

Department of Water and Power



the City of Los Angeles

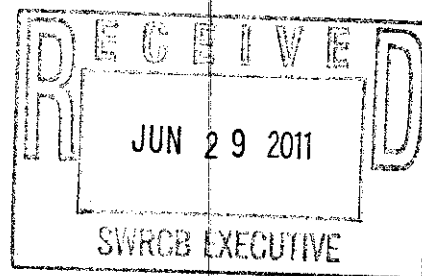
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June 28, 2011

Ms. Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
1001 "I" Street, 24TH Floor
Sacramento, California 95814



Dear Ms. Townsend:

Subject: Comment Letter – OTC Policy Amendment

The Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to review and comment on the State Water Resources Control Board's (SWRCB) Proposed Amendment to the Statewide Water Quality Control Policy (OTC Policy) on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Amendment), dated May 17, 2011, and its associated Draft Staff Report (Staff Report) of May 20, 2011.

I want to thank the SWRCB and its staff for taking the time to meet with LADWP and gain an in-depth understanding of LADWP's power system and the implications the unique operational characteristics of the LADWP system have for the manner in which we are able to comply with the SWRCB's requirements for reducing the use of once-through cooling (OTC) for our coastal power plants. LADWP vigorously supports the proposed Amendment, and commends SWRCB staff for its support in recommending the Alternative 3 over the other proposed alternatives, which recognizes LADWP's need for an extended compliance schedule in order to maintain the reliability of our system. The amended OTC Policy, with LADWP's core commitment to totally eliminate the use of OTC, is the most environmentally beneficial alternative, as it goes beyond the original policy goal while maintaining a secure and reliable electric system.

As noted in the Staff Report (second paragraph on Page 9), LADWP has already reduced its OTC fleet from 14 to 9 units, and is about to embark on a three-

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phase repowering program that will achieve significant OTC reductions as additional OTC units go off-line. LADWP is unique among California utilities; it is its own balancing authority and must oversee generation, transmission and distribution facilities and operations. While other utilities have to comply with some State mandates, LADWP is the only utility that must, in addition to adhering to the SWRCB OTC Policy, comply by 2020, with AB 32, and SB 1, while also working to achieve the goals of SB 1368. Therefore, for LADWP, the ramifications of the OTC Policy cannot be evaluated alone, but as one element of a larger plan for complying with all State mandates.

The Table below presents the OTC reductions at each stage, along with other major modifications to the LADWP power supply system as we concurrently eliminate OTC at our plants.

Year Unit/s Repowered Start and in Service	Unit/s No.	OTC Reduction			Total LADWP
		Scattergood	Haynes	Harbor	
2007 - 2013	5 & 6		50%		42%
2009 - 2015	3	55%			56%
2016 - 2020	Achieve 33 percent renewable portfolio standard (RPS) Integrate renewable energy (Variable Energy Resources [VERs]) Comply with SB 1368 (divest Navajo Generating Station's coal-fired generation) Transmission system upgrades to deliver renewable energy to the LADWP system				
2016 - 2024	1 & 2	100%			68%
2020 - 2027	1 & 2		77%		82%
2025 - 2031	5			100%	87%
2028 - 2035	8		100%		100%

As per previous discussions and correspondence, the proposed extended compliance schedule reflects the importance of the OTC units to the reliable operation of the LADWP power system to meet our retail customers' needs. As designated "reliability must run" units; they must remain online and operational to ensure LADWP's compliance with the reliability criteria set forth by the Western Electricity Coordinating Council (WECC). Simply put, we cannot take our coastal, gas-fired power generation units off-line to replace them in order to convert to dry cooling. While new units are built to comply with the elimination of OTC, we need to keep the existing OTC units operating. Physical space limitations require that we do this in a sequence that precludes completion of all of the replacements by 2020.

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These units are also critical to maintaining voltage support and balance to LADWP's entire electric power system. The western and southern portions of LADWP's service territory are situated in a power "cul-de-sac" that cannot easily be supplied by power imported from long-distance transmission lines or other local generation. The nearby OTC stations therefore represent nearly 100 percent of the area's power source. Power generation from other locations cannot replace the function of any of our existing coastal generating plants.

As LADWP works toward a 33 percent RPS, dependable, quickly available power sources – primarily LADWP's OTC units - are necessary to integrate intermittent renewable power, a VER. A schedule that allows the continuous operation of the OTC units is necessary for LADWP to meet Local Area Reliability (LAR) requirements. While costs alone are not the reason for our inability to achieve elimination of OTC by 2020, the ability to "amortize" compliance costs over a longer period is essential in a city where the LADWP rate payer will pay 100 percent of the cost and nearly 16 percent of families and 19 percent of all individuals have incomes that fall below the poverty level. More rapid implementation of such a major portion of our irreplaceable power supply sources would add meaningfully to the significant other costs that LADWP is incurring as we meet other State mandates and rebuild and replace a 100-year old power system that serves over four million people in our City.

Lastly, as a municipal utility governed by City Charter, LADWP cannot "walk away" and cease operations. Unlike non-municipal utility power generators, LADWP is mandated to provide power 24 hours a day, 7 days a week, in a reliable, cost-effective manner to meet the requirements of our utility customers.

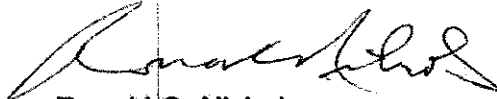
The SWRCB carved out exceptions for nuclear facilities due to their uniqueness. Specifically, allowing consideration of their OTC compliance costs makes sense – and SWRCB is to be commended for doing so. However, a binary analysis that categorizes nuclear facilities as distinct entities, but groups all other fossil-fueled power plants together, is too simplistic. LADWP appreciates that SWRCB also recognized that LADWP's uniqueness warrants consideration rather than a one-size-fits-all approach, and thus proposed this Amendment after review of our Implementation Plan, submitted April 1, 2011.

In closing, LADWP also has a few comments regarding the Staff Report that can be found in the enclosure. LADWP sincerely appreciates the efforts involved in drafting the Amendment that provides compliance dates for LADWP which are physically achievable and enables the LADWP power system to operate reliably while totally eliminating ocean cooling.

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If you have any questions or require additional information, please contact Ms. Lorraine A. Paskett or Ms. Katherine Rubin of the Sustainability Programs and External Affairs Division at (213)367-0926 or (213)367-0436, respectively.

Sincerely,



Ronald O. Nichols
General Manager

KR/LAP/RON:en

Enclosure

c/enc: Ms. Nancy McFadden - Executive Secretary, California Governor's Office
Mr. Charles R. Hoppin - Chairman, SWRCB
Ms. Fran Spivey Weber - Vice Chairman, SWRCB
Ms. Tam M. Doduc, Member - SWRCB
Mr. Thomas Howard - Executive Director, SWRCB
Mr. Michael Lauffer - Chief Counsel, SWRCB
Ms. Marley Wood - Counsel, SWRCB
Mr. Jonathan Bishop - Chief Deputy Director, SWRCB
Mr. Dominic Gregorio - Staff, SWRCB
Ms. Joanna Jensen - Staff, SWRCB
Ms. Lorraine A. Paskett
Ms. Katherine Rubin

Proposed Amendment to the Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling Draft Staff Report (Staff Report)

LADWP provides the following comments on the Staff Report.

A. Amendment Introduction, Item 3 "Implementation Provisions," Section E., Table 1 "Implementation Schedule" (page 12)

As elaborated in LADWP's comment letter, LADWP supports the Amendment and the revised OTC compliance or "Due Dates."

Although the compliance dates set forth in the May 4, 2010, adopted OTC Policy were developed using a report produced by energy agencies (the California Energy Commission or CEC; the California Public Utilities Commission, or CPUC; and the California Independent System Operator or CAISO), it must be noted that these agencies stated that the dates specified in their report "may require periodic updates," as referenced in the Introduction, Section H of the Amendment document's Introduction (Page 2). LADWP appreciates that the need for updates was acknowledged. But as a public utility that must plan years in advance, LADWP requires the certainty that this Amendment offers.

LADWP would like to address the amount of time considered necessary to repower an OTC generating station. The original compliance schedule presented in the OTC Policy appears to have been based on the "general consensus of the energy industry that five years is needed to plan, site, permit, and construct of a new major power plant, and seven years is needed for a major transmission line," as stated in Page 4 of the April 2008 SWRCB's report entitled "Electric Grid Reliability Impacts from Regulation of Once-Through Cooling in California."

In contrast, the revised LADWP compliance dates in the Amendment are predicated upon an average of six to eight years for each repowering. LADWP believes this is not only accurate, but also aggressive, and was based on LADWP repowers undertaken to date. These are Haynes Units 3 and 4, Harbor Units 1-6, and the repowering of Haynes Units 5 and 6, and Unit 3 at Scattergood which are now underway.

Chart 1 – Description of Repowering with Closed-Cycle Cooling Tasks, found on Page 14 of LADWP's Implementation Plan (IP), which was submitted to the SWRCB on April 1, 2011, shows the time required for each phase of a repower: conceptual engineering, emission modeling, preparation of a Request for Proposal (RFP), preparation of the City of Los Angeles-mandated ordinance, permitting and engineering, the California Environmental Quality Act (CEQA) process, issuance of the final RFP and award of a contract, City Council

approval, procurement of equipment, construction, commissioning of new units, trial operation, and demolition of existing equipment. This timeline allocates no time for schedule delays.

Items of Concern

Although LADWP supports the Amendment, LADWP believes that the following items require clarification or refinement.

A. Amendment Introduction, Item 2 "Requirements for Existing Power Plants," Section C. "Immediate and Interim Requirements," Item 4 (Page 8)

LADWP also supports the new Impingement Mortality (IM) and Entrainment (E) mitigation requirements found in the above-referenced Item 4 (listed below), with additional clarification

(4) Owners or operators of fossil fueled units that utilize OTC after December 31, 2020 shall:

- (a) Commit to eliminate OTC for all units at the facility.
- (b) Conduct a study or studies, singularly or joint with other facilities, to evaluate new technologies or improve existing technologies to reduce impingement and entrainment.
- (c) Submit the results of the study and a proposal to minimize entrainment and impingement to the Chief Deputy Director no later than December 31, 2015.
- (d) Upon approval of the proposal by the Chief Deputy Director, complete implementation of the proposal no later than December 31, 2020.

LADWP believes that a portion of the Staff Report is relevant when discussing IM and E mitigation efforts:

In paragraph B of the Staff Report, Item 2., Regulatory Background (Last paragraph on Page 3), this item states: "USEPA concluded in its analysis that closed-cycle cooling reduces impingement and entrainment mortality to the greatest extent, but may not be practically feasible in a number of circumstances. Regarding alternative control technologies for entrainment, USEPA concluded that investigated screening technologies *are significantly less effective than initially thought in reducing entrainment mortality* (emphasis added), and could not identify (a) single technology that represented Best Technology Available (BTA) for all facilities. For alternative impingement mortality controls, USEPA is proposing the use of modified traveling screens with a fish handling and return system or reduced intake velocity as BTA."

The Amendment stipulates that fossil fuel owners/operators: "(b) Conduct a study or studies, singularly or joint with other facilities, to evaluate new technologies or improve existing technologies to reduce impingement and entrainment."

LADWP is supportive of this approach and believes that research and development of these technologies can only be beneficial in the future.

Recommendation

In the interim, LADWP plans to help foster the development of new technology by participating in jointly sponsored pilot studies as stated in its IP. However, a dollar limit needs to be agreed upon, in addition, should technology (ies) prove infeasible, LADWP recommends being able to fund mitigation until compliance at \$3/million gallons (MG), or some amount that is mutually agreed upon by the discharger and the Board that is deemed fair and reasonable.

B. Staff Report, Item 8, "Analysis of Alternatives and Issues," Table 1 and Table 2 (Page 14)

The above-referenced Table 1 provides "a comparison of impingement (numbers of fish) under the Policy and the Amendment (2010-2040), while Table 2 provides "a comparison of entrainment under the Policy and the Amendment (2010-2040) if compliance was by dry cooling and/or wet cooling using only recycled wastewater" (Page 14).

LADWP notes that it will eliminate OTC usage by 2035, and recommends that the Tables be amended to reflect that end date.

Further, LADWP does not believe that design flows are the appropriate metric for comparing I and E impacts under the Policy and Amendment, given that actual flows were significantly less, as shown below:

Facility	Total Design Flow in Millions Gallons/Day (MGD)	Actual Average Annual Flow (2000 - 2010) MGD	Percent of Design
Scattergood	495	302	61.01%
Haynes	968	723	74.69 %
Harbor	108	54	50.00%

Recommendation

Therefore, LADWP submits its own comparisons (below), based on actual flow and I and E data, and requests that SWRCB use this when evaluating the Amendment.

Table 1 – Revised estimated fish impingement based on actual cooling water flow volumes and impingement rates recorded during the 2006 Impingement and Entrainment Characterization studies at each of the three LADWP facilities. Negative values indicate the level of increased fish impingement resulting from the revised compliance dates listed in the proposed amendment. Positive values indicate less fish impingement resulting from the compliance dates in the proposed amendment. Estimated fish impingement under the amendment scenario represents impingement occurring between October 1, 2010, and the compliance dates specified in the proposed amendment not to exceed December 31, 2035.

Table 1 – Revised by LADWP

Scenario	Harbor GS	Haynes GS	Scattergood GS	Total DWP
Policy	51,216	438,462	1,037,861	1,527,539
Amendment	207,269	683,893	1,020,079	1,911,241
Difference	-156,053	-245,431	17,782	-383,702

Table 2 – Revised estimated fish larvae entrainment based on actual cooling water flow volumes and entrainment rates recorded during the 2006 Impingement and Entrainment Characterization studies at each of the three LADWP facilities. Negative values indicate the level of increased fish larvae entrainment resulting from the revised compliance dates listed in the proposed Amendment. Positive values indicate less fish larvae entrainment resulting from the compliance dates in the proposed amendment. Estimated fish larvae entrainment under the amendment scenario represents entrainment occurring between October 1, 2010, and the compliance dates specified in the proposed amendment not to exceed December 31, 2035.

Table 2 – Revised by LADWP

Scenario	Harbor GS	Haynes GS	Scattergood GS	Total DWP
Policy	410,341,907	28,482,031,960	3,184,214,712	32,076,588,579
Amendment	1,660,622,461	44,433,490,792	3,109,850,735	49,203,963,988
Difference	-1,250,280,554	-15,951,458,832	74,363,977	-17,127,375,409