC x MW/h per year x Average Price of a MW/h = Additional Income as a Result of OTC.

As an example, we will use Moss Landing figures for the year 2006:

$2.1\% \times 5,362,144 \text{ Annual MW/h} \times \$61 =$   
 $\$6,868,905 \text{ Additional Income/Year as a Result of OTC.}$

We further want to point out that the present assessment fails to offer incentives to power companies to implement BTA. In fact, it creates just the opposite motivation to delay use of BTA. Again looking at Moss Landing, the CCRWQCB flatly refused to consider dry cooling as an alternative basing this on cost/benefit this was despite examples of dry-cooling technology being used in other places. Instead the RWQCB chose habitat restoration as mitigation and assessed a one-time mitigation cost of app. \$7 million. Looking at the above formula, it's clear that it was more profitable for Duke Energy to make a one-time payment of \$7 million in order to continue to use OTC and thus increase income by over \$6.8 million per year for the lifetime of the plant.

We go into this detail not to promote a new formula to calculate monetary mitigation for OTC which again we believe is prohibited by Riverkeepers II -- but to illustrate how defective the current assessment methods of mitigation are and how important it is to require BTA.

COMMENT re Page 83:

Regarding Paragraph 1D, BTA should be the primary requirement. By using closed-cycle cooling, for instance, limited estuarine or coastal waters are needed, thereby causing the least amount of damage to the ecosystem.

COMMENT re Page 84:

Paragraph 2B(1), under Final Compliance Dates, states, Existing non-nuclear fueled power plants having a capacity utilization rate of 20 percent or less shall comply with Section 2.A above no later than January 1, 2015.

See Table 13 of this report, the Mean Energy Penalty for Dry Cooling vs. OTC.

See Table 13 of this report, the Mean Energy Penalty for Dry Cooling vs. OTC.

See Table 3-1 of draft report entitled, Electric Grid Reliability Impacts from Regulation of Once-Through Cooling in California, published in April 2008 by the SWRCB and the CA Ocean Protection Council, which states Moss Landing CC1 and CC2 produced 5,362,144 MW/h in 2006.

According to chart entitled California Electric Market: Annual Bilateral Prices which was found on the FERC website (Market Oversight @ FERC. Gov) the Annual Average Bilateral Prices for Zones NP15 (Northern California) and SP15 (Southern California) were \$61.08 and \$61.95 respectively. These numbers were rounded down to \$61 for the above calculations.

The above paragraph should be changed to make such power plants comply with Section 2.A no later than January 1, 2012. As the following excerpt from pages 4 and 5 of the SWRCB and CA Ocean Protection Council's Electric Grid Reliability Impacts from Regulation of Once-Through Cooling in California, (April 2008) shows, it is clear these plants

could comply by 2012. Based on this report, we believe many of the existing OTC power plants could be retired in the next one or two years.

#### IMPACTS TO ELECTRIC SYSTEM RELIABILITY

In summary, the analyses conducted for this study shows that while the Board's pending OTC policy does have potential to negatively affect electric reliability, proper planning can compensate for any plant retirements and prevent reliability problems, provided the industry has sufficient time to respond. The general consensus of the energy industry is that 5 years is needed to plan, site, permit, and construct a new major power plant, and 7 years is needed for a new major transmission line. However, the vast majority of the transmission upgrades identified in the analysis to compensate for OTC plant retirements are relative modest, requiring only 1-3 years to construct and place in-service. Because the transmission planning process in the state has improved considerably in recent years, the state seems well poised to compensate for most OTC plant retirements in the 2012 and beyond time period by constructing transmission upgrades to tap into the excess generating capacity that is projected to occur then. . . .

#### COMMENT re Page 85:

We believe Paragraph C on "Interim Requirements" should be stricken in its entirety. The SWRCB should require use of BTA and begin immediate implementation of the standards set out in the Riverkeepers II decision. See also our previous comment regarding Page 46.

#### COMMENT re Page 83-88:

The approach used in this section attempts to keep the status quo, by preserving loopholes and following the same policies and procedures that it has in the past. These policies should be critically re-reviewed in light of the requirements set out in the Riverkeepers II decision, and policies and procedures, both interim and long-term, should be changed to conform with these. BTA, not best professional judgment or lesser standards, must be required starting now for both new plants as well as existing plants being "replaced," "renovated," "rebuilt," "re-powered," "modernized" or otherwise significantly altered. The SWRCB should adopt a strong policy to phase out the use of existing OTC power plants.

#### COMMENT re Page 90:

The status of the Morro Bay Power Plant (Morro Bay, CA) is listed as "proposed re-powering with 2 combined cycle units and OTC."

Clearly the Morro Bay Power Plant has to be critically re-examined by the CEC as well as the RWQCB in light of the Riverkeepers II decision. Using Best Professional Judgment standards, the use of OTC should be denied at this location. The sooner the RWQCB does this, the more time the owners of the plant will have to decide what to do next. We believe this should have been done two years ago when the CA Ocean Protection Council mandated that BTA be required at OTC plants. Anything less than BTA at the Morro Bay Power Plant is unacceptable.

#### PART B

The Coastal Alliance on Plant Expansion, a non-profit citizens group based in Morro Bay, which has been monitoring plans for the Morro Bay Power Plant since 1999, urges the State Water Resources Control Board to withdraw authorization for the Morro Bay Power Plant to continue operation using once-through cooling because of its unique status and position among California's coastal plants as well as the dire risk the Morro Bay National Estuary may face from continued killing of fish and larvae that has taken a severe toll on the Estuary over the past 50 years.

After reviewing the Scoping Document, we are very disappointed that the State Water Resources Control Board's long-awaited draft policy on use of once-through cooling by California's coastal power plants lacks the force, urgency, clarity and recognition of requirements under prevailing federal law for ending once-through cooling. In addition, we believe the Document is flawed and contains serious loopholes that will allow power companies to avoid compliance with best available technology requirements.

Facts and the Scoping Document itself provide abundant support for the request to halt use of OTC by the Morro Bay plant:

--The Morro Bay National Estuary is one of only two Environmentally Sensitive Habitat Areas in California, from which water and its marine life are diverted into the plant, killing vast numbers of small fish and other larvae. A proposed new plant using once-through cooling would kill between 17% and 33% of the fish and crab larvae in the Estuary, according to state-approved studies, indicating the relatively severe impact of the existing plant's OTC operations.

--The State Board is placing the Estuary and the economic base of the surrounding community at great risk by considering to allow continued use of OTC by the Morro Bay Power Plant in light of U.S. Environmental Protection studies that have shown that fisheries in estuaries and bays have been known to collapse from the killing of fish and larvae through diversion of their water into power plants.

--As Figure 1 on Page 4 of the Scoping Document (Percent of Total Power Production, OTC Power Plants in Calif.) shows, the Morro Bay plant produces a miniscule amount of electricity, through operation estimated at less than 6% of capacity over the past two years with no prospect for increased production absent costly upgrades. Even though the plant in recent years has been run much less, it operates in the summer when the marine life are at the height of their reproduction cycles, making their destruction particularly significant for the health of the Estuary and its surrounding ocean waters.

--The NPDES permit for the Morro Bay Power Plant is the longest expired among coastal plant permits and its continued unreviewed rollover on administrative extension for eight years makes a mockery of any reasonable state oversight of power plants and restrictions on their destruction of coastal resources.

Closure of little-used plants is one option that the reliability study cites. On Page 2, it states that "plant owners could choose to...shut the plant down, temporarily while waiting for more favorable economics for repowering or retrofitting." The owner of the Morro Bay plant has made clear repeatedly that it does not intend to convert the plant to closed-cycle cooling, as now required, or to build a new BTA plant. Therefore, there is no justification for continued operation of the plant using OTC, given the facts and arguments mentioned above against it.

The ELECTRIC GRID RELIABILITY IMPACTS FROM ONCE-THROUGH COOLING IN CALIFORNIA study dated April, 2008, also makes clear that closure of such plants will not jeopardize the state's supply of electricity. On Page 3, it states that "under all but the most extreme scenarios, more than enough power plants are expected to be operating in 2015 to more than compensate for any or all OTC plant retirements..."

The case for closing the Morro Bay plant would have been amply demonstrated had the study examined the situation at each plant in greater detail. The study acknowledged on Page 3 of the study that "ideally, the modeling effort would have been expanded to thousands of runs examining each OTC plant in great detail, instead of the limited number of runs that were possible for this study." But the referenced facts that the study would have revealed speak for themselves.

Short of that ideal, however, the study urges continued "comprehensive study of the issue (of substituting BTA for OTC among the state's coastal plants), examining the reliability implications of retirement of each plant individually and in combinations with all other plants.

With respect to the Scoping Document in general, we firmly believe that a broad state policy that will recognize the destruction of marine life stemming from once-through cooling is not only overdue but required by legal mandate. We hope that adequate, legal new protections of our coastal resources lie ahead.

Here are some of our specific comments:

--The Scoping Document states that "the mission of the Water Boards is to protect water resources and marine/estuarine life," but now, faced with an opportunity and a legal mandate to carry out its mission, the board staff proposes allowing California's coastal power plants to kill 475 billion fish, invertebrates and larvae--based on the document's own annual figures extended for six more years--and continue to destroy the public's coastal resources before it even begins in 2015 to enforce some measure of controls over the use of once-through cooling by those plants.

--The Document's introduction attempts to provide historical context and implicit rationale for the board's effort to enact a new state policy on once-through cooling at this time but grossly misleads by stating "the State Water Resources Control Board (State Water Board) is therefore considering the development of a state policy for water quality control to establish requirements for implementing section 316(b) for existing coastal and estuarine power plants." It does so with no mention whatsoever that the Second Circuit Federal Appeals Court on Jan. 25, 2007, in effect, banned the use of once-through cooling by all power plants by requiring each to use BTA. To further mislead, it states that attempts by the USEPA "to adopt regulations implementing section 316(b) for existing power plants have been largely unsuccessful." This is false. The EPA has adopted regulations, but they have largely been overturned as inconsistent with the Clean Water Act by the same unmentioned Second Circuit court. And, to provide real perspective, the document should acknowledge at the outset that the board is being forced to consider adoption of a new policy as a direct result of that court decision.

Yes, the court's decision is referenced later in the document but not where readers could immediately understand the historical significance and the legal mandate that the effort to fashion a new policy to protect California's priceless coastal waters represents.

--The Reliability study, in summarizing its recommendations, requests that "the industry must continue comprehensive study of the issue" of OTC with BTA. We strongly object to the industry conducting any research or study on which the board as a public agency may rely for its policy decisions. The public record is overflowing with industry misinformation and claims disproved by public agency staffs. It should be noted that power plant representatives have commented to the board in public meetings that power plants do no harm to marine life.

--The Reliability study on Page 5 estimates that the costs for OTC plant retirements and conversions "could range from as little as around \$100 million to as much as \$11 billion, depending on how and when the policy is enacted, and how the energy industry responds to OTC plant retirements." We regret the use of such a expansive range because the \$11 billion figure opens the way for typically-misrepresented arguments that power companies can use to lobby and mislead the public about the costs of conversion from OTC to BTA. A series of narrower cost ranges tied to various scenarios would have been more realistic and useful to decisionmakers and the public alike and would have discouraged the distortions that plant owners may exploit.

--Table 2 on Page 3 of the Scoping Document contains Flow and Power Production Summary for OTC Power Plants, which is the basis for this statement: "Collectively, the OTC power plants produce a sizable fraction of California's power, as large as 35 percent in 2001." This is very misleading because the years 2000 and 2001 were artificially inflated due to market manipulation by power companies, as documented by the Federal Trade Commission. Those years should not be referenced as an indicator of plant production "as large as 35 per center in 2001" because they serve to portray these plants as more productive than they are in fact. The years 2006 and 2007, which are not shown unfortunately, are more representative of the past five years of OTC power plant power production, which should legitimately be considered normal.

--Table 3 lists OTC Power Plant/Unit Electricity Generation Capacities, and the text says "gross plant output data were used instead of net plant output data to compute the utilization (the difference between gross and net output have not been considered in this analysis)." Failure to reference net output is extremely misleading as to the capabilities of these plants because many of them do not and cannot generate anything near the gross capacities listed on the table. Morro Bay is a good example and is representative of many of the plants; its capacity is listed at 1002 MW but two of its four units have been retired and the two operational units have not operated anywhere near their generating capacities for at least four years and are now incapable of doing so. Therefore, this table, like Table 2, makes the plants appear to have the ability to generate energy far above their actual capabilities.

--The Riverkeeper II decision by the Second Circuit Court of Appeals, dated Jan. 25, 2007, states unequivocally that "section 316(b), on its face, applies to existing facilities," but this surety is not mentioned or recognized in the document.

--The Document's statements are not reliable without citations of authorities for the statements, rendering them open to undocumented interpretation, i.e. "Clean Water Act requires"...and the "State Water Board is designated as the state water pollution control agency." It is unclear why these statements are not attributed in the same document that this attribution appears: D. State law in California Water Code §13142.5...

--This statement is extremely controversial without reference to an authority and raises the question of whether this is the state board's interpretation: "Currently, there are no applicable nationwide standards implementing §316(b) for existing power plants. Consequently, the Water Boards must implement §316(b) on a case-by-case basis, using best professional judgment."

--If there are, as the document claims, no applicable nationwide standards implementing 316(b) for existing power plants, how can it be true that "cooling water intake structures at existing coastal and estuarine power plants...must be implemented in NPDES permits"?

--1. G. of the Appendix to the Document: The stated intent of this policy is to ensure that the beneficial uses of the State's coastal and estuarine waters are protected while also ensuring that the electrical power needs essential for the welfare of the citizens of the State are met. This statement, if taken literally, appears to be needlessly narrow and ignores other sources of energy, such as solar, wind and wave generation for meeting the state's power needs. (Other references to the Appendix follow.)

--1. H.: The Ocean Protection Council must be included among agencies because of its role and responsibilities in protection of coastal resources.

--2. A. (1) (2) This section without legal or statutory basis allows differences in compliance requirements between new and existing plants. The Riverkeeper II decision by the Second Circuit Court of Appeals, dated Jan. 25, 2007, prohibited reliance on EPA rules in this regard.

Page 54 of the decision: The environmental petitioners challenge the reclassification in the Phase II Rule preamble of certain new constructions as "existing facilities," thereby rendering them subject to the Phase II Rule rather than the more stringent Phase I requirements that apply to new facilities. We agree with the petitioners that the Agency interpretively modified a definition appearing in the Phase I Rule via statements in the preamble to the Phase II Rule without providing interested parties notice and an opportunity for comment."

--2. B. The compliance dates provide no justification for failure to comply with the prevailing law under the Second Circuit decision, which stated: "We conclude in any event that the language of section 316(b) itself plainly indicates that facilities must adopt the best technology available and that cost-benefit analysis cannot be justified in light of Congress's directive." Nor do these sections provide any rationale for allowing a minimum of six years until

compliance is achieved, despite, as the decision noted, once-through cooling and "the resulting impingement and entrainment from these operations kill or injure billions of aquatic organisms every year." And despite the findings of the California Energy Commission's 2005 Integrated Energy Policy Report, which stated: "California marine and estuarine environments are in decline and the once-through cooling systems of coastal power plants are contributing to the degradation of our coastal waters...California's Ocean Action Plan recognized...that the marine environment has been overexploited to the point that its biological integrity and the viability of economies that depend on it are threatened..." The draft policy ignores these impacts to California's treasured coastal resources without any valid rationale for allowing OTC for at least six more years.

--2. C. (1) This provides plants the option of substituting a lax limit on once-through cooling discharges for a more stringent one in 2.A. (2). It allows plants to meet Track 2 compliance alternatives in 2.A.(2) when not generating electrical energy for a period of two or more consecutive days by reducing discharge flows to less than ten percent of the permitted daily flow rate. This unnecessarily allows plants to substitute this looser requirement for reduction in the level of adverse environmental impacts from the cooling water intake structure to a comparable level to that which would be achieved under Track 1, using operational or structural controls, or both.

--2. C. (3) Impingement and entrainment impacts due to the cooling water intake structure(s) are allowed to be offset by habitat restoration by plant owners and a plan for habitat restoration must be included in any compliance implementation plan. This is blatantly illegal. The Second Circuit decision explicitly forbids restoration, as stated in these sections of the Riverkeeper II decision:

--Restoration mitigation is prohibited ("Riverkeeper I foreclosed the EPA from interpreting section 316(b) in the Phase II Rule to permit restoration measures as a means of complying with the statute").

--"Restoration measures correct for the adverse environmental impacts of impingement and entrainment," we noted, but "they do not minimize those impacts in the first place." We agree with the petitioners that Riverkeeper I held that the Agency's decision to permit restoration measures in the Phase I Rule was not "based on a permissible construction of the statute," *Chevron*, 467 U.S. at 843, and that this holding applies equally here (for existing plants).

--Restoration measures are not part of the location, design, construction, or capacity of cooling water intake structures, *Riverkeeper I*, 358 F.3d at 189, and a rule permitting compliance with the statute through restoration measures allows facilities to avoid adopting any cooling water intake structure technology at all, in contravention of the Act's clear language as well as its technology-forcing principle. As we noted in *Riverkeeper I*, restoration measures substitute after-the-fact compensation for adverse environmental impacts that have already occurred for the minimization of those impacts in the first instance.

--3. B. of the Appendix: Within one year of the effective date of this Policy, existing power plant dischargers shall submit an implementation plan for approval to the Water Board. The implementation plan shall identify the compliance alternative selected by the discharger, describe the design, construction, or operational measures that will be undertaken to implement the alternative, and propose a schedule for implementing these measures. This requirement contains no standards to guide plants in submitting plans to meet requirements that new and expanded coastal power plants using seawater for cooling must utilize the best available site, design, technology, and mitigation measures. The model for guiding plants to comply with state requirements should be the Second Circuit decision, which laid out explicit standards for determining compliance with the Clean Water Act.

--4. A. and B. Impact studies are irrelevant and only serve to mislead about best available technology requirements because, in fact, impacts are eliminated by BTA whether a new or existing plant is the issue, as required by the Second Circuit decision.