

STATE OF CALIFORNIA

Energy Resources Conservation  
And Development Commission

In the Matter of:	)	Docket No. 00-AFC-14
	)	
Application for Certification	)	
of the <b>EL SEGUNDO POWER</b>	)	<b>STAFF’S RESPONSE TO THE</b>
<b>REDEVELOPMENT PROJECT</b>	)	<b>COMMITTEE WORKSHOP NOTICE</b>
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**I. INTRODUCTION and SUMMARY OF STAFF’S POSITION**

The California Energy Commission (CEC or Energy Commission) Staff respectfully provides the following written response to the “Notice of Committee Workshop” issued on September 3, 2004 by the CEC Committee assigned to the El Segundo Power Redevelopment siting case (Chairman William Keese, presiding member, and Commissioner James Boyd, associate member).

As discussed in further detail below, Staff finds that the Applicant’s recently submitted proposal (dated August 23, 2004) concerning “Biological Resources” would not protect the aquatic resources of Santa Monica Bay as specifically required under various provisions of California law, and therefore should not be adopted by the Committee/Commission. In addition, while it is necessary for the El Segundo project to satisfy all of the relevant requirements of the federal Clean Water Act, including the recently adopted “Phase II” regulations concerning “existing” facilities under Section 316(b), compliance with these specific legal requirements alone (under the direction and oversight of the Los Angeles Regional Water Quality Control Board -- LARWQCB) would be insufficient to protect the aquatic resources of Santa Monica Bay as required under other important provisions of state law, including the Warren-Alquist Act, the California Environmental Quality Act (CEQA), and the California Coastal Act. Finally, Staff concludes that an Energy Commission license for this project can be lawfully issued only if the Commission requires either (1) the “Fully Mitigated Option” or (2) the “Hyperion Wastewater Alternative” that Staff has recommended throughout this proceeding.

## II. STAFF'S RESPONSE TO ISSUES IDENTIFIED BY THE COMMITTEE

In its "Notice of Committee Workshop" the Committee asked all active participants in this El Segundo siting case to address five specific issues. Staff hereby provides the following written response (in slightly modified numerical sequence) to these issues.

### A. Applicant's Recent Aquatic Biology Proposal Is Not Lawful or Effective

Issue #1 in the Committee's Workshop Notice asks participants to address the "Applicant's Proposal, dated August 23, 2004, for additional enhancements to **BIO-4** regarding both the specifics and the proposed schedules therein."

#### 1. Key Elements Of The Applicant's Latest Biological Resource Proposal

The Applicant's recently proposed Biological Resource conditions for the El Segundo power plant contain none of the "once-through cooling" provisions recommended by the Staff, the concerned Agencies (i.e., the California Coastal Commission, the California Department of Fish and Game, and the National Marine Fisheries Service) or the Intervenor in this case. Instead, the Applicant's recently amended language in **BIO-4** contains the following key elements:

(a) Exclusive Jurisdiction Is Granted To The Regional Water Board: The Applicant's proposed conditions expressly state that any entrainment/impingement study, and any related compliance activities required for this project, will be "at the sole discretion of the Los Angeles Regional Water Quality Control Board."

(b) No Substantive Impact-Reduction Measures Are Provided: The Applicant's proposed conditions set forth various procedural milestones concerning compliance with the federal Clean Water Act Section 316(b) regulations, beginning with the submittal of a "compliance schedule" to the LARWQCB by February 1, 2005, and ending approximately three years later (by January 7, 2008) with submittal to the Regional Board of a "Comprehensive Demonstration Study" identifying what, *if anything*, will be done to meet the substantive entrainment/impingement requirements of the Section 316(b) regulations. *However, it is important to recognize that Applicant's proposed **BIO-4** contains no specific technological, operational or restoration measures to reduce the once-through cooling impacts of the El Segundo project, nor does it provide any date-certain by which such substantive measures will be undertaken, if ever.*

(c) The Applicant's Total Financial Costs Are Minimized: Finally, the Applicant's recently proposed conditions seek to ensure that the Applicant's total cost for *all activities* related to assessing and reducing the impingement/entrainment impacts of this "once-through cooling" project will not exceed \$7 million dollars (including the costs of the impact study itself). This figure is well below the comparable costs other power plant developers have incurred for "once-through cooling" projects which have recently received licenses in California (e.g. the Morro Bay project, the Moss Landing project), as documented by undisputed testimony submitted during the evidentiary hearings in this case.

## 2. The Applicant's Latest Biological Resource Proposals Are Unlawful and Ineffective

In summary, the Applicant's recently proposed amendments to **BIO-4** would expressly turn all responsibilities for entrainment/impingement issues over to the LARWQCB; would provide approximately 3 ½ years or more to determine what, if anything, will be done to reduce the project's "once-through cooling" impacts; and would cap all related costs at \$7 million dollars, regardless of what the impingement/entrainment impacts of the project actually are. All of these proposed elements are unlawful and/or ineffective for protecting the marine resources of Santa Monica Bay for the following reasons.

### (a) The Applicant's Proposed Transfer Of Responsibility Is Contrary To Law

If the Applicant's proposed **BIO-4** conditions are adopted, the Energy Commission would lose all jurisdiction over the cooling water issues in this case, contrary to the requirements of the Warren-Alquist Act, the California Coastal Act and CEQA. This is because the proposed conditions expressly delegate final approval of the Section 316(b) study exclusively to the LARWQCB, not the Energy Commission, and the Regional Board is given complete discretion to determine what additional impact-reduction measures, if any, will be required. Nothing is effectively retained for the Energy Commission to decide in this matter, and any future disagreements concerning law, fact or policy committed by the Regional Board will no longer be subject to Energy Commission review and approval.

Under long established case law in California, a permitting agency such as the Energy Commission cannot legally transfer or delegate its responsibilities for protecting the environment to another agency, even if that other agency might seek to address the matter further at some later time. (See *Sundstrom v. County of Mendocino* (1988), 202 Cal.App.3<sup>rd</sup> 296, at 306-307; 248 Cal Rptr. 352, at 358-359). While the LARWQCB does have proper jurisdiction over federal Clean Water Act compliance issues, it is the Energy Commission and the Coastal Commission that are responsible for ensuring compliance with the requirements of the Warren-Alquist Act and the California Coastal Act in power plant siting cases such as El Segundo. In addition, it is the Energy Commission (not the LARWQCB) that serves as the "lead agency" for CEQA purposes in site certification proceedings such as this. See Public Resources Code (PRC) Section 25519(c).<sup>1</sup> Hence, transferring the Energy Commission's responsibilities for addressing Coastal Act, Warren-Alquist Act and CEQA issues to the Regional Board (as the Applicant now proposes) is not allowed under California law.

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<sup>1</sup> In a letter to the Energy Commission, docketed in this proceeding and cited in the Final Staff Assessment (FSA), the LARWQCB has expressly stated that *it "has no objection if the CEC elects to make additional factual and legal determinations on [the entrainment impacts] issue pursuant to [the Energy Commission's] responsibilities under the California Environmental Quality Act (CEQA) and the Warren Alquist Act."* (See the FSA at p. 4.2-38). The Regional Board's acknowledgement and acceptance of the Energy Commission's additional legal responsibilities is also entirely consistent with a long-standing legal opinion of the State Water Resources Control Board as well. (See Legal Memo from State Water Resources Control Board [Craig Wilson, Assistant Chief Counsel] to the Energy Commission [David Maul], dated March 24, 1999).

## (b) Applicant's Proposed Transfer Of Responsibility Would Not Protect The Environment

In the Applicant's recently proposed **BIO-4** conditions, there are no requirements that the Applicant deploy any specific technological, operational or off-site restoration measures to minimize the impacts of entrainment or otherwise ensure the protection of marine resources in Santa Monica Bay. Moreover, transferring responsibility for once-through cooling issues from the Energy Commission to the LARWQCB (as the Applicant proposes to do) would not ensure that Santa Monica Bay is "enhanced and restored" where feasible (as required by the Coastal Act) for several reasons, including the following:

- *The "Technology Fix" Under 316(b) Is Incomplete and Unlikely To Occur*

The LARWQCB's jurisdiction under federal Clean Water Act Section 316(b) is limited by the express terms of that law and its related regulations. This is primarily a "Best Technology Available" (BTA) law, requiring only a 60 to 90 percent impact reduction below a vaguely defined "unmitigated" default technology *if feasible*.<sup>2</sup> Thus, at best, the Regional Board can require only a *partial* reduction in cooling water impacts under Section 316(b), as opposed to requiring all enhancement and restoration efforts that are feasible, as provided for under the Coastal Act.

Moreover, the record in this case has established that "dry cooling" and "wet/dry cooling" are infeasible; the Committee has concluded that the "wastewater cooling" alternative is infeasible; and Staff (as well as all marine resource protection agencies testifying in this case) doubt that the "Gunderboom" technology will be found feasible. Thus, under the provisions of the Section 316(b) regulations, there is a real possibility that the LARWQCB will find that no "technology fix" of any kind is feasible in this case.

- *The "Off-site Mitigation Fix" Under 316(b) Is Incomplete and Uncertain To Occur.*

The current version of the Phase II Section 316(b) regulations for existing facilities allows "off-site" mitigation to be required if "technology fixes" are found infeasible. However, these off-site restoration provisions were found unlawful for "new" facilities by the federal courts (*Riverkeeper, Inc. v. United States Environmental Protection Agency* [2<sup>nd</sup> Circuit, 2004], 358 F. 3<sup>rd</sup> 174), and a similar court challenge is now pending for the

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<sup>2</sup> It is important to understand that the 60% to 90% reduction in entrainment/impingement impacts required under EPA's recently adopted Phase II 316(b) regulations for existing once-through cooling facilities is not determined based on the actual level of entrainment/impingement occurring at the facility in question. Instead, it is based on a purely theoretical facility that is assumed to be withdrawing cooling water from a *shoreline intake structure with no controls at all* to reduce its entrainment/impingement impacts.

Thus, in this case for example, if the Applicant can demonstrate that the theoretical uncontrolled shoreline facility would entrain and kill 10 billion marine organisms per year, but the proposed El Segundo project would only entrain and kill 1 billion marine organisms per year (i.e. a 90% reduction from the theoretical facility), the Applicant would not be required to do anything under the Clean Water Act Section 316(b) regulations to further reduce or compensate for the substantial adverse entrainment/impingement impacts which the proposed project would actually cause.

recently adopted Phase II regulations concerning existing facilities as well. If “off-site restoration” for existing facilities is also ruled to be illegal under Section 316(b), the El Segundo power plant could obtain a complete “variance” or exemption from the LARWQCB, and no “restoration and enhancement” of any kind would be required for this project. At best, the LARWQCB could legally require only a 60 to 90 percent improvement through enhancement and restoration, as opposed to all feasible enhancement and restoration efforts required under the Coastal Act, which the Energy Commission is required to enforce. (See Public Resources Code (PRC) Sections 30230, 30231 and 25523(b)).

(c) The Applicant’s Proposed Restoration Trust Fund Is Neither Lawful Nor Adequate

The Applicant now proposes that when the project is approximately half built, the Applicant will place \$7 million into a trust fund to cover the entire cost of all biological resource studies and related restoration and enhancement efforts for the project. This funding proposal is unlawful and/or inadequate for several reasons, including the following.

First, under the California Coastal Act the Applicant is required to “minimize [where feasible] the effects of entrainment.” (See PRC Section 30231). This statute would appear to require the Applicant to actually *reduce its withdrawal of cooling water to the extent feasible*, not to simply offer money to compensate for whatever biological harm the project will otherwise actually cause. The Applicant has never presented any evidence to prove that the volumes of water it is requesting (both annually and seasonally) are the minimum amounts needed to “feasibly” operate the project. To the contrary, undisputed evidence in the record reveals that the Applicant can actually operate this project at full capacity, including duct-firing, 24 hours a day, 7 days a week, with far less cooling water (both annually and seasonally) than it is now requesting.

Second, unlike any other “once-through cooling” case for which the Energy Commission has issued a license, the Applicant is proposing to limit its funding level for restoration and enhancement without presenting any reliable scientific evidence concerning the actual extent and nature of the harm this project will cause to marine resources in Santa Monica Bay. Hence, there is no rationale evidentiary basis for the Energy Commission to accept the Applicant’s proposed level of funding at this time.

Finally, the Coastal Act requires the Applicant to “maintain, enhance and *where feasible* restore” marine resources. (PRC Section 30230). The Applicant has submitted no evidence proving that \$7 million dollars is all that is feasibly needed for the various impact studies, monitoring and related cooling water restoration and enhancement efforts required in this case. To the contrary, the undisputed testimony in the record reveals that in other recently licensed “once-through cooling” projects, the Energy Commission has feasibly required the expenditure of substantially more cooling water-related funds than now proposed by the Applicant in this case (e.g., in the Morro Bay case the Applicant feasibly proposed over \$37.5 million for the various cooling system costs [including approximately \$20 million for the initial entrainment/impingement

studies, on-going marine resource monitoring and related off-site mitigation]; and in the Moss Landing case the Applicant feasibly proposed over \$67 million for various cooling water costs. See Staff's Direct Written Testimony, dated January 22, 2003, at p. 10).

## **B. Compliance With Section 316(b) Alone Is Not Legally Sufficient**

Issues # 3, 4 and 5 in the Committee's Workshop Notice ask participants to address the "oversight," "timing" and "sufficiency" of a Section 316(b) entrainment/impingement study conducted under the LARWQCB's supervision, as the Applicant now proposes. Staff has addressed these issues at some length in the previous section of this Response (Section II. A., above), and we therefore summarize our answers to these issues as follows.

Initially, Staff recognizes that compliance with the requirements of federal Clean Water Act Section 316(b), and the recently adopted Phase II regulations for existing facilities, is under the primary jurisdiction and oversight of California's various Regional Water Quality Control Boards and the State Water Resources Control Board. These water resource agencies have legal responsibility for determining what marine resource impact studies, if any, are needed to meet the "best technology available" requirements under Section 316(b), and they also have legal oversight regarding the development, timing and sufficiency of such studies as may be required under this provision of the federal Clean Water Act. However, complying with the requirements of Section 316(b) alone, as the Applicant now proposes, does not constitute a legally sufficient basis for the Energy Commission to license the proposed El Segundo project for several reasons, including the following.

First, the Energy Commission has the legal responsibility to ensure that this project complies with numerous laws *in addition to the provisions of the federal Clean Water Act* (e.g., *the Warren-Alquist Act, the California Coastal Act, CEQA, etc.*), and this responsibility cannot be lawfully delegated to some other agency, like the state or regional water quality control boards. (See *Sundstrom v. County of Mendocino* (1988), 202 Cal.App.3<sup>rd</sup> 296, at 306-307; 248 Cal Rptr. 352, at 358-359).

Second, the Energy Commission has a clear understanding of the scope, nature and timing of the entrainment/enhancement studies needed for compliance with the Warren-Alquist Act, as such studies have been required, designed and successfully implemented in several recent siting cases, including Morro Bay, Moss Landing, Potrero and Huntington Beach. By contrast, the scope, nature and timing of the marine resource studies, if any, required under federal Clean Water Act Section 316(b) has yet to be legally established by the various regional water quality control boards in California; has yet to be reviewed, approved and/or reconciled by the State Water Resources Control Board in the event of conflicts between the various regional boards; and has yet to be evaluated for legal sufficiency by the courts in the ongoing litigation surrounding the 316(b) process. Thus, the Energy Commission needs to retain control over the scope, nature and consequences of the entrainment/impingement study in this case in order to

ensure full and timely compliance with the requirements of the Warren-Alquist Act, the California Coastal Act, and CEQA.

Third, the cooling water impact studies required under Section 316(b) will focus on evaluations pertaining to the “best technologies available” for controlling the adverse impacts of once-through cooling systems, whereas the entrainment/impingement studies required under the Warren Alquist Act, the California Coastal Act and CEQA will focus more broadly on what is needed to “enhance and where feasible restore” marine resources. Thus, any entrainment/impingement study conducted under the Energy Commission’s control in the El Segundo case will certainly provide data essential to meet the various requirements of federal Clean Water Act Section 316(b); conversely, the content of once-through cooling studies conducted under the control of the water agencies pursuant to Section 316(b) are speculative, at best, and are not likely to meet all of the essential data requirements of the Warren-Alquist Act, the Coastal Act, etc.

Finally, the remedial actions, if any, required under Section 316(b) are not expected to be determined by the LARWQCB before 2008, at the earliest. By contrast, the undisputed evidence in the El Segundo record proves that results from an Energy Commission entrainment/impingement study can be provided within 18 months of the Commission’s decision requiring such a study, and thus could be available for compliance as early as 2006.

For all of these reasons, Staff concludes that a sufficient and timely entrainment/impingement study in this case must be conducted under the oversight and control of the Energy Commission, in consultation with the LARWQCB and other concerned agencies, not the other way around, as the Applicant now proposes.

### **C. Staff’s “Fully Mitigated Option” Is Both Legal and Feasible**

Issue #2 in the Committee’s Workshop Notice asks participants to address “Staff’s proposed ‘fully mitigated option’ for aquatic biology as outlined in its April 27, 2004 filing.”

In the April 27<sup>th</sup> filing, and in detailed testimony and other filings in the record as well, Staff stated that the Energy Commission could lawfully issue a license for the El Segundo project if the Applicant were required to meet three specific Conditions of Certification (often referred to as the “three-legged stool” or the “fully mitigated option”). These three conditions can be summarized as requiring: (1) specific annual and monthly cooling water intake caps that do not exceed the cooling water levels now being withdrawn at the facility (including a “zero baseline” for Units 1 and 2 because those two units have not been legally operating for almost two years); (2) a reliable site-specific entrainment study, conducted under the jurisdiction and control of the Energy Commission, which must be completed before the start of project operations; and (3) all required impact compensation funds, to be placed in trust to “maintain, enhance and where feasible restore” the marine resources of Santa Monica Bay consistent with the findings of the entrainment study. (Specific language implementing these three

Conditions of Certification was provided in Staff's April 27, 2004 submittal, and is provided again as Attachment "A" hereto for the Committee's convenience). Staff finds that the "fully mitigated option" is both legal and feasible for the following reasons, which we have discussed extensively in earlier filings, and which we summarize herein as follows.

First, Staff's recommended annual and monthly cooling water intake caps are essential to ensure that this project will actually "maintain" existing conditions at the site, as required under the California Coastal Act and CEQA, rather than increase the level of harm to marine resources as the Applicant's proposed higher caps would allow. Staff's recommended annual and monthly caps will also ensure that the project will "minimize [where feasible] the effects of entrainment," as is specifically required under the California Coastal Act (PRC Section 30231). Moreover, the annual and monthly caps which Staff recommends have been shown by unrefuted evidence in the record to be *completely feasible* for the Applicant to comply with, since they allow the new El Segundo facility (i.e. Units 5, 6 and 7) to withdraw enough once-through cooling water to fully operate at maximum capacity (including duct-firing) 24 hours per day, 7 days per week, with substantial additional volumes of water also available to operate the remaining Units 3 and 4 on an intermediate and peak load basis, as they are now operated, or whenever an "emergency situation (e.g. energy crisis) arises." Applicant has presented no evidence at all to prove that Staff's recommended annual and seasonal caps are infeasible.

Second, a current, reliable, site-specific entrainment study, under the Energy Commission's control, is needed because no such data currently exist, and without this information it is impossible for the Commission to determine what must be done to "enhance and where feasible restore" the marine resources of Santa Monica Bay, as required by the California Coastal Act and the Warren-Alquist Act. This type of entrainment study is entirely feasible for the Applicant to perform, and has been provided or required by the Energy Commission in every other recent siting case proposing to use once-through cooling for the project in question (e.g. Morro Bay, Moss Landing, Potrero, Huntington Beach). The undisputed evidence in the record proves that this entrainment study can be completed within 18 months of licensing (e.g. in 2006), long before this project is expected to commence commercial operation.

Third, requiring the creation of a trust account to ensure that all feasible restoration and enhance efforts are fully funded is legally essential and also feasible for the following reasons. Initially, we again note that the California Coastal Act and the California Coastal Commission both expressly require the Applicant to "enhance and where feasible restore" the marine resources of Santa Monica Bay. Since the Applicant has elected not to provide any reliable scientific data needed to satisfy this requirement prior to licensing (despite four years of repeated requests from numerous resource agencies and Staff to do so), the only way to now ensure that this mandatory enhancement and restoration effort will be fully funded after the Energy Commission issues its license is to require the Applicant to place all feasible funds into a trust account at the time a license is granted in this case, or shortly thereafter.

The fully funded trust fund requirement is clearly feasible (though unorthodox) for several reasons. First, by definition, this condition only requires the Applicant to deposit such restoration funds as are feasible, consistent with maintaining an economically viable project. The law requires nothing more, even if the subsequent entrainment study shows that full restoration and enhancement would cost more to achieve. Second, it allows the Applicant to know its maximum financial exposure at the time of licensing, thus allowing project financing to proceed with certainty as to this issue. Third, the trust fund will ensure that the Applicant does not pay for harm the project is not causing. Thus, if the entrainment study determines that less funds are needed for enhancement and restoration, the Applicant would be entitled to receive a rebate of any excess funds it has deposited into the trust account. Finally, if so desired by the Applicant, Staff is willing to consider an appropriate surety bond in lieu of full trust fund payment up front, assuming that full payment would be guaranteed by the surety bond in the future.

For all of these reasons, Staff concludes that the fully funded trust fund requirement is both legally essential and feasible as a condition of licensing in the El Segundo case.

### **III. CONCLUSIONS CONCERNING THE COMMITTEE WORKSHOP NOTICE**

Staff appreciates this opportunity to provide written comments on the issues in the El Segundo Committee's Workshop Notice dated September 3, 2004.

Regarding Issue #1, as explained in this filing, the Applicant's recently proposed Biological Resource conditions should not be adopted by the Committee/Commission in the El Segundo case. Specifically, the Biological Resource conditions proposed by the Applicant would improperly transfer Energy Commission responsibilities and jurisdiction concerning cooling water impacts to the LARWQCB; would not properly protect the environment (for both technical and legal reasons); and would not comply with various other provisions of the California Coastal Act, the Warren-Alquist Act and CEQA.

Regarding Issues #3, 4 and 5, as explained in this filing, Staff concludes that conducting a federal Clean Water Act Section 316(b) study pursuant to LARWQCB oversight is essential, but neither sufficient nor timely to answer the various legal issues which the Energy Commission must address before issuing a license in this case. Staff concludes that a sufficient and timely entrainment/impingement study in this case must be conducted under the oversight and control of the Energy Commission, in consultation with the LARWQCB and other concerned agencies, not the other way around, as the Applicant has now proposed.

Finally, regarding Issue #2, Staff concludes that the "fully mitigated option" (as reflected in the specific Conditions of Certification contained in Attachment "A" hereto) provides a feasible and legal basis for the Committee/Commission to issue a license for the El Segundo project.

We look forward to further discussion of these issues at the Committee Workshop now scheduled for Monday, September 20, 2004, in El Segundo.

Dated: September 17, 2004

Respectfully submitted,

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## **ATTACHMENT “A”**

### **STAFF’S “FULLY MITIGATED OPTION” CONDITIONS**

## STAFF’S “FULLY MITIGATED OPTION” IN THE EL SEGUNDO CASE

Staff proposes that the Committee/Commission adopt the “fully mitigated option” consisting of the following three Conditions of Certification instead of the “Biological Resources” conditions proposed by the Applicant in the El Segundo case. These Conditions of Certification are necessary to comply with the Warren-Alquist Act, the California Coastal Act and CEQA.

### 1. Implementation of monthly and annual cooling water flow caps to meet CEQA

**BIO-1** The project owner shall implement a total “annual” flow cap on the combined total of Intake #1 and Intake #2 of **101.5 billion gallons per year**. The project owner shall also implement the following combined total “monthly” flow caps for each specified month below (numbers represent million gallons per month):

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
7635	7231	7519	7176	8038	8370	9923	10,532	10,410	9463	7965	7270

**Verification:** During project operation, the project owner shall provide to the CPM quarterly reports that detail monthly totals. Quarterly reports will be provided to the CPM within 10 working days following the end of each quarter. Total annual flow and a review of the previous year’s monthly flows will be provided in the Annual Compliance Report.

The project owner can request that the CPM consider a variance from a month-to-month flow cap if an emergency situation (e.g. energy crisis) arises.

If the entrainment/impingement study required by **BIO-2**, below, establishes that less stringent annual or monthly flow caps will avoid significant adverse direct or cumulative marine resource impacts, then the project owner can apply to the Energy Commission for consideration of adjustment of the flow cap requirement(s) in accordance with the study’s findings.

### 2. Completion of an Impingement and Entrainment study to determine impacts prior to the start of project commissioning

**BIO-2** The project owner shall conduct a scientifically reliable site-specific entrainment/impingement study to determine the marine resource impacts of the project’s once-through cooling system. This study shall sample the intake and source water to determine the fractional losses of fish larvae and invertebrates relative to their abundance in the source water specific to the El Segundo Generating Station cooling water system.

Sampling design and data analysis protocols shall follow those developed from the recent studies done at Diablo Canyon, Moss Landing, San Onofre,

Morro Bay, and Huntington Beach power plants, and the results used to determine the significance of impingement and entrainment losses on fish populations and invertebrates. This analysis shall also determine the cumulative impingement/entrainment impacts of all Santa Monica Bay coastal power plants on nearshore fish populations and other marine organisms. The study protocols, analysis, results, and conclusions of the monitoring study shall be documented in a scientific style report and submitted to the CPM for review and approval. Other agencies, including the California Coastal Commission, the National Marine Fisheries Service, the California Department of Fish and Game, and the Los Angeles Regional Water Quality Control Board shall be consulted in the development and review of the study design. These agencies will also be involved with the review of draft reports and a final report upon completion of the study.

**Verification:** Within 90 days of Energy Commission certification, the project owner shall provide an impingement/entrainment study plan for approval by the CPM, in consultation with the agencies listed above. Within 30 days of the CPM's approval of the study plan, the project owner shall commence the actual study, and complete this effort as soon thereafter as possible. During the study, the project owner will provide to the CPM monthly status reports (including all data collected) within 10 working days of the end of the previous month and quarterly analyses of study results within 10 working days of the end of the previous quarter's field sampling. The project owner will provide to the CPM a draft final report within 60 days of completion of the impingement, entrainment, and source water sampling studies, and a final report within 120 days from the end of field sampling.

### **3. Submittal of all funds needed to guarantee the "restoration and enhancement to the extent feasible," of the marine resources of Santa Monica Bay**

**BIO-3** The project owner shall pay all feasible restoration and enhancement funds, as determined and ordered by the Energy Commission prior to certification, into a Santa Monica Bay Restoration and Enhancement Trust Account.

**Verification:** Within 90 days of Energy Commission certification of the project, the project owner shall deposit the restoration and enhancement funds required by the Energy Commission into such trust fund as specified by the CPM.