

February 26, 2008

Mike Chrisman, Chair and Members  
California Ocean Protection Council  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

**Re:** Ocean Protection Council guidance on a statewide policy to address once-through cooling systems.

**VIA EMAIL:** [COPCpublic@resources.ca.gov](mailto:COPCpublic@resources.ca.gov)

Dear Chair Chrisman and Members of the Council:

The undersigned groups commend the Ocean Protection Council (“Council”) for taking a leadership role in the development of a clear and consistent state policy to protect coastal, estuarine, and marine ecosystems from the devastating impacts of once-through cooling (“OTC”). The resolution on OTC you passed in April of 2006<sup>1</sup> and your draft feasibility study provide important guidance and support to the State Water Resources Control Board (“State Board”) as it implements state and federal requirements through developing state policy on OTC.<sup>2</sup> **We respectfully submit the following comments and ask that you continue to lead the agencies tasked with addressing once-through cooling issues to a prompt and timely phase-out of this antiquated technology.**

It has been almost two years since you passed your resolution on OTC, and yet California still does not have a clear statewide policy on once-through cooling. While we wait for the State Board to finalize a policy, the daily assault on our delicate marine and estuarine ecosystems continues. Just last week, the National Marine Fisheries Service released a notice of receipt of applications filed by 13 Southern California power plants using OTC for incidental take permits under the Marine Mammal Protection Act to kill and injure marine mammals, including California sea lions, harbor seals, and northern elephant seals.<sup>3</sup> For example, San Onofre estimates that it will kill an average of 14 California sea lions and six harbor seals per year in its OTC system, while Scattergood reports that over a 17-year period, it entrained 69 California sea lions in its OTC system, 55 of which died.<sup>4</sup> These deaths are both tragic and entirely avoidable.

In early 2007, directly after the Second Circuit Court of Appeals decision in *Riverkeeper, Inc. v. U.S. EPA*, 475 F.3d 83 (2d Cir. 2007) (“*Riverkeeper II*”), the U.S. Environmental Protection Agency (“EPA”) sent a memo to the Regional Administrators directing them to institute best professional judgment regarding permits under section 316(b) of the Clean Water

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<sup>1</sup> Resolution of the California Ocean Protection Council Regarding the Use of Once-Through Cooling Technologies in Coastal Waters (adopted April 20, 2006); *available at*: [http://www.resources.ca.gov/copc/docs/060418\\_OTC\\_resolution\\_LH2\\_adopted\\_2006-4-20.pdf](http://www.resources.ca.gov/copc/docs/060418_OTC_resolution_LH2_adopted_2006-4-20.pdf) (Resolution).

<sup>2</sup> *E.g.*, the Resolution “encourages the State to implement the most protective controls to achieve a 90-95 percent reduction in impacts.”

<sup>3</sup> Federal Register: February 20, 2008 (Vol. 73, No. 34); *available at*: <http://a257.g.akamaitech.net/7/257/2422/01jan20081800/edocket.access.gpo.gov/2008/E8-3146.htm>.

<sup>4</sup> *Id.*

Act.<sup>5</sup> Specifically, U.S. EPA headquarters directed the Regional Offices as follows: “With so many provisions of the Phase II [existing facilities] rule affected by the [*Riverkeeper II*] decision, the rule should be considered suspended . . . . In the meantime, all permits for Phase II facilities should include conditions under section 316(b) of the Clean Water Act developed on a Best Professional Judgment basis.”<sup>6</sup> “Best professional judgment” should be informed by the clear judicial review and holdings in *Riverkeeper II*. For example, the federal appeals court found that “after the fact restoration” cannot substitute for best available technology, and “cost/benefit analysis” is prohibited. Despite this specific direction from U.S. EPA, the Regional Water Quality Control Boards (Regional Boards) have failed to properly reissue NPDES permits for power plants using OTC, and the State Water Resources Control Board (“State Board”) has denied petitions for review of improperly reissued permits, and in at least one case cited the imminence of the long-overdue state policy as the reason. Out of the 19 plants currently using OTC, 11 have NPDES permits that have already expired; Regional Board staff has stated that they are waiting for the statewide policy to update these overdue permits. Three more plants have NPDES permits that will expire in 2008, which means almost three-quarters of the plants using OTC will have overdue permits in 2008 because of the delayed policy.

We encourage the Council to follow through with your strong resolution to ensure that the agencies involved, including the State Board, the California Energy Commission (“CEC”), California Public Utilities Commission (“CPUC”), State Lands Commission, and California Coastal Commission, among others, are on target to expeditiously phase out OTC, which is ravaging our coastal, marine, and estuarine ecosystems and marine life.<sup>7</sup> We are concerned that some of the goals in the OPC Resolution are not being met. Accordingly, **we request that you direct OPC staff to work with staff of affected agencies to assess their progress towards achieving all of the goals set forth in your resolution, and to report back to the Council on their findings at the next OPC meeting.** Some of these key provisions are highlighted and discussed below.

### **First Resolve Clause**

*“RESOLVES that, in agreement with U.S. EPA findings, the environmental impacts from once-through cooling technologies for coastal power plants can be significant, and resolves to urge the State Water Resources Control Board to implement Section 316(b) and more stringent state requirements requiring reductions in entrainment and impingement at existing coastal power plants and encourages the State to implement the most protective controls to achieve a 90-95 percent reduction in impacts;”*

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<sup>5</sup> Memorandum from Benjamin Grumbles, Assistant Administrator, U.S. EPA to U.S. EPA Regional Administrators, “Implementation of the Decision in *Riverkeeper, Inc. v. EPA*, Remanding the Cooling Water Intake Structures Phase II Regulation” (March 20, 2007).

<sup>6</sup> *Id.*; see 40 CFR § 401.14.

<sup>7</sup> In 2005, California Energy Commission staff identified OTC as a contributing factor to the degradation of California’s fisheries, estuaries, bays and coastal waters in its report *Issues and Environmental Impacts Associated with Once-Through Cooling at California’s Coastal Power Plants*, CEC Report No. 700-2005-013; available at: [www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013.PDF](http://www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013.PDF).

The State Board staff released a draft OTC policy in June 2006<sup>8</sup> and received written comments by September 2006. The most recent public discussion of possible revisions to that policy occurred at a public OTC workshop in January 2008, where State Board staff noted that neither the exact level of targeted reductions in impacts, nor the method for assessing those reductions, had yet been finalized.<sup>9</sup> Of significant concern is the fact that some of the options discussed for calculating reductions in impacts would result in no changes in operations for many of the plants, in contravention of the Clean Water Act and your resolution.<sup>10</sup> Furthermore, we are very concerned by the State Board's continued delay in the release of its OTC policy. The State Board has been working on this policy for over two years, and still has not committed to a deadline for its publication. Meanwhile, as stated above, close to three-quarters of the plants using OTC will have expired NPDES permits in 2008 due to the delayed policy. **We ask that you direct staff to assess and report back to you at the next meeting on the State Board's specific progress in implementing Section 316(b) consistent with *Riverkeeper II*, U.S. EPA's direction, and your resolution, and ask that you urge the State Board to release the policy in a timely fashion, no later than June 30, 2008.**

#### **Fourth Resolve Cause**

*“ FURTHER RESOLVES to fund a 6-month study that will analyze each of the existing coastal plant's conversion to alternative cooling technologies or installation of best technology available;”*

Although the Council's Draft Alternative Cooling System Analysis (“OPC feasibility study” or “study”) is somewhat helpful in assessing the potential alternatives to OTC for coastal power plants, the scope of the study was very limited and therefore does not give complete information upon which to base a statewide policy. As discussed in our November 2007 comments on the OPC feasibility study (attached), the study only examines retrofitting the existing plants, which involves changing only the cooling technology of the plant. It does not address the option of repowering, which would involve changing both the power generation and cooling technology of a plant. Repowering to a combined-cycle power generation with wet or air cooling, which is happening with increasing frequency already, would in many cases result in newer, cleaner, more efficient power generation than retrofitting the existing facilities. By not examining repowering, the study missed an important opportunity to research an option that would solve multiple environmental problems and improve our energy efficiency and reliability.

The power plant operators themselves have demonstrated that repowering is often a preferred alternative that offers an opportunity to solve multiple environmental impacts and improve energy efficiency. In the wake of the OPC resolution and the *Riverkeeper II* decision,

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<sup>8</sup> Proposed Statewide Policy on Clean Water Act Section 316(b) Regulations, *available at*: [http://www.swrcb.ca.gov/npdes/docs/cwa316b/316b\\_scoping.pdf](http://www.swrcb.ca.gov/npdes/docs/cwa316b/316b_scoping.pdf).

<sup>9</sup> “Implementation of Clean Water Act Section 316(b) Once Through Cooling Research Results Symposium, UC Davis January 16, 2008.” *available at*: [http://www.waterboards.ca.gov/npdes/docs/cwa316b/symposium\\_2007jan/steve\\_saiz.pdf](http://www.waterboards.ca.gov/npdes/docs/cwa316b/symposium_2007jan/steve_saiz.pdf)

<sup>10</sup> For example, staff discussed using permitted flows as the baseline (*Id.* at p. 11). Most power plants operate far below their permitted flows, and therefore if the reduction were calculated on permitted, rather than average annual actual flows, most plants would not have to institute any changes to their operations to be in compliance and therefore would provide no actual protection for marine life.

four power plants - including El Segundo, Encina, Humboldt, and South Bay - have announced their intention to repower to combined-cycle operation without the use of once-through cooling.<sup>11</sup> The repowering option could be viable in the few instances that the study found retrofitting more difficult. For example, while the OPC feasibility study found that retrofitting of the existing OTC system at El Segundo Generating Station to a closed-cycle wet cooling system “poses several challenges with respect to areas available for placement and potential conflicts with other land use policies,”<sup>12</sup> NRG Energy, the company that owns the EL Segundo plant, recently demonstrated that repowering instead is not only feasible, but preferable for this plant.<sup>13</sup>

In addition to repowering, retirement of some of the once-through cooled plants might also be a preferable option. In its *2005 Integrated Energy Policy Report* the CEC called for studies to plan for the retirement of the coastal steam-powered plants by 2012; CEC staff also presented testimony to the CPUC on this topic in 2007.<sup>14</sup> Since 2005, two once-through cooled power plants, Hunters Point and Long Beach, have retired.<sup>15</sup> The California Independent System Operator (“CAISO”) is currently conducting its own grid reliability study titled *Mitigation of Reliance on Old Thermal Generation Including Those Using Once-Through Cooling Systems*. In its draft study CAISO states that “A mix of scenarios will be developed that will include retirement/replacement of old thermal generation, development of new generation (particularly renewable generation) and related reinforcement of the electric transmission system.”<sup>16</sup> CAISO’s findings also support the notion that prolonging the life of these steam plants perpetuates other environmental problems. The draft study states that “the power plants being analyzed tend to have higher heat rates than newer combined-cycle generating plants. They also tend to have higher green house gas emission rates and other pollutants than new generation sources.”<sup>17</sup>

**Based on this extensive and growing body of information on the options available to phase out OTC in a manner other than retrofitting existing plants, we ask that you direct staff to report back as well at the next meeting on the range of options both being used and being examined to address OTC, other than the retrofit and technical control options reviewed in your study.**

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It has been over thirty years since the Clean Water Act first laid out the requirements for power plant cooling technology, two years since the Council’s and the State Lands Commission’s

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<sup>11</sup> California Energy Commission, *2007 Environmental Performance Report of California’s Electrical Generation System*, Draft Staff Report, CEC Report No. 700-2007-016-SD, p 56-57 (“2007 Environmental Performance Report”); available at: <http://www.energy.ca.gov/2007publications/CEC-700-2007-016/CEC-700-2007-016-SD.PDF>.

<sup>12</sup> Ocean Protection Council, “Draft Alternative Cooling System Analysis,” p. D-1.

<sup>13</sup> Petition to Amend the Final Commission Decision for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF, June 2007, p. 2-2 and Figures 2.1-1, 2.1-2a, and 2.1-2b (proposes repowering to closed cycle dry cooling system at Units 1 & 2).

<sup>14</sup> 2007 Environmental Performance Report at p. 17.

<sup>15</sup> *Id.* at p.58

<sup>16</sup> California Independent System Operator, *Old Thermal Generation Retirement and Replacement of Once-Thru Cooling Long-Term Transmission Planning Study Version 2.0* “Mitigation of Reliance on Old Thermal Generation Including Those Using Once-Thru Cooling Systems Study Plan Draft Version 2.0,” p.1; available at: <http://www.caiso.com/1c58/1c58e92e2cc30.pdf>.

<sup>17</sup> *Id.* at p.1.

resolutions on once-through cooling, and over a year since the *Riverkeeper II* decision and U.S. EPA's direction for "all permits for Phase II facilities [to] include conditions under section 316(b) of the Clean Water Act." We are long overdue for a clear, consistent statewide policy that protects our coastal, marine and estuarine ecosystems and helps to move California towards a future with cleaner, more efficient and more sustainable energy production.

The Council has the authority to coordinate "activities of state agencies, that are related to the protection and conservation of coastal waters and ocean ecosystems, to improve the effectiveness of state efforts to protect ocean resources..."<sup>18</sup> We respectfully ask that you exercise your authority and continue to lead the way to stopping this needless assault on our resources. Thank you for considering our request to have staff assess the affected agencies' progress towards achieving the all of the goals set forth in your resolution and report back to the Council at the next meeting.

Sincerely,

Linda Sheehan  
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California Coastkeeper Alliance

Mark Gold, D. Env.  
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Heal the Bay

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Surfrider Foundation

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<sup>18</sup> California Public Resources Code § 35615 (a)(1).

Conner Everts  
Co-Chair  
Desal Response Group

Dr. Suzanne Michel  
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Doug Buckmaster  
Secretary-Treasurer  
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cc: Tam Doduc, Chair, State Water Resources Control Board  
John Chiang, State Controller and Chair, State Lands Commission  
Patrick Kruer, Chair, California Coastal Commission  
Peter Douglas, Executive Director, California Coastal Commission  
Sam Schuchat, Executive Officer, California Coastal Conservancy  
Jackalyne Pfannenstiel, Chair, California Energy Commission  
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B.B. Blevins, Executive Director, California Energy Commission  
Michael Peevey, President, Public Utilities Commission  
Yakout Mansour, President and CEO, California ISO  
Larry Tobias, Senior Regional Transmission Engineer, California ISO

Attachment