



Linda S. Adams  
Secretary for  
Environmental Protection

# State Water Resources Control Board

## Executive Office

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Arnold Schwarzenegger  
Governor

NOV 30 2010

Mr. Eric Pendergraft  
Alamitos Generating Station  
AES Southland, LLC  
690 North Studebaker Road  
Long Beach, CA 9083

Dear Mr. Pendergraft,

### IMPLEMENTATION PLANS AND IMMEDIATE AND INTERIM REQUIREMENTS FOR THE ONCE-THROUGH COOLING WATER POLICY

On May 4, 2010, the State Water Resources Control Board (State Water Board) adopted a Statewide Policy (Policy) on the Use of Coastal and Estuarine Waters for Power Plant Cooling under Resolution No. 2010-0020. The Policy establishes uniform, technology-based standards to implement federal Clean Water Act section 316(b), which requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. The purpose of this letter is to require, pursuant to the Policy and California Water Code section 13383, information you must submit in your implementation plan.

The Policy requires the owner or operator of an existing fossil fuel power plant using once-through cooling to submit an implementation plan to the State Water Board within six months after the effective date of the Policy (April 1, 2011). In your implementation plans, you must select an alternative on a unit-by-unit basis that will achieve compliance by the date specified for your facility within the Policy. The State Water Board must receive responses to the information detailed below by **April 1, 2011**. If certain aspects of your implementation plan and associated information change after submittal, you may amend the information at a later date. We have provided the specific requirements in the enclosure.

Please submit an original and an electronic copy (in word-searchable PDF format) of the requested documents to Mr. Philip Isorena, Chief of the NPDES Unit, at [pisorena@waterboards.ca.gov](mailto:pisorena@waterboards.ca.gov), or by mail at:

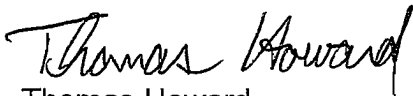
*California Environmental Protection Agency*

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State Water Resources Control Board  
Division of Water Quality, 15<sup>th</sup> Floor  
1001 I Street  
Sacramento, CA 95814

Please feel free to contact Mr. Renan Jauregui at (916) 341- 5505  
([rjauregui@waterboards.ca.gov](mailto:rjauregui@waterboards.ca.gov)) or Ms. Joanna Jensen at (916) 341- 5582  
([jjensen@waterboards.ca.gov](mailto:jjensen@waterboards.ca.gov)) if you have questions about this request for information.

Sincerely,



Thomas Howard  
Executive Director

Enclosure: Implementation Plan Requirements

cc: Mr. Samuel Unger, Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013-2343



## Implementation Plan Requirements

Pursuant to the Policy and California Water Code section 13383, no later than April 1, 2011, you must submit an implementation plan that satisfies the following requirements:

1. Identifies the compliance alternative (Track 1, Track 2 or retirement) that you have selected. If Track 2 is selected, it must be accompanied by a demonstration that compliance with Track 1 is not feasible. If you decide to retire one or more units, please identify the specific closure date for each unit when power generation and water inflows will cease. If one or more units will be repowered or new units will be constructed as replacement, please identify a specific on-line date for each new or repowered unit.
2. Describes the general design, construction, or operational measures that will be undertaken to implement your selected alternative.
  - a. If Track 1 is selected, will the units be re-powered, or retrofitted, and will closed-cycle wet cooling or dry cooling be employed?
  - b. If Track 2 is selected, what combination of impingement and entrainment control measures has been or will be employed on each unit at your facility? For example, such control measures may include, but are not limited to, closed-cycle cooling (wet or dry), reductions in velocity at the intake, movement of the intake structure, application of screens on the intake structure, reductions in flow, either operationally or mechanically (e.g., variable frequency drive pumps), installation of fish return systems, etc.
  - c. If closed-cycle wet cooling is selected as a compliance alternative, the plan must address whether recycled water of suitable quality is available for use as makeup water.
3. Proposes a realistic schedule for implementing these measures that is as short as possible. In proposing a schedule, identify specific milestones and associated dates for measure implementation, including: procurement cycles for entities to which plant output is sold, any necessary permits, demolition of existing facilities, and construction of new components.
4. Identifies the time period, if any, when generating power is infeasible and describes measures taken to coordinate this activity through the appropriate electrical system balancing authority's maintenance scheduling process and/or infrastructure planning process. For each period when power generation is infeasible, describe the reason for this constraint.
5. If implementation plans include re-powering of existing units, please provide as much detail as possible on the new generating units, as specified below:
  - a) The size (in Mega Watts) of the re-powered generating units;

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- b) Technology of the re-powered units (i.e., combined-cycle, single gas turbines, etc.);
  - c) The amount of power that would still be generated during repowering process, and the ultimate generating output once the repowered process has been completed;
  - d) Timetable for the above repowering process;
  - e) Electrical characteristics of the new repowered generating units if available when implementation plans are submitted; and
  - f) Available information on obtaining required air permits and required offsets.
6. Identifies the transmission configuration around the units, and specifies planned upgrades and known contingencies related to these transmission facilities, so as to document awareness of transmission improvements as part of the generation planning process.
7. In addition to the implementation plan, please provide any prior studies that accurately reflect current impingement or entrainment impacts. Prior impingement studies must accurately characterize the species currently impinged and their seasonal abundance. Prior entrainment studies must account for seasonal variation in oceanographic conditions and larval abundance and behavior such that abundance estimates are reasonably accurate and must have used a mesh size of 333 or 335 microns for entrained larvae sampling.

In addition, you must also comply with the Immediate and Interim Requirements in Section 2.C. of the Policy. Your proposed method of compliance with the Immediate and Interim Requirements must be included in the implementation plan. This portion of the implementation plan must address the following requirements:

1. No later than October 1, 2011, an existing power plant with an offshore intake shall install large organism exclusion devices having a distance between exclusion bars of no greater than nine inches, or install other exclusion devices, deemed equivalent by the State Water Board. Therefore, if your facility has an offshore intake, by April 1, 2011 you must provide your planned method of compliance with this requirement, including the design and schedule for installation of the exclusion device.
2. No later than October 1, 2011, an existing power plant that includes a unit that is not directly engaging in power generating activities or critical system maintenance must cease intake flows, unless you demonstrate to the State Water Board that a reduced minimum flow is necessary for operations. Therefore, by April 1, 2011, you must provide information regarding when it is likely that each unit in your facility may not be generating power, or when you are performing critical system maintenance that would result in the cessation of intake flows. This information may be provided in

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terms of likely months when there will be no intake flow, with the understanding that if a need for power arises, that intake flows will re-start, as long as appropriate documentation is later provided regarding that unexpected power demand. If a reduced minimum flow is necessary for operations during the period when power is not typically generated, then you must define specifically why that is the case and provide an estimate of minimum flows as compared to historic flows during corresponding months 2000-2005 when power is not typically generated.

3. For those facilities that have not achieved final compliance by October 1, 2015, the owner or operator must implement measures to mitigate the interim impingement and entrainment impacts resulting from the cooling water intake structure(s), and continuing up to and until the facility achieves final compliance with the requirements of the Policy. If you do not plan to achieve final compliance by October 1, 2015, you must include in your implementation plan to be submitted no later than April 1, 2011, the specific measures that will be undertaken to comply with this additional requirement. The options you may choose from include:
  - a. A demonstration that existing mitigation efforts, including any projects that are required by state or federal permits as of October 1, 2010, compensate for the interim impingement and entrainment impacts; or
  - b. A demonstration that the interim impacts will be compensated for by providing funding to the California Coastal Conservancy, which will work with the California Ocean Protection Council to fund an appropriate mitigation project. It is the preference of the State Water Board that this option be selected; or
  - c. A proposal for the development and implementation of a mitigation project for the facility, which would compensate for the interim impingement and entrainment impacts. Included in this proposal must be a description of how the habitat production foregone method, or a comparable alternate method, is to be used to determine the habitat and area, based on replacement of the annual entrainment, for funding the mitigation project.