STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

In the Matter of:	**)**	**Docket No. 00-AFC-14**
	)	
Application for Certification	**)**	**STAFF'S DIRECT WRITTEN**
of the EL SEGUNDO POWER	**)**	**TESTIMONY**
REDEVELOPMENT PROJECT	**)**	
	)	
_____	**)**	

In accordance with the "*Notice of Evidentiary Hearing*" issued on January 17, 2003 by the assigned Committee in this matter (Commissioner Robert Pernell, Presiding, and Commissioner William Keese), the Energy Commission Staff hereby tenders its "*Direct Written Testimony*" for the evidentiary hearing phase of this siting case proceeding. Staff anticipates that this direct written testimony will be augmented by subsequent written rebuttal/response testimony (now scheduled for filing on February 10, 2003), and by Staff's oral testimony and related exhibits at the evidentiary hearings (now scheduled for February 18-20, 2003). At the present time all subject areas except Biological Resources are uncontested between the Staff and the Applicant.

I. THE CONTESTED BIOLOGICAL RESOURCES ISSUES

Technical Staff Authors: **Dr. Noel Davis, Dr. Mike Foster, Dr. Pete Raimondi, Dr. Gregor Calliet, Rick York, James Schoonmaker, and Susan Lee.**

A. Introduction and Background

The Applicant in this proceeding is currently seeking a license from the California Energy Commission (CEC) to withdraw up to 139 *billion* gallons annually from Santa Monica Bay for "once-through" cooling of the proposed El Segundo Power Redevelopment Project and related facilities. This is enough water to submerge more than 426,000 acres of land a foot deep in water.[1] Based on data provided by the Applicant concerning the nearby Scattergood power plant, the project as currently proposed will kill *trillions* of marine organisms in Santa Monica Bay each year, including planktonic invertebrates, fish larvae and fish eggs.

[1] It requires 326,000 gallons of water to provide an "acre-foot" of water, i.e. enough water to cover *one* acre, *one* foot deep in water.

Santa Monica Bay is one of the nation's most important natural resources. Over 10 million people live within an hour's drive of Santa Monica Bay, and Santa Monica Bay beaches average 40 to 50 million visits per year. The bay generates an estimated $1.08 billion annually for the economy of Southern California. However, the waters of Santa Monica Bay are experiencing serious degradation affecting a large number of marine organisms, and it has been listed as an impaired water body under Section 303(d) of the federal Clean Water Act. In 1988, Santa Monica Bay also became one of the first estuaries in the country to be added to the "National Estuary Program."[2]

In its Final Staff Assessment (FSA), docketed in this proceeding on September 11, 2002, Staff has described in great detail the serious, unmitigated adverse direct and cumulative entrainment, impingement and thermal impacts which the once-through cooling system proposed for this project will cause to the biological resources of Santa Monica Bay. In addition, the FSA carefully explains why the various "proxy" materials tendered by the Applicant to support its claim of "no significant adverse biological impacts" are scientifically unreliable and/or inadequate. Finally, the FSA notes that replacing the cooling water to be withdrawn from Santa Monica Bay with reclaimed wastewater from the nearby Hyperion sewage treatment plant appears to be a feasible alternative water source that would eliminate the major adverse biological resource impacts of the project. The FSA concludes by recommending that unless the reclaimed wastewater alternative is proposed by the Applicant, the project should be denied a license until a scientifically reliable, site-specific biological impact study is completed and appropriate avoidance/mitigation measures are implemented to ensure full compliance with all applicable LORS (e.g. the California Coastal Act) and the California Environmental Quality Act (CEQA), as required by the provisions of the Warren-Alquist Act. Staff hereby incorporates into its direct written testimony the entire Biological Resources section of the FSA (Section 4.2, pages 1 through 47), and the related section of the FSA entitled "Biological Resources Appendix A" containing Staff's "Cooling Options Report" (Section 4.2, Appendix A, pages A-1 through A-39).

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[2] *See* the "National Estuary Program" website: http://www.anep-usa.org/factcards/santamonica.htm. The federal Clean Water Act Amendments of 1987 established the "National Estuary Program" to identify nationally significant estuaries that are threatened by development, pollution or overuse, and to promote comprehensive planning to restore and protect them. Section 320 of the Clean Water Act directs the Environmental Protection Agency to develop plans for attaining or maintaining water quality in an estuary. The program focuses not just on improving water quality in an estuary, but on maintaining the integrity of the whole system - its chemical, physical, and biological properties, as well as its economic, recreational, and aesthetic values. State governors can nominate estuaries within their states to be admitted into the National Estuary Program. Each National Estuary Program is made up of representatives from federal, state and local government agencies responsible for managing the estuary's resources as well as members of the community. EPA administers the National Estuary Program, but program decisions and activities are carried out by committees of local government officials, private citizens, and representatives from other federal agencies, academic, institutions, industry, and estuary user-groups. Currently there are 28 estuaries in the program. Each program establishes a Comprehensive Conservation and Management Plan to meet the goals of Section 320.

Following the issuance of the FSA, the Applicant rejected Staff's recommended reclaimed wastewater alternative, stating in its written comments (dated October 2, 2002) that this option would render the project "unviable." To date the Applicant has not presented any detailed information to support its claim, nor has the Applicant submitted any additional scientific data to establish that the project, as proposed, will have no serious adverse impacts on the marine resources of Santa Monica Bay.

However, during the initial Prehearing Conference held on November 7, 2002, the Applicant proposed for the first time four new conditions concerning the Biological Resources subject area. Thereafter, in accordance with a Prehearing Committee Order (issued on November 20, 2002), a lengthy workshop was held on December 18, 2002, to review and discuss the four new proposed Conditions of Certification that the Applicant had recently put forward in this proceeding. At the workshop, the Applicant explained each of the four conditions in detail, and answered related questions for the first time from numerous participants who are concerned about the adverse biological impacts of this proposed project (including the Staff, the National Marine Fisheries Service, the California Department of Fish and Game, the California Coastal Commission, the U.S. Coast Guard, the "Santa Monica Bay Keepers" organization, the "Heal The Bay" organization, and various residents of the area including Mr. Bill Eisen, Mr. Richard Nickelson and Mr. Bob Perkins).

B. Concerns Regarding Applicant's Proposed Biology Conditions

During the December 18th workshop, it became apparent that there were substantial concerns, problems and/or inadequacies with each of the four biology conditions proposed by the Applicant. Thereafter, on January 3, 2003, the Applicant withdrew these four proposed conditions, and replaced them with three new conditions in its "Second Prehearing Conference Statement." The Applicant's three newly proposed biology conditions now state the following:

> **BIO-1: Fund Santa Monica Bay Health and Information Efforts**
> Prior to commercial operation, project owner shall place $1,000,000 in trust to the Santa Monica Bay Restoration Project. Use of the funds in trust must be restricted to improving understanding of the biological dynamics of Santa Monica Bay and for purposes of improving the health of the Santa Monica Bay biological habitat. This could include fish population studies, entrainment studies, or other studies approved by the Santa Monica Bay Restoration Project that focus on the Santa Monica Bay habitat. The funds in trust shall be administered by the Santa Monica Bay Restoration Project, whose authority in determining the use of the funds shall be absolute. The Santa Monica Bay Restoration Project shall have the responsibility to publish the results of any study(ies) conducted, and to account for the disposition of the funds in trust in a timely and detailed manner.

Verification: The Project Owner shall submit to CPM a copy of the receipt transferring the stipulated amount to the Santa Monica Bay Restoration Project.

BIO-2: Aquatic Filter Barrier Feasibility Study
The Project Owner shall conduct a study to determine the feasibility of constructing, deploying, and operating a Gunderboom Marine Life Exclusion System™ at intake #1 at ESGS. The feasibility study shall also determine expected benefits and potential impacts of the Gunderboom Marine Life Exclusion System™ if deployed and operated at intake #1.

Verification: The project owner shall submit to CPM and the LARWQCB a complete analysis and all results of the feasibility study no later than 60 days after completion of the study.

BIO-3: Ensure No Significant Entrainment Impacts
The project owner shall take action to reduce entrainment impacts by implementing an annual cap on flow in the combined total of Intake #1 and Intake #2 of 139 billion gallons and shall also cap the monthly flow volumes in February at 9.4 billion gallons, March 9.8 billion gallons and April at 10.0 billion gallons The annual cap shall be in place for the first year that Intake #1 is operated to support the new facility.

If future NPDES permitting establishes that an annual flow cap is not necessary to avoid significant impacts then the project owner shall obtain changes to this condition of certification that removes the annual flow cap.

If the NPDES permit for ESGS is changed to incorporate entrainment control technology that confirms less than significant impacts then the project owner shall obtain changes to this condition of certification that removes the annual flow cap.

Verification:
Project owner shall report to the CPM all communication efforts with the LARWQCB regarding entrainment and NPDES permit renewal or compliance.

Project owner shall report, in its annual report, monthly flow volumes for both Intake #1 and Intake #2.

To date, the Applicant has provided little written explanation concerning its three newly proposed Biological Resources conditions above. Accordingly, Staff's direct written testimony about these new conditions is limited to what is known at this time. For the reasons discussed further below, Staff currently finds that (1) the proposed cooling water volumetric "cap" condition (**BIO-3**) will not maintain existing environmental conditions at the site or adequately address the serious "seasonality"

impacts related to biological entrainment and impingement impacts from the project; (2) the proposed "funding" condition (**BIO-1**) will not "restore and enhance to the extent feasible" the damage that the project will cause to the marine environment of Santa Monica Bay (as required by LORS such as the California Coastal Act), nor will it provide any reliable scientific information prior to licensing, which is needed to achieve that end; and (3) the proposed "Gunderboom feasibility study" (**BIO-2**) will not be conducted prior to certification, and the condition contains no date for either completion of the study or for appropriate implementation and compliance through the CEC process. Accordingly, as explained further below, Staff recommends that the Committee and Commission reject *all* of the Biology Conditions currently proposed by the Applicant, and deny the proposed project a license at this time.

1. Concerns About The Proposed Volumetric "Cap" Condition

The Applicant's proposed volumetric "cap" condition (**BIO-3**) is apparently premised on the assumption that any adverse entrainment, impingement and/or thermal impacts of the proposed project caused by withdrawing water from Santa Monica Bay through existing Intake #1 can be "offset" or "mitigated" by reducing related volumetric withdrawals from the nearby Intake #2, and imposing a related "facility-wide" cap on the total volumetric withdrawals for both intakes. Staff recognizes that the two cooling water intake structures are located in close physical proximity to each other (about 400 feet apart), and it would probably be impossible to reliably measure any biological differences that might exist when "trading off" equivalent volumes between the two intakes. While we doubt that there is a perfect 1 to 1 correlation between the biological impacts of Intake #1 and Intake #2, given the facts in this particular case we agree with the Applicant's apparent assumption that the adverse impacts from one intake can be "offset" by equivalent reductions at the other intake structure.

However, while Staff accepts the "intake tradeoff" assumption in theory, we find that neither the specific annual volumetric cap nor the specific monthly volumetric caps proposed by the Applicant will maintain environmental conditions as they currently exist at that site. To understand the basis for this conclusion, we will examine each proposed cap (annual and monthly) separately, below.

(a) The Proposed "Annual" Cap Will Not Maintain Existing Conditions At The Site

The Applicant is currently proposing a "facility-wide" *annual* cap on its total cooling water use from both Intake #1 and Intake #2 of 139 *billion* gallons per year. Staff finds that this proposed facility-wide annual cap *exceeds* the existing conditions at the site by approximately 37.467 *billion* gallons per year based on the following facts.

First, the Applicant has recently informed Staff of a significant change in the existing conditions at the site. Specifically, effective January 1, 2003, the Applicant no longer possesses a valid South Coast Air Quality Management Distric (SCAQMD) permit

to operate generating units #1 and #2, and as of that date all operations of those generating units completely ceased.[3] It is entirely speculative as to when, if ever, the Applicant will seek to reactivate its air quality permit to operate Units #1 and #2. Accordingly, at the present time, Staff concludes that the existing cooling water volume at Intake #1 for servicing these generating units is *zero* (i.e. none).

Second, based on data officially reported to and retained by the Los Angeles Regional Water Quality Control Board (LARWQCB), the cooling water volumes from Intake #2 averaged 277.9 million gallons per day, or *101.533 billion* gallons per year, for the five year period preceding the filing of the AFC in this case in December 2000 (i.e. the five years from January 1996 through December 2000).[4] *See* **Table 1**, below. Hence the Applicant's proposed 139 *billion* gallon annual "facility-wide" cap will significantly exceed existing conditions at the site by 37.467 *billion* gallons per year, and will *increase* the adverse biological impacts that are now occurring at the site, both directly and cumulatively.

Table 1 -- Average Existing Flows For Intakes #1 and #2
(million gallons)

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
# of days	31	28 / 29	31	30	31	30	31	31	30	31	30	31
Intake #1 (daily av.)	0	0	0	0	0	0	0	0	0	0	0	0
Intake #2 (daily av.)	246.3	254.6	242.5	239.2	259.3	279.0	320.1	339.8	347.0	305.3	265.5	234.5
Total #1&2 (daily av.)	246.3	254.6	242.5	239.2	259.3	279.0	320.1	339.8	347.0	305.3	265.5	234.5
Total #1&2 (month av.)	7634.8	7230.9	7518.9	7176.3	8038.4	8370.4	9923.1	10532.3	10410.3	9463.2	7965.2	7269.7

Total Existing Average Annual Flow = 101.533 *Billion* Gallons

Third, even if the cooling water volumes at Intake #1 are analyzed based on the five-year historic average preceding the filing of the AFC in December 2000, rather than the *zero* intake level which reflects existing factual and legal conditions, the Applicant's proposed facility-wide annual cap of 139 *billion* gallons per year would still exceed the historic usage levels by 12.216 *billion* gallons per year. This is so because the official records of the LARWQCB indicate that the volumes at Intake #1 averaged 69.2 million gallons per day, or 25.258 *billion* gallons per year, for the five year period in question. Together, the volumes at Intake #1 and Intake #2 historically averaged 347 million gallons per day, or 126.784 *billion* gallons per year, for the five-year period preceding the filing of this AFC. *See* **Table 2**, below. Hence the Applicant's proposed 139 billion gallon annual "facility-wide" cap will significantly

[3] This new information was "foreshadowed" by the Applicant during the workshop held on December 18, 2002, and was confirmed as a fact by the Applicant's attorney on January 3, 2003 (ROC by Staff member James Reede with Applicant's attorney John McKinsey on January 3, 2003). On January 16, 2003, Staff received written confirmation of this matter from the SCAQMD.

[4] This data was conveyed from the LARWQCB (LB Nye) to Staff (attorney David Abelson) as attachments to two letters, dated February 21 and March 1, 2001.

exceed historic conditions at the site by *12.216 billion* gallons per year, and will *increase* the adverse biological impacts that have historically occurred at the site, both directly and cumulatively.

Table 2 -- Average Historic Flows For Intakes #1 and #2 (1996 through 2000)
(millions of gallons)

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
# of days	31	28 / 29	31	30	31	30	31	31	30	31	30	31
Intake #1 (daily av.)	32.7	25.7	25.6	44.9	47.3	88.9	129.9	137.5	111.4	84.6	46.0	53.6
Intake #2 (daily av.)	246.3	254.6	242.5	239.2	259.3	279.0	320.1	339.8	347.0	305.3	265.5	234.5
Total #1&2 (daily av.)	279.0	280.3	268.2	284.1	306.6	367.9	450.0	477.2	458.4	389.9	311.5	288.1
Total #1&2 (month av.)	8649.1	7961.0	8312.8	8524.3	9504.8	11038.2	13950.0	14793.4	13751.6	12086.9	9343.8	8931.6

Total Historic Average Annual Flow = 126.784 *Billion* Gallons

Source: Table based on data received from the LARWQCB January 1996 through December 2000

Finally, even if there were no numeric discrepancies between the Applicant's proposed "facility-wide" average annual cap and the existing conditions at the site, Staff finds that an average annual cap will not ensure that existing conditions are maintained because, as explained in detail in the next section, an annual cap alone would allow the Applicant to use the allotted water volumes anytime it wanted to, regardless of the "seasonal" needs of the many diverse biological resources which will be adversely impacted by the project. In short, the operational flexibility embedded in an annual volumetric cap completely fails to address any of the "seasonal" needs of the adversely impacted biological resources, and an annual cap alone could actually increase the adverse impacts of the project if the annual water allotments are not properly limited to address these seasonal needs.

(b) The Proposed "Monthly" Caps Will Not Maintain Existing Conditions At The Site

At the Biological Resources workshop held on December 18, 2002, the Applicant's biological resources representative (Mr. Chuck Mitchell) stated that there are legitimate "seasonality" concerns about the timing and volume of cooling water withdrawals from Santa Monica Bay, and that "all things being equal a monthly cap is preferable to an annual cap" (emphasis added). Thereafter, in its Second Prehearing Conference Statement, the Applicant proposed for the first time to limit the facility-wide cooling water intake volumes to 9.4 *billion* gallons in February, 9.8 *billion* gallons in March, and 10 *billion* gallons in April. No other monthly caps were proposed by the Applicant.

The Applicant has not provided any information to date on how or why these particular months and numbers were chosen and, for the reasons explained below, Staff concludes that these proposed monthly caps will not maintain existing conditions at the site, and could actually allow direct and cumulative adverse

impacts from the project to *increase* above current conditions. The reasons for Staff's conclusion are as follows.

First, as a simple numeric comparison, the proposed monthly volumetric caps would substantially exceed the existing average monthly volumetric levels at the site reflected in **Table 1**, above, by 2.17 *billion* gallons in February, 2.28 *billion* gallons in March, and 2.82 *billion* gallons in April. These volumetric differences are somewhat smaller if the reference point is based on the historic flows rather than the existing flows at the site, as reflected in **Table 2** – i.e. 1.44 *billion* gallons in February, 1.49 *billion* gallons in March, and 1.48 *billion* gallons in April. However, under either set of assumptions, the Applicant's proposal does not "mirror" the existing or historic conditions at the site for the months of February, March and April, *and imposes no monthly limitations at all to address seasonal concerns for the remaining nine months of the year.*

Second, as discussed in detail in **Appendix A** of this direct written testimony, providing monthly caps only for the months of February, March and April will not address serious adverse "seasonality" impacts that are likely to occur at other times of the year. The basis for this conclusion is as follows (all literature references in the following paragraphs are fully identified in **Appendix A**, prepared by Staff witness Dr. Gregor M. Cailliet of the Moss Landing Marine Laboratories).

It is well known that seasonal patterns of abundance are quite variable among the myriad species of fishes occupying and producing eggs and larvae for subsequent recruitment in the Southern California Bight (SCB), of which Santa Monica Bay is a key part (Watson 1982, Lavenberg et al. 1987, McGowen 1993). While many species spawn in the wintertime, so that their eggs and larvae can benefit from upwelling and the subsequent nutrition found during the spring and summer months (e.g. Lasker 1975, 1978, 1981, Brewer and Kleppel 1986, Lavenberg et al. 1987, Jahn et al. 1988, Watson and Davis 1989), *not all species follow this pattern*.

There are actually at least three distinct patterns of fish larvae abundance in the SCB (Gruber et al. 1982, Loeb et al. 1983a, b, c). The first, and probably most common, is a **winter-spring peak** in larval fish abundance. The second is a **summer-fall peak**. The third is the tendency of some fish species to **spawn all year around**, thus providing a more-or-less continuous output of larvae or more than one peak over a year's period. This is clearly stated by Moser and Watson in their book entitled "Ecology of California Marine Fishes" (currently in press):

> "In general, seasonal abundance patterns that have been recognized in all the SCB studies reflect spawning primarily during winter-spring (cool water), summer-fall (warm water), or more or less evenly throughout the year, with interannual variation of up to a few weeks in initiation and termination of spawning."

Examples of the first pattern of **winter-spring** peaks would include hake (family Merlucciidae), silversides (family Atherinidae, including both the topsmelt, *Atherinops affinis*, and the jacksmelt, *Atherinopsis californiensis*), some croakers (family Sciaenidae, and including at least five species), some rockfishes (family Scorpaenidae), and some flatfishes (Order Pleuronectiformes).

Examples of the second pattern of **summer-fall** peaks in the SCB would include some flatfishes (such as the California halibut, *Paralichthys californicus*,, and several other species like larval sanddabs (*Citharichthys spp.*), and croakers, including the white croaker (*Genyonemus lineatus*) and queenfish (*Seriphus politus*) (Gruber et al. 1982, Lavenberg et al. 1986, Walker et al. 1987, McGowen 1993).

Examples of the third **all-year** pattern include some of the flatfishes (Moser et al. 1987), as well as Pacific sardines (*Sardinops sagax*) (Watson 1992) and northern anchovies (*Engraulis mordax*) (Lavenberg et al. 1986). Walker et al. (1987) and Gruber et al. (1982) also found sardine larvae and associated species throughout the year in the coastal zone, with highest abundance in spring and autumn, suggesting a bimodal spawning season. Gobies (family Gobiidae, including, perhaps among others, the arrow goby, *Clevelandia ios*, bay goby, *Lepidogobius lepidus*, shadow goby, *Quietula y-cauda*, and cheekspot, goby *Ilypnus gilberti*) are also found year around with no dominant seasonal pattern (Walker et al. 1987, McGowen 1993).

Thus, Staff concludes that the Applicant's proposal to provide monthly "caps" on the facility-wide intake volumes *only for the months of February, March and April*, will not ensure that significant numbers of fish eggs and larvae are not killed because many fishes have spawning periods at entirely different times of the year, and some fishes actually have progeny in the water all year around and especially inshore.

2. Concerns About The Applicant's Proposed "Trust Fund"

In its Second Prehearing Conference Statement (filed on January 3, 2003), the Applicant proposed for the first time a $1,000,000 "trust fund" to be administered by the Santa Monica Bay Restoration Project for the purpose of "improving understanding of the biological dynamics of Santa Monica Bay and . . . improving the health of the Santa Monica Bay biological habitat" (proposed condition **BIO-1**).[5] To date, the Applicant has provided no detailed information concerning how it developed this particular condition or why the condition is restricted as it is. Staff has a number of serious concerns about this condition, including the following.

First, existing LORS in California clearly require that proposed projects such as this one "restore and enhance where feasible" adversely impacted biological resources (*See, e.g.,* the California Coastal Act, Public Resources Section 30230). In many recent siting cases before the CEC, the applicants have proposed to expend far

[5] The Santa Monica Bay Restoration Project is a consortium entity created under the National Estuaries Program, described in footnote 1 above, specifically for the Santa Monica Bay.

more than $1 million to address the serious adverse biological resources impacts which their proposed projects would cause. Thus, for example, in the Moss Landing case the applicant proposed to expend approximately $60 million to modify its once-through cooling system, and an additional $7 million for "offsite" mitigation efforts. In the Morro Bay case, the applicant is currently proposing to expend approximately $25 million to modify its once-through cooling system, and an additional $12.5 million for "offsite" mitigation. By contrast, the Applicant in this case has provided no facts to prove that it is "infeasible" for it to expend more than $1 million to "restore and enhance to the extent feasible" the biological resources that its proposed project will adversely impact.

Second, no reliable site-specific study has been performed to scientifically determine the nature and scope of the adverse impacts of this project. Accordingly, the Applicant has no sound scientific basis for limiting its funding proposal to $1 million dollars.

Third, the Applicant proposes to provide money for the trust fund only *"prior to commercial operation."* No funds would be provided prior to certification to the CEC or prior to construction of the facility, so the project could be entirely built before *any* funds are forthcoming from the Applicant for "fish population studies, entrainment studies, or other studies approved by the Santa Monica Bay Restoration Project." From Staff's perspective, the Applicant has placed the cart before the horse. In order to reliably determine the nature and extent of harm this project will cause to the biological resources of Santa Monica Bay, a sound, site-specific, 316(b)-like cooling system impact study *must* be completed, and appropriate mitigation and enhancement must be assured, <u>before</u> a licensing certificate can be lawfully issued.

Finally, the Applicant proposes that the Santa Monica Bay Restoration Project, rather than the CEC, serve as the "trustee" of the funds and determine how the funds shall be expended. Staff has great respect for the Santa Monica Bay Restoration Project. However, it is the California Energy Commission which is responsible for issuing the license in this case and ensuring that the conditions imposed in that license are properly carried out. Therefore, the "trust fund" condition, as currently proposed by the Applicant, is completely unacceptable and should be rejected by the Committee and Commission.

3. <u>Concerns About The Applicant's Proposed Gunderboom Feasibility Study</u>

At the initial Prehearing Conference held on November 7, 2002, the Applicant proposed for the first time to perform a "Gunderboom" feasibility study, and to possibly install an "aquatic filter barrier (i.e. Gunderboom) or equivalent technology on Intake #1." At the subsequent workshop on biological resources (held on December 18, 2002), the Applicant acknowledged that (a) its biologists had not been "dialed into" this proposal, (b) its biologists had no expertise concerning this approach, and (c) this type of technology had never been deployed in open waters such as Santa Monica Bay. The Applicant also heard serious concerns from Staff

about potential "biofouling" problems with this technology, and likely mooring instability problems due to the strong wave action and shallow waters in Santa Monica Bay. In addition, the U.S. Coast Guard, the National Marine Fisheries Service, the California Department of Fish and Game, and the California Coastal Commission all voiced serious concerns about the feasibility of deploying a Gunderboom or similar aquatic filter technology at this particular site.

In its Second Prehearing Conference Statement, filed on January 3, 2003, the Applicant retained its proposal for a "Gunderboom" feasibility study (proposed condition **BIO-2**) with one major change. There is no longer *any* commitment to implement this approach if it is, in fact, found to be feasible. In addition, as mentioned earlier in this testimony, the proposed "Gunderboom feasibility study" will not be conducted prior to certification by the CEC, and the condition contains *no date whatsoever* for either completion of the study or for appropriate implementation and compliance through the CEC process. Therefore, the "Gunderboom feasibility study" condition, as currently proposed by the Applicant, is completely unacceptable and should be rejected by the Committee and Commission.

C. Conclusion Regarding Biological Resources Issues

For the reasons set forth above, Staff recommends that *all* of the Biological Resources Conditions currently proposed by the Applicant be rejected. Instead, consistent with the FSA, Staff recommends that the proposed project be denied a license at this time, unless it is conditioned upon the use of reclaimed wastewater for *all* cooling water needs concerning the new generating facilities.

II. THE UNCONTESTED ISSUES BETWEEN STAFF and APPLICANT

At the present time all subject areas except Biological Resources are uncontested between the Staff and the Applicant. Below is a brief summary of Staff's position on these uncontested subject areas, and the evidentiary material upon which Staff intends to rely.

A. Summary Status of the Conditions Proposed In This Case

A summary of the Conditions proposed by Staff in this case is attached as Appendix B. This summary includes a listing of all proposed conditions by number, a brief description of each, the current status of the condition among the parties, and an indication of which document contains the latest version of Staff's proposed condition.

B. Staff's Supplemental Direct Testimony Concerning Uncontested Issues

This section of Staff's Direct Written Testimony addresses uncontested issues in this proceeding that required supplemental testimony from Commission Staff.

AIR QUALITY SUPPLEMENTAL TESTIMONY

Technical Staff Author: **Joseph M. Loyer**

The Air Quality section of the Final Staff Assessment for the El Segundo Power Redevelopment Project (ESPR) filed in September of 2002 concluded that the project would contribute to an existing violation of the federal and state ambient air quality standards for PM10. Staff had determined that the ESPR had left unmitigated 158 lbs/day of PM10 emissions and 16 lbs/day of SO2 emissions. Staff recommended at that time that the Applicant, the El Segundo Power II LLC (ESPII), seek further mitigation, possibly from the retrofit of new diesel engines in existing tug boats operating in the nearby area.

Since that time, the South Coast Air Quality Management District (District) has identified further specific offsets that the District will supply to offset the ESPR emissions.

MITIGATION

EMISSION OFFSETS

ESPII previously identified the emission reduction credits (ERCs) shown in **AIR QUALITY Tables 17 through 19** in the September 2002 Final Staff Assessment, however some of the ERC certificate numbers were not included. Staff has revised these tables, **AIR QUALITY Tables 17 through 19 Revised**, below to show the certificate numbers. ESPII currently owns all of these ERCs therefore the company and city (of that company) are not relevant and are not included in these revised Tables. Although these tables are being revised it should be noted that the ESPII is not changing their proposed offsets for the ESPR.

AIR QUALITY Table 17
Sulfur Dioxide Emission Reduction Credits Procured for the El Segundo Power Redevelopment Project Emission Offsets

Certificate Number	Amount (lbs/day)
AQ003331	47
AQ003332	13
AQ003333	17
AQ003334	75
AQ003336	19
AQ003463	1
AQ003464	1
AQ004450	10
AQ004498	10
Total SO2 Emission Reduction Credits	**193**

AIR QUALITY Table 18
Volatile Organic Compounds Emission Reduction Credits Procured for the El Segundo Power Redevelopment Project Emission Offsets

Certificate Number	Amount (lbs/day)
AQ003326	70
AQ003338	20
AQ003719	95
Total VOC Emission Reduction Credits	**185**

AIR QUALITY Table 19
PM10 Emission Reduction Credits Procured for the El Segundo Power Redevelopment Project Emission Offsets

Certificate Number	Amount (lbs/day)
AQ001500	6
AQ003429	2
AQ003512	2
AQ003566	3
AQ001066	1
AQ004183	5
AQ004184	3
AQ004325	2
Total PM10 Emission Reduction Credits	**24**

Additionally, ESPII will be allowed to purchase 293 lbs/day of PM10 emission reduction credits from the District Priority Reserve per District Rule 1309.1. It should also be noted that the ESPII has shutdown El Segundo Units 1 and 2 and has realized the emission reductions from that action.

NEW IDENTIFIED EMISSION OFFSETS

The District has identified further emission reduction credits that the District will provide exogenous to the Applicant's obligations under the District Rules and Regulations. These emission reduction credits are part of the District Account, the same ultimate source as the Priority Reserve. The District has a long-established policy of offsetting all emission increases in the District boundaries by a ratio of 1.2:1 including Priority Reserve Credits and emissions exempted from offset requirements (Regulation 13). Even though the ESPII purchased the Priority Reserve PM10 Credits at a 1:1 ratio, the District will retire enough additional credits to offset to a 1.2:1 ratio. Additionally, the ESPII was allowed to exempted part of their PM10 and SO2 emissions through District Rule 1304, which in part encourages the replacement of boiler systems with combined cycle combustion turbine systems (this has significant benefits in NOx emissions). The District will also provide emission reduction credits to offset these emission increases at a ratio of 1.2:1. **AIR QUALITY Supplemental Table 1** shows the exact amounts that the District will retire for the ESPR PM10 and SO2 emission increases exempted by District Rules and the Priority Reserve.

AIR QUALITY Supplemental Table 1
Offsets Provided by South Coast Air Quality Management District

Emission Reduction Source	Amount (lbs/day)
PM10: for use of the Priority Reserve	59
PM10: exempted by Rule 1304	173
SO2: exempted by Rule 1304	29

Staff presents **AIR QUALITY Table 20 Revised**, which summarizes and totals the offsets for the ESPR. It should be noted that the ERCs for VOC and SO2 shown in this table are less than those shown in the **AIR QUALITY Tables 17** and **18 Revised**. The amount shown in **AIR QUALITY Table 20 Revised** is the actual amount of ERCs that will be surrendered and retired. It is the ESPII's choice as to the final selection of ERCs to be retired to comply with the amounts required.

AIR QUALITY Table 20 Revised
Summary of Offsets for the El Segundo Power Redevelopment Project

Emission Reduction Source	Responsible Party	CO (lbs/day)	SOx (lbs/day)	VOC (lbs/day)	PM10 (lbs/day)
Shutdown of Units 1&2	ESPII/District	2457	18	161	223
ERCs to be Surrendered	ESPII	0	43	140	24
Priority Reserve Purchased	ESPII	0	0	0	293
Additional Priority Reserve Retired	District	0	0	0	59
Exempted Emissions Offsets	District	0	29	0	173
Total Emission Reductions		**2457**	**90**	**301**	**772**

Staff presents **AIR QUALITY Tables 21** and **22 Revised** to show the comparison of the expected project emissions to the proposed offsets on a daily and annual basis.

AIR QUALITY Table 21 Revised
Comparison of Expected Annual Emissions to Offsets Provided
(tons/year)

Pollutant	Liability	Total Emission Reductions	Final Liability
NOx	153	166	-13
CO	94	202	-108
VOC	32	39	-7
SOx	12	16	-4
PM10	105	141	-36

AIR QUALITY Table 22 Revised
Comparison of Expected Daily Emissions to Offsets Provided
(pounds/day)

Pollutant	Liability	Total Emission Reductions	Final Liability
NOx	1,155	908	248
CO	703	2,457	-1,754
VOC	230	301	-71
Sox	71	90	-19
PM10	615	772	-157

Air Quality Table 22 Revised shows a final liability of 248 lbs/day of NOx. The operating scenario under which this daily excess may occur is restricted to a short-term duration in which the turbines employ the power augmentation and duct burners. That is expected to be no more than 2099 hours per year (less than a quarter of the year) and no more than 15 hours in a single day. The RECLAIM program essentially allows an emission source to operate as they see fit during the year so long as they have sufficient RTCs (and that they do not use all their RTCs in one quarter). Since the ESPR will be monitoring NOx emissions in-stack, it is unlikely, in staff's opinion, that the ESPR will exceed its RTC allocation and therefore unlikely that the ESPR will emit unmitigated NOx emissions.

STAFF PROPOSED MITIGATION

OPERATIONAL MITIGATION

As demonstrated by **AIR QUALITY Tables 21** and **22 Revised**, the ESPII and the District have fully mitigated the project emission impacts through the procurement, surrender and retirement of ERCs, PRCs, RTCs and the District Account. Therefore, staff recommends that no further mitigation is necessary for the ESPR.

CONCLUSIONS AND RECOMMENDATIONS

The ESPR's emissions of NOx, SO2 and CO will not cause or contribute to a violation of any NO2, SO2 or CO ambient air quality standards, and therefore, these direct impacts are not significant. The project's air quality impacts from the ozone precursor emissions of NOx and VOC could be significant if left unmitigated. ESPII will reduce emissions by providing emission offsets for NOx and VOC emissions, and thus reduce the potential for ozone formation. ESPII has provided ERCs and PRCs in concert with District Account Credits provided by the District to offset the ESPR PM10 and SO2 emission impacts. Thus, ESPR's potential for direct, cumulative and secondary impacts on PM10 ambient air quality conditions have been mitigated to a level of insignificance. ESPR's emissions of PM10 and SO2 are fully mitigated and thus are not expected to cause or contribute to a new violation of the 24-hour PM10 standards (either federal or state).

The District has submitted a Final Determination of Compliance (SCAQMD 2002c) that concludes that the ESPR will comply with all applicable District rules and regulations and therefore has proposed a set of conditions presented here as staff recommended Conditions of Certification AQ-2 through AQ-29. Staff also recommends the inclusion of Conditions of Certification AQ-C1 through AQ-C5 that address construction related impacts and the verification of project mitigation.

Staff recommends that the Committee approve of the certification of the ESPR with the Conditions of Certification included in the Air Quality section of the FSA, with the following additions, deletions and modifications.

ADDITIONS, DELETIONS & MODIFICATIONS TO THE RECOMMENDED CONDITIONS OF CERTIFICATION

Given the nature of the offsets planned for the ESPR, staff recommends Condition of Certification AQ-C5 be added to the list of recommended Conditions of Certification.

AQ-C5 The project owner shall commit specific emission reduction credits certificates for the ESPR to offset the project emissions as provided for in Table AQ-C5-1. The project owner shall not use of any ERCs to be surrendered in the Table AQ-C5-1 for purposes other than offsetting the ESPR.

TABLE AQ-C5-1 – Emission Offset Requirements

Certificate Number	Amount (lbs/day)	Pollutant
AQ003331	47	SO2
AQ003332	13	SO2
AQ003333	17	SO2
AQ003334	75	SO2
AQ003336	19	SO2
AQ003463	1	SO2
AQ003464	1	SO2
AQ004450	10	SO2
AQ004498	10	SO2
Total of Certificates Identified	193	SO2
Total to be surrendered	43	SO2
District Exempted Emission Offsets	29	SO2
Total surrendered & exempted emissions	**72**	**SO2**
AQ003327	70	VOC
AQ004580	20	VOC
AQ003722	95	VOC
Total of Certificates Identified	185	VOC
Total to be surrendered	140	VOC
Total surrendered emissions	**140**	**VOC**
AQ003352	6	PM10

AQ003462	2	PM10
AQ003550	2	PM10
AQ003568	3	PM10
AQ004145	1	PM10
AQ004322	5	PM10
AQ004323	3	PM10
AQ004326	2	PM10
Total of Certificates Identified	24	PM10
Total to be surrendered	24	PM10
1304 Exempted Emission Offsets	173	PM10
Priority Reserve Purchased	291	PM10
Priority Reserve from District	58	PM10
Total surrendered & exempted emissions	**546**	**PM10**

The project owner shall request from the District a report of the NSR Ledger Account for the ESPR after the District has granting the ESPR a Permit to Construct. Such report to specifically identify the ERCs, Priority Reserve Credits and Rule 1304 Exempted Emissions used to offset the project emissions. The project owner shall submit this report to the CPM prior to turbine first fire.

Verification: No more than 15 days following the issuance of the District's Permit to Construct, the project owner shall request from the District the report of the NSR Ledger Account for the ESPR. The project shall submit the report of the NSR Ledger Account for the ESPR to the CPM no less than 30 days prior to turbine first fire.

Condition **AQ-1** was included in the FSA based on the PDOC. The District has dropped this condition in the FDOC, stating that Condition of Certification 296-1 (**AQ-27**) is adequate to ensure compliance with Rule 2005. Staff has no objection as **AQ-27** works seamlessly with the requirements of RECLAIM and requires reporting to the Commission CPM (see recommended modifications below).

~~**AQ-1** The operator shall not operate at the El Segundo Power Generation facility combined cycle turbines No. 5 and No. 7 unless prior to the initial operation, the operator demonstrates to the Executive Officer that the facility holds RTCs in the amount of 297,651 lbs for the initial compliance year.~~

~~**Verification:** The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District in each Quarterly Operational Report (see **AQ-9**).~~

AQ-27: This equipment shall not be operated unless the operator demonstrates to the Executive Officer **and the CPM** that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the

operator demonstrates to the Executive Officer **and the CPM** that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

Verification: The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District in each Quarterly Operational Report (see **AQ-9**).

In subsequent discussions with the SCAQMD and Applicant, Staff has also determined that changes are also necessary to conditions AQ-25 and AQ-26 to mirror changed conditions in the FDOC.

AQ-25: The 2.0 PPMV CO emission limit(s) are averaged over 60 minutes at 15 percent oxygen, dry.

Verification: The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-9.**

AQ-26: The 5 PPMV NH3 emissions limit(s) are averaged over 60 minutes at 3 percent O2, dry.

Verification: The project owner shall submit CEMS records and all calculations demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-9.**

Staff also recommends that the following Condition of Certification **AQ-30** be deleted as it pertains to ammonia deliveries that will be eliminated by the ESPII in the course of construction of the ESPR.

~~**AQ-30** The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:~~

~~In compliance with all mitigation measures as stipulated by the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" and final subsequent Environmental Impact Report dated January, 1994 (SCH No. 88032315) for the El Segundo Generating Station ammonia storage and selective catalytic reduction project.~~

~~**Verification:** The project owner shall submit the "Statement of Findings, Statement of Overriding Considerations and Mitigation Monitoring Plan" and the final subsequent Environmental Impact Report dated, 1994 (SCH No. 88032315) to the CPM in a timely manner.~~

CULTURAL RESOURCES SUPPLEMENTAL TESTIMONY

Technical Staff Author: **Dorothy Torres**

Some of the Conditions of Certification published for Cultural Resources in the December 13, 2002, Agreed-to-Conditions were different from those published in the FSA based on staff's efforts to standardize Conditions of Certification to the extent feasible based on recent experience in the certification and compliance process. These changes do not affect the substance of the requirements in the Condition, and the modified Conditions are supported by the analysis outlined in the FSA text and / or Errata. The changed Conditions are: Cultural Conditions **CUL-1** through **CUL-8.**

LAND USE SUPPLEMENTAL TESTIMONY

Technical Staff Author: **Mark R. Hamblin**

RESPONSE TO PUBLIC AGENCY AND INTERVENOR COMMENTS

PRE-CONFERENCE HEARING COMMITTEE AND COMPLIANCE DIVISION COMMENTS – NOVEMBER 7, 2002

On November 7, 2002, the Pre-Conference Hearing Committee requested that staff combine conditions of certification **LAND-1** through **LAND-4** in the FSA to create one condition. Also, the revised and merged condition was to address the Energy Commission Compliance Section's comments clarifying the Commission's permitting authority, the role of the Compliance Project Manager and to include specific verification measures in the condition.

The revised **LAND-1** (below) merges **LAND-1, LAND-2,** and **LAND-3** presented in the FSA for the project. FSA **LAND-2** and **LAND-3** are deleted. **LAND–4** has been renumbered **LAND-2** and revised to require specific information regarding the lay down/staging area(s) for the project and could not be merged with the revised **LAND-1.** The renumbered **LAND-2** was published January 6, 2002 in the 2nd Staff Errata. The condition below replaces the **LAND-1** condition presented in the December 13, 2003 Agreed-To-Conditions. The revised **LAND-1** is as follows:

LAND-1 The project owner shall ensure that the project and its associated facilities are in compliance with the affected local jurisdiction's applicable adopted county or municipal code requirements for the project site's development (e.g., setbacks, zone district requirements, design criteria, height, sign requirements, etc.).

The project owner shall submit to the applicable city/county planning department for review and comment, a development plan showing site dimensions, design and exterior elevation(s) and any

other item(s) that may be required by the local jurisdiction's planning department to conduct a ministerial review of the project and its associated facilities in accordance to the jurisdiction's site development requirements. The city/county planning department shall have 60 calendar days to review the plan(s) and provide written comments to the project owner. The project owner shall provide a copy of the city/county planning department's written comments, if any, when submitting a copy of the development plan to the Energy Commission's Compliance Project Manager (CPM) for review and approval.

Verification: At least 90 calendar days prior to site mobilization on the power plant project site and its associated facilities, the project owner shall submit the proposed development plan to the affected local jurisdiction for review and comment. The project owner shall provide any comment letters received from the local jurisdiction along with the proposed development plan to the CPM for review and approval.

The project owner shall submit written evidence to the CPM that demonstrates that the project conforms to the applicable adopted site development requirements of the affected local jurisdiction.

CITY OF EL SEGUNDO - LAYDOWN/STAGING AND PARKING AREA COMMENTS NOVEMBER 7, 2002 & DECEMBER 9, 2002

The project owner originally proposed eight locations that potentially could be used as laydown/staging and parking areas for the project. Staff has reviewed the affected jurisdiction(s) general and specific plans, LCP and zone regulations for the staging/laydown and parking areas. On December 18, 2002 staff conducted a site visit to each of the proposed laydown/staging and parking areas. Staff provides the following synopsis for each of the sites.

LAND USE Table 2
Synopsis of the Project Owner's Proposed Laydown/Staging and Parking Areas

1. Kramer Staging Area

Location/Jurisdiction: City of El Segundo
Site Size: 11.5 acres
Applicant's Use of Site: Temporary laydown/staging site for construction equipment and materials.
General Plan designation: Light Industrial – Permits light manufacturing, warehousing, research and development, and office. Light manufacturing is defined as the assembly, packaging, fabrication, and processing of materials into finished products, rather than the conversion or extraction of raw materials. The light industrial activity shall be conducted primarily within structures; outside storage areas and assembly activity should be limited.

Zone District: Light Industrial (M-1) - This zone district is intended to provide for the location and grouping of light industrial activities, research, and technological processes, and related offices and

auxiliary uses performing support services for existing and permitted establishments, companies or business firms within the Zone.

Analysis: The use of the site as a temporary laydown/staging area would be a permitted use within this general plan designation, which allows limited outside storage areas. The City's M-1 Zone district permits general storage, warehousing and mini-storage as a permitted use. General land uses surrounding the site consist of light industrial type activities. The site is not in vicinity of the project site. The property is nearly land locked and bordered by railroad tracks. The site could physically serve the use proposed by the project owner.

2. Federal Express Staging/Parking Area

The project owner withdrew this site from consideration on January 7, 2003 during the PHC #2.

3. Grand Avenue Parking Area

Location/Jurisdiction: City of Los Angeles, State of California (Dockweiler Beach State Park)
Site Size: 115 parking spaces
Applicant's Use of Site: Parking
General Plan: Westchester-Playa Del Rey Community Plan
Zone District: Unknown – State owned beach area and parking facility

Analysis: Site is an existing open-air public parking area for day use of the beach area. The parking area is located in proximity to the project site. The parking area has direct road access to Vista Del Mar. Surrounding land uses include the beach, Scattergood power generating plant, Hyperion sewage treatment facility. The Los Angeles County Department of Beaches and Harbors operates the parking lot. Also, the Department of Beaches and Harbors would review any application by the project owner to use the parking lot for construction parking. They will not allow the use to interfere with public access to the beach, particularly during peak use times such as summer time weekends. The site could physically serve the use proposed by the project owner.

4. Chevron Marine Terminal Staging Area

Location/Jurisdiction: City of El Segundo
Site Size: 18 acres (approx.)
Applicant's Use of Site: Temporary laydown/staging site for construction equipment and materials.

El Segundo Local Coastal Program (LCP)
Designation: Marine Terminal & Shoreline Area
General Plan designation: Heavy Industrial
Zone District: Heavy Industrial (M-2)

Marine Terminal uses – petroleum refineries, together with all plants and facilities incidental to the operation thereof in connection with the manufacture of all present and future by-products of oil, gas, gasoline and other hydrocarbon substances. Petroleum storage, processing, transportation and distribution of oil, gas, gasoline and other hydrocarbon substances. Accessory buildings and other structures incidental to the normal operation of a marine terminal.

Shoreline Areas uses – Public beach facilities and beach activity amenities, seawalls and other structures to prevent shoreline erosion.

Heavy Industrial designation – permits heavy manufacturing uses such as construction yards, factories, generating stations, extraction of raw materials, and refining. M-2 Zone District is intended to provide areas suitable for the development of heavy manufacturing, assembling, or processing activities having unusual or potentially deleterious operational characteristics that would be detrimental if allowed to operate in other zones within the City.

Analysis: The use of the site as a temporary laydown/staging area may potentially not be a use consistent with the Marine Terminal designation of the City's LCP. The LCP takes precedent over the general plan and zone code. Under the City's zone code, when a use is not specifically listed as either a permitted use or conditional use under a particular zone, and when that use is proposed or classification of the use is requested, the Director of Community, Economic and Development Services upon written request or upon his own initiative, can determine whether the use is sufficiently similar to a listed use in the particular zone. The Director would determine whether there is justification for a finding that it should be deemed either a permitted use, a conditional use or that an administrative use permit is necessary in one or more zones.
The site is adjoining the El Segundo Generating Station property and the Grand Avenue Parking area. The site also has direct road access to Vista Del Mar. There are no buildings on the site. The site contains large pipelines and pipeline bulkheads used for the operation of the marine terminal that connects to the refinery across the street. The site could physically serve the use proposed by the project owner.

5. LAX Pershing Staging/Parking Area

Location/Jurisdiction: City of Los Angeles
Site Size: 3 – 5 acres (approx.)
Applicant's Use of Site: Temporary laydown/staging site for construction equipment and materials and parking.
General Plan: Los Angeles International Airport Master Plan
Zone District: Unknown – Los Angeles International Airport

Analysis: Site is within the Airport Master Plan boundary area; therefore the use of the site requires approval from the Los Angeles City Department of Airports. The site is currently being used for storage of airport and construction equipment. No buildings are on site. The site appears to be a former parking area. The site has direct access to Pershing Drive. Surrounding land uses consist of Los Angeles International Airport and the El Segundo Dunes Habitat Preserve. The site is in the vicinity of the project site. The site could physically serve the use proposed by the project owner.

6. Marina Del Rey Boat Launch Parking Area

Location/Jurisdiction: County of Los Angeles
Site Size: 422 parking spaces
Applicant's Use of Site: Parking
General Plan designation: Marina del Rey Land Use Plan
Zone District: Marina del Rey Local Implementation Program

Analysis: Site is an existing open-air public parking area. The parking area has a 48-hour parking time limit. The Los Angeles County Department of Beaches and Harbors operates the parking lot. Also, the Department of Beaches and Harbors would review any application by the project owner to use the parking lot for construction parking. The parking area is not located in proximity to the project site. The parking area is near other parking areas, boat slips, and a fuel dock. The site could physically serve the use proposed by the project owner.

7. Dockweiler State Beach Parking Area

Location/Jurisdiction: City of Los Angeles and State of California (Dockweiler Beach State Park)
Site Size: 3 parking lots totaling 300 spaces
Applicant's Use of Site: Parking
General Plan: Westchester-Playa Del Rey Community Plan
Zone District: Unknown – State owned beach area and parking facility
Analysis: same as the analysis under Grand Avenue Parking Area above.

8. Hyperion Parking Area

Location/Jurisdiction: City of Los Angeles and State of California (Dockweiler Beach State Park)
Site Size: 461 parking spaces
Applicant's Use of Site: Parking
General Plan: Westchester-Playa Del Rey Community Plan
Zone District: Unknown – State owned beach area and parking facility.
Analysis: same as the analysis under Grand Avenue Parking Area above.

CITY OF EL SEGUNDO AND ENERGY COMMISSION COMPLIANCE SECTION PUBLIC USE AREA COMMENTS – NOVEMBER 7, 2002, DECEMBER 9, 2002

The City Of El Segundo stated in their December 9, 2002 dated letter that they are concerned about the extent of the public accessibility that is proposed by the project owner for the proposed public use area. The City has requested that the condition state the "property as depicted on the Landscape Concept Plan, shall be designated for *"public use" and available for public access at all times."* Staff does not support the City's requested modification.

In the January 6, 2003, 2nd Response to Comments and Errata to the FSA, the staff presented a revised version of the **LAND-9** condition to include wording from Section 25529 of the Warren-Alquist Act (the Energy Commission's enabling legislation). Section 25529 states *"Lands within such area shall be acquired and maintained by the applicant and shall be available for public access and use, subject to restrictions required for security and public safety."* The specific wording "*subject to restrictions required for security and public safety*" has been incorporated into the condition of certification. This wording has been requested by the Energy Commission's Compliance section, which also reviewed the project for security issues. The Compliance section has approved the proposed condition. In addition, the wording provides the CPM flexibility in the case of decisions, recommendations or directives from the State's joint-agency committee on security (Attorney General's Office, the Dept. Justice, the Highway Patrol, Energy Commission, etc.) created during the aftermath of the September 11, 2001 terrorist actions.

The City has requested that the revised **LAND-9** stipulate that the public use area be "*available for public access at all times*." However, the beach and the parking area are closed to the public at night. On December 18, 2002, staff met with a representative from the Los Angeles County Department of Beaches and Harbors on the Class 1 bicycle path, which borders the southern perimeter of the El Segundo Generating Station. The Los Angeles County Department of Beaches and Harbors maintains the state owned beaches, the public parking areas and the bicycle path within the County of Los Angeles. The County representative informed staff that The Strand parking area is closed to the public at 8:00 PM. The beach is closed to the public at 10:00 PM. Signs are posted showing these times. He said, in general people voluntarily leave the beach shortly after sunset. The representative also said that the bicycle pathway legally prohibits any pedestrian use, however it is not enforced by law enforcement.

The size of the public use area and where it is to be located are open for discussion. Section 25529 does not prescribe an acreage formula to be used by the Energy Commission for the calculation of the "public use" land requirement. Section 25529 does not prescribe how the land is to be developed (e.g., park, rest area, hiking trail, bike path) and does not limit the public use area to being constructed on the project site. The land amount and how it is to be developed are based on project-by-project negotiations. In the case of Duke Energy's Moss Landing power plant, the resulting amount of public use land agreed upon involved enough land to construct a hiking trail that was to run along the ocean side of the power plant. This portion of constructed trail connects existing trails located on both sides of the power plant (roughly one acre of trail area). The County of Monterey and Duke conducted the negotiations and the Energy Commission approved the final outcome.

In the case of the Morro Bay Power Plant project, Duke Energy has taken ownership of a 7.2-acre property between Morro Strand State Beach and the west property boundary of their power plant, formerly known as the Den Dulk property. Duke is proposing to use the property to address their "public access" requirement under the Coastal Act and "public use" land area requirement under Section 25529. Duke is proposing to maintain ownership of the property, but convey to the City an approximate one-acre area known as Coleman Park. The Energy Commission has not ruled on this power plant permit.

Also, for the Morro Bay project, the California Coastal Commission has requested that the public use area options not be limited to the boundaries of the City of Morro Bay, but to all land located within the designated Coastal Zone within the County of San Luis Obispo.

The project owner has not explained what they are proposing to do to address Section 25529 of the Public Resources Code. The City of El Segundo has suggested that a 1.2-acre public use area be established on the southwest corner of the El Segundo Generating Station property.

A suggestion offered by an intervenor that was presented during the November 7th Pre-Conference Committee Hearing was for a pedestrian walk path adjoining the existing bicycle pathway bordering the power plant, since the existing bike path prohibits pedestrian use.

NOISE SUPPLEMENTAL TESTIMONY

Technical Staff Author: **James Buntin**

Some of the Conditions of Certification in the NOISE section have been changed through stipulated agreements between Staff, Applicant and other parties to the proceeding. All of the changed Conditions are supported by the analysis outlined in the FSA text or Errata. The changed Conditions are: **NOISE-2, NOISE-6,** and **NOISE-8**, and were published in the December 13, 2002 Agreed-to-Conditions.

PUBLIC HEALTH SUPPLEMENTAL TESTIMONY

Technical Staff Author: **Obed Odoemelam, Ph.D.**

On p. 4.7-8 in the next to the last paragraph, the following sentences appear:
"A maximum incremental cancer risk of 0.94 was calculated for the maximally exposed individual for a location approximately 2.1 kilometers east-southeast of the project site. This number is below staff's significance criterion of 1.0, suggesting a lack of a material cancer risk to any individual within the project area."

The second sentence contained a typographical error, and should read: "This number is below staff's significance criterion of 10.0, suggesting a lack of a material cancer risk to any individual within the project area."

VISUAL RESOURCES SUPPLEMENTAL TESTIMONY

Technical Staff Author: **Eric Knight and William Kanamoto**

Staff presented revised conditions of certification for visual resources in the second Agreed-Upon-Conditions, published on December 31, 2002. The conditions were revised from those published in the FSA based on input and discussion amongst the parties in recent months. An additional change condition **VIS-2** was proposed by the City of Manhattan Beach at the January 7, 2003, Pre-Hearing Conference, and this change was agreed to by all parties. Except for the one change to **VIS-5** that is discussed below, the current agreed to visual conditions of certification and changes to **VIS-2** made at the Pre-Hearing Conference on January 7, 2002, are supported by the FSA, Errata to the FSA, and submittals made by the Applicant to date.

The City of Manhattan Beach suggested a change to **VIS-2**, Paragraph 2) b) that was agreed to by the parties. The revised paragraph reads as follows:

> “b) graphic documentation on the plan and through digital photo simulations of Bay view corridors and power plant screening which would exist from Vista del Mar and the residential area east of Highland Avenue that has views of the project site, after project construction; and …”

The current version of **VIS-5**, as published In the December 31, 2002, Agreed-to-Conditions includes the following language that did not appear in the FSA:

> "The project owner shall consult with representatives of the Cities of El Segundo and Manhattan Beach to determine if specific treatment or painting options that may improve the aesthetic appearance of the project are desired, and shall provide a report to the CPM."

This language was added by staff to allow for the consideration of more of an "artistic" approach to the surface treatment of the power plant (consistent with the objectives of **VIS-5**) if so desired by the local community. The design issue was raised in early December when artist Mr. Mark Beam submitted to Energy Commission staff a conceptual idea for an artistic design approach for the ESPR Project. Staff circulated the conceptual idea to the parties, which received positive feedback from intervenors Murphy/Perkins. Mr. Beam made a very brief presentation of his concept at the Visual Workshop on December 18, 2002. There was little time to discuss the issue in any depth before the close of the workshop however, the response to the idea by the Applicant was not negative.

WASTE MANAGEMENT SUPPLEMENTAL TESTIMONY

Technical Staff Author: **Alvin J. Greenberg Ph.D.**

Some of the Conditions of Certification in the Waste Management section have been changed through stipulated agreements between Staff, Applicant and other parties to the proceeding. All of the changed Conditions are supported by the analysis outlined in the FSA text, Errata or Agreed to Conditions documents. The changed Conditions are: **WASTE–3, WASTE-4, WASTE-5, WASTE-6, WASTE-7,** and **WASTE-8**. They were published in the December 13, 2002, Agreed-to-Conditions.

WORKER SAFETY SUPPLEMENTAL TESTIMONY

Technical Staff Author: **Alvin J. Greenberg Ph.D.**

Some of the Conditions of Certification in the Worker Safety/Fire Protection section have been changed through stipulated agreements between Staff, Applicant and other parties to the proceeding. All of the changed Conditions are supported by the analysis outlined in the FSA text or Errata. The changed Conditions are: **WORKER SAFETY-1** and **WORKER SAFETY-2** as shown in the Second Set of Agreed to Conditions dated December 31, 2002.

PREPARATION TEAM CORRECTIONS

Omissions of Preparation Team Members occurred during the compilation of the Final Staff Assessment. The corrected list and declarations are attached as Appendix C.

III. CONCLUSION

Staff also submits the following information to the Committee:

1. With the Committee's approval, for all undisputed topics Staff is prepared to submit its testimony solely in writing as contained in the FSA and relevant Errata, including this direct written testimony; and

2. At the present time, there is one important topic area which remains disputed between the Applicant and Staff (Biological Resources), and this topic area will require adjudication and the presentation of witnesses at the evidentiary hearings.

January 22, 2003

Respectfully submitted,

_____
DAVID F. ABELSON
Senior Staff Counsel

APPENDIX A

A Brief Review of Larval Fish Seasonal Abundances in the Southern California Bight

Dr. Gregor M. Cailliet
Professor, Moss Landing Marine Laboratories
Consultant, California Energy Commission
(January 2003)

A Brief Review of Larval Fish Seasonal Abundances in the Southern California Bight

Dr. Gregor M. Cailliet
Professor, Moss Landing Marine Laboratories
Consultant, California Energy Commission
(January 2003)

While there is a scarcity of studies sampling larval fishes (ichthyoplankton) at the site-specific location where the El Segundo Power Plant is situated, one "proxy" study (URS Corporation 2001) has discussed results found elsewhere in the Southern California Bight (SCB) in 1978-1979, and used as input to 316 (b) studies for (1) King Harbor and the Scattergood Generating Station (IRC 1981), (2) Redondo Beach Generating Station (SCE 1983), and (3) El Segundo Generating Station (SCE 1982). This "proxy" material was also reported in Appendix D of the URS Corporation (2001) Application for Certification to the California Energy Commission (CEC) for the proposed El Segundo Redevelopment Project. In this "proxy" report, there are clearly species of fishes in the vicinity of the Applicant's proposed project that have different spawning seasons and hence different patterns of abundance over seasons of their eggs and larvae. A careful review of Appendix D of the URS Report (2001) reveals the three seasonal patterns in fish larval abundance described below from a fuller literature review.

Upon further investigation of the peer-reviewed, public scientific literature, it became obvious that many similar studies had been done in the Southern California Bight (SCB) on fish larvae and their distribution, abundance, and seasonal abundance patterns. Many of these have been stimulated either by the California Cooperative Oceanic Fisheries Investigations program operated by the National Oceanic and Atmospheric Administration or by power plant entrainment studies at such locations as San Onofre and elsewhere. A recent review on ichthyoplankton (fish egg and larvae) studies in the SCB is presently being published as a chapter (Moser and Watson, In Press) in a book edited by Larry Allen, Michael Horn and Dan Pondella II, and this review provides a complete list of references on larval fish ecology in the SCB. In the few paragraphs below, a synopsis of the findings about larval fish seasonal abundance patterns is provided.

First, it is known that geographic (inshore-offshore, north-south) and seasonal patterns of abundance are quite variable among the myriad species of fishes occupying the SCB and producing eggs and larvae for subsequent recruitment (Watson 1982, Lavenberg et al. 1987, McGowen 1993). While many species spawn in wintertime so their eggs and larval can benefit from upwelling and the subsequent nutrition found during the spring and summer months (e.g. Lasker 1975, 1978, 1981, Brewer and Kleppel 1986, Lavenberg et al. 1987, Jahn et al. 1988, Watson and Davis 1989), not all species follow this pattern.

Likewise, specific assemblages of fish larvae also have spatial distribution patterns, enabling scientists to characterize their species assemblages based on these habitat, as well as temporal variables (McGowen 1993). It is also fairly well established that nearshore (typically rocky intertidal) fishes characteristically have larvae which stay inshore and are either retained there by oceanographic features or by behavioral mechanisms (Marliave 1986). This has been more recently found in the SCB by other investigators (Brewer and Smith 1982, Gruber et al. 1982, Loeb et al. 1983a, b, c, Barnett et al. 1984, Jahn and Lavenberg 1986, Lavenberg et al. 1986, McGowen 1993).

Also, even though the seasonal abundance patterns in SCB fish larvae are relatively poorly studied, there are at least three basic patterns (Gruber et al. 1982, Loeb et al. 1983a, b, c). The first, and probably most common, is a **winter-spring peak** in larval fish abundance. The second is a **summer-fall peak**. While the third is the tendency of some fish species to **spawn all year around**, thus providing a more-or-less continuous output of larvae or more than one peak over a year's period. This was clearly stated by Moser and Watson (In Press):

> "Results of the various coastal ichthyoplankton studies in the SCB generally agreed with regard to patterns of seasonal and spatial distributions of the ichthyoplankters, but differed to some degree in the details of the temporal and spatial patterns of individual taxa, and they differed in the allocation of some taxa to the various coastal ichthyoplankton assemblages. These inter-study differences resulted primarily from differences in sampling and analytical methodologies. In general, seasonal abundance patterns that have been recognized in all the SCB studies reflect spawning primarily during winter-spring (cool water), summer-fall (warm water), or more or less evenly throughout the year, with interannual variation of up to a few weeks in initiation and termination of spawning."

Examples of the first pattern of **winter-spring** peaks would be hake (family Merlucciidae), silversides (family Atherinidae, including both the topsmelt, *Atherinops affinis*, and the jacksmelt *Atherinopsis californiensis*), some croakers (family Sciaenidae, and including at least five species), some rockfishes (family Scorpaenidae), and some flatfishes (Order Pleuronectiformes). This was found to be true for an area relatively close to El Segundo Beach (King Harbor, Scattergood Generating Station) in 1978-1979, and was reviewed by URL Corporation (2001) in the document they prepared as Application for Certification (00-AFS-14). Other references (see Moser and Watson, In Press) document other groups of fishes.

As a first example of this pattern, the Pacific hake (*Merluccius productus*) spawns off California and further south (Bailey et al. 1982) and it is reported that most spawn in winter, with 90% of the larvae being produced off southern California during January–March, with half of those produced in February. However, the

Pacific hake is an offshore species whose larvae can enter nearshore waters on occasion.

Another example would be the rockfish family, from which ~ 60 species in the genus *Sebastes* occur off California. Unfortunately, only 7 species of larvae in this genus can be identified from ichthyoplankton samples. From studies of adult spawning and ichthyoplankton samples, most species of *Sebastes* release their larvae in winter and are abundant during winter and spring (Moser et al. 2000).

Examples of the second, more **summer-fall**, pattern in the SCB would be some flatfishes, such as the California halibut, *Paralichthys californicus,* and several other species like larval sanddabs, *Citharichthys spp.*, and croakers, including the white croaker, *Genyonemus lineatus* and queenfish, *Seriphus politus* (Gruber et al. 1982, Lavenberg et al. 1986, Walker et al. 1987, McGowen 1993). Watson et al. (1999) collected eggs of some of the species above between winter and spring and added the diamond turbot, *Hypsopsetta guttulata*, to the group. Some typically inshore species of fishes (basses in the genus *Paralabrax*, blennies in the genus *Hypsoblennius*, and others) were found by Gruber et al. (1982), Lavenberg et al. (1986), and McGowen (1993) to be summer-fall spawners. Some of these fishes, especially the flatfishes, may spawn all year around, with peaks in late winter/early spring and small increases in mid-summer to fall (Watson et al. 1999, Moser and Watson 1990).

Examples of the third **all-year** pattern, include some of the flatfishes (Moser et al. 1987), as well as Pacific sardines (*Sardinops sagax*) (Watson 1992) and northern anchovies (*Engraulis mordax*) (Lavenberg et al. 196). Walker et al. (1987) and Gruber et al. (1982) found sardine larvae and associated species throughout the year in the coastal zone, with highest abundance in spring and autumn, suggesting a bimodal spawning season. Gobies (family Gobiidae, including, perhaps among others, the arrow goby, *Clevelandia ios*, bay goby, *Lepidogobius lepidus*, shadow goby *Quietula y-cauda*, and cheekspot goby *Ilypnus gilberti*), are often found year around with no dominant seasonal pattern (Walker et al. 1987, McGowen 1993).

Further north off the Diablo Canyon Power Plant in San Luis Obispo County, Icanberry et al. (1978) found northern anchovy (*Engraulis mordax*), northern lampfish (*Stenobrachius leucopsarus*), rockfish (*Sebastes* spp.), unidentified (probably white) croaker, and unidentified (probably bay) goby larvae through much or all of the year with highest abundances in winter and spring. He also found painted greenling (*Oxylebius pictus)*, lingcod (*Ophiodon elongatus)*, greenlings (*Hexagrammos* spp.), and blennies to be collected primarily during winter. Also further north, Watson et al. (1999) recently sampled fish eggs at the Big Sycamore Canyon and Vandenberg Ecological Reserves and two of the Santa Barbara Channel Islands (Anacapa and San Miguel Islands). They found 41 fish egg taxa, with 30 occurring in winter and 29 in summer. The winter eggs represented similar species already mentioned, including the northern anchovy, California halibut, speckled sanddab, white croaker, and Pacific hake. The summer eggs catches

included more nearshore species of more tropical origin, including the California sheephead (*Semicossyphus pulcher*), the California barracuda (*Sphyraena argentea*), and white seabass (*Astractoscion nobilis*).

There is a growing body of literature suggesting that larval abundance reflects adult abundance and that larval surveys could be used as a fishery-independent tool in for management (Moser and Watson 1990). In addition, such long-term changes as those noted among El Nino Southern Oscillation (ENSO) and Pacific Decadal Oscillation (PDO) cycles of years and decades, can be detected using larval fish surveys (see Moser et al. 2000, 2001, plus Chavez et al. 2003, for examples). As noted by Moser and Watson (In Press), typically warm-water fishes, including larval barracuda, some flatfishes, and lizardfishes (family Synodontidae) exhibit ENSO and PDO effects on the warm-water, summer spawners of the coastal SCB. Their larvae increased in abundance through the warm regimes and their distribution along the coast shifted northward, from highest abundance in the south with no occurrences from Point Conception northward during the cool regime, to highest abundance in the central and northern SCB.

Thus, it would be important for the entrainment analysis of any power plant to include recent, full year, and perhaps even multi-year larval fish entrainment studies. It is obvious from this brief review that large variations occur both spatially and temporally in fish egg and larvae abundances along the California Coast and within the SCB. Without direct, site-specific and replicated data on fish egg and larval abundance and potential entrainment, one is left to extrapolate and interpolate from existing, and often dated, studies. For example, Pacific sardines and northern anchovies have had cycles that different over the past century (see Chavez et al. 2003 for a review).

Thus, it is concluded that the Applicant's proposal to provide a three month "cap" on volumes entrained for the months of February, March and April (considered by most to be late-winter and early spring) alone will not assure that significant numbers of fish eggs and larvae are not killed. Indeed, the literature reviewed above indicates that many fishes have spawning periods producing eggs and larvae at different times of the year and some actually have progeny in the water all year around and especially inshore. It is unclear what the proposed annual "cap" or limited monthly caps are likely to do to reduce entrainment losses by the El Segundo Power Plant.

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APPENDIX B

STATUS OF
CONDITIONS OF CERTIFICATION

Condition Number	Condition Description	Status	Location
Air Quality			
AQ-C1	Const. Mitigation Mgr.	AGREED	12/13 Agreed Memo
AQ-C2	Fugitive Dust Mitigation	AGREED	12/13 Agreed Memo
AQ-C3	Diesel Const. Equipment	AGREED	12/13 Agreed Memo
AQ-C4	Monthly Const. Report	AGREED	12/13 Agreed Memo
AQ-C5	Identification of ERC's	Discussion	Presented above
AQ-1	Deleted	AGREED	Deleted
AQ-2	NH3 Flow Meter	AGREED	12/13 Agreed Memo
AQ-3	SCR Exhaust Inlet Temperature Guage	AGREED	12/13 Agreed Memo
AQ-4	SCR Catalyst Bed Pressure Guage	AGREED	12/13 Agreed Memo
AQ-5	NH3 Source Testing	AGREED	12/13 Agreed Memo
AQ-6	Pollutant Source Testing	AGREED	12/13 Agreed Memo
AQ-7	Pollutant Source Testing	AGREED	12/13 Agreed Memo
AQ-8	Pollutant Source Testing	AGREED	12/13 Agreed Memo
AQ-9	Quarterly Ops Reports	AGREED	12/13 Agreed Memo
AQ-10	Turbine Venting	AGREED	12/13 Agreed Memo
AQ-11	Emissions Limit	AGREED	12/13 Agreed Memo
AQ-12	Natural Gas Use Records	AGREED	12/13 Agreed Memo
AQ-13	Ammonia Injection	AGREED	12/13 Agreed Memo
AQ-14	CEMS Installation CO	AGREED	12/13 Agreed Memo
AQ-15	CEMS Installation NOx	AGREED	12/13 Agreed Memo
AQ-16	2.5 PPM NOx Limit	AGREED	12/13 Agreed Memo
AQ-17	6 PPM CO Limit	AGREED	12/13 Agreed Memo
AQ-18	109 Lbs/MMCF NOx Limit	AGREED	12/13 Agreed Memo
AQ-19	33.9 Lbs/MMCF NOx Limit	AGREED	12/13 Agreed Memo
AQ-20	80 Lbs/Hr NOx Limit	AGREED	12/13 Agreed Memo
AQ-21	102 Lbs/MMCF Nox Limit	AGREED	12/13 Agreed Memo
AQ-22	Continuously Record AQ2, AQ3, AQ24	AGREED	12/13 Agreed Memo
AQ-23	Continuously Record AQ4	AGREED	12/13 Agreed Memo
AQ-24	2.5PPMV NOx Limit	AGREED	12/13 Agreed Memo
AQ-25	6PPMV CO Limit	AGREED	Minor revision presented above
AQ-26	5PPMV NH3 Limit	AGREED	Minor revision presented above
AQ-27	RTC's	AGREED	Minor revision presented above
AQ-28	Emergency Fire Pump Limits	AGREED	12/13 Agreed Memo

Condition Number	Condition Description	Status	Location
AQ-29	Ammonia Tank PR Valve	AGREED	12/13 Agreed Memo
AQ-30	Deleted	AGREED	Deleted as discussed above
Biology	No Conditions proposed by Staff	Contested	None
Cultural Res.			
CUL-1	Cultural Res. Specialist	AGREED	12/13 Agreed Memo
CUL-2	Pre-Construction Dwgs.	AGREED	12/13 Agreed Memo
CUL-3	CRMMP	AGREED	12/13 Agreed Memo
CUL-4	CRR	AGREED	12/13 Agreed Memo
CUL-5	Worker Environmental Awareness Program	AGREED	12/13 Agreed Memo
CUL-6	Monitoring of ground Disturbance	AGREED	12/13 Agreed Memo
CUL-7	Stop Work	AGREED	12/13 Agreed Memo
CUL-8	Water Pipeline Study Area	AGREED	12/13 Agreed Memo
Facility Design			
GEN-1	CBC	AGREED	12/13 Agreed Memo
GEN-2	Master Drwg & Spec List	AGREED	12/13 Agreed Memo
GEN-3	CBO Payments	AGREED	12/13 Agreed Memo
GEN-4	Resident Engineer	AGREED	12/13 Agreed Memo
GEN-5	Required Engineers	AGREED	12/13 Agreed Memo
GEN-6	Special Inspectors	AGREED	12/13 Agreed Memo
GEN-7	CBO Status Reports	AGREED	12/13 Agreed Memo
GEN-8	CBO Final Inspections	AGREED	12/13 Agreed Memo
GEN-9	Closure / Decom Plan	AGREED	12/13 Agreed Memo
CIVIL-1	Pre-grading Plan Approval	AGREED	12/13 Agreed Memo
CIVIL-2	Stop Earth Work	AGREED	12/13 Agreed Memo
CIVIL-3	Grading inspections	AGREED	12/13 Agreed Memo
CIVIL-4	Final “As-graded” Drwgs	AGREED	12/13 Agreed Memo
STRUC-1	Lateral Force Procedures	AGREED	12/13 Agreed Memo
STRUC-2	Required Structural Documents	AGREED	12/13 Agreed Memo
STRUC-3	Design Changes	AGREED	12/13 Agreed Memo
STRUC-4	Tanks & Vessels	AGREED	12/13 Agreed Memo
MECH-1	Piping & Plumbing Design	AGREED	12/13 Agreed Memo
MECH-2	Pressure Vessels	AGREED	12/13 Agreed Memo
MECH-3	HVAC Equipment Design	AGREED	12/13 Agreed Memo
ELEC-1	Elect Equipment Design	AGREED	12/13 Agreed Memo

Condition Number	Condition Description	Status	Location
General Conditions			
COM-1	Access	AGREED	12/13 Agreed Memo
COM-2	Compliance record	AGREED	12/13 Agreed Memo
COM-3	Reporting of Unplanned Outages	Deleted	Deleted as noted in 12/13 Agreed Memo
COM-4	Verification Submittals	AGREED	12/13 Agreed Memo
COM-5	Pre-Construction Matrix	AGREED	12/13 Agreed Memo
COM-6	Monthly Compliance Rept	AGREED	12/13 Agreed Memo
COM-7	Annual Compliance Rept	AGREED	12/13 Agreed Memo
COM-8	Construction & Operation Security Plan	AGREED	12/13 Agreed Memo
COM-9	Confidential Information	AGREED	12/13 Agreed Memo
COM-10	DFG Filing Fee	AGREED	12/13 Agreed Memo
COM-11	Complaints, Notices & Citations.	AGREED	12/13 Agreed Memo
COM-12	Planned Facility Closure	AGREED	12/13 Agreed Memo
COM-13	Unplanned Temp/Perm Facility Closure	AGREED	12/13 Agreed Memo
COM-14	Post-Certification Changes	AGREED	12/13 Agreed Memo
COM-15	Pre-Construction Milestones	AGREED	1/3 PHC Statement
Hazardous Materials			
HAZMAT-1	CPM List Approval	AGREED	12/13 Agreed Memo
HAZMAT-2	Hazmat Floor Plan Exercise	AGREED	12/13 Agreed Memo
HAZMAT-3	CalARP Program RMP	AGREED	12/13 Agreed Memo
HAZMAT-4	Feasibility Study	AGREED	12/13 Agreed Memo
Land Use			
LAND-1	Compliance with codes	AGREED	Revised version presented above
LAND-2	Staging & Parking Areas	AGREED	1/6 Staff's second errata and response to comments
LAND-3	FAA Compliance	AGREED	12/13 Agreed Memo
LAND-4	45th Street Sewer Line	AGREED	12/13 Agreed Memo
LAND-5	Tank Farm Future Plans	AGREED	12/13 Agreed Memo
LAND-6	Abandoned Fuel Tanks	AGREED	12/31 Agreed Memo

Condition Number	Condition Description	Status	Location
LAND-7	Final Grading & Drainage Plans	AGREED	12/13 Agreed Memo
LAND-8	State Lands Commission	AGREED	12/13 Agreed Memo
LAND-9	Public Use Areas	AGREED	1/6 Staff's second errata and response to comments
Noise			
NOISE-1	Pre-construct Notification	AGREED	12/13 Agreed Memo
NOISE-2	Noise Complaints Procedure	AGREED	12/13 Agreed Memo
NOISE-3	Noise Control Program	AGREED	12/13 Agreed Memo
NOISE-4	Low Pressure Steam Blow	AGREED	12/13 Agreed Memo
NOISE-5	Steam Blow Notification	AGREED	12/13 Agreed Memo
NOISE-6	Noise Mitigation	AGREED	12/13 Agreed Memo
NOISE-7	Occupational Noise Survey	AGREED	12/13 Agreed Memo
NOISE-8	Heavy Equipment Restrictions	AGREED	12/13 Agreed Memo
NOISE-9	Vibration Monitoring	AGREED	12/13 Agreed Memo
NOISE-10	Loudspeaker Restrictions	AGREED	12/13 Agreed Memo
Socioecon			
SOCIO-1	Fiscal Impact Analysis	AGREED	12/13 Agreed Memo
SOCIO-2	One-Time Fees to COES	AGREED	12/13 Agreed Memo
Soil/Water			
S&W-1	Construction Storm Water Pollution Prevention Plan	AGREED	12/13 Agreed Memo
S&W-2	Erosion & Sedimentation Control Plan Const.	AGREED	12/13 Agreed Memo
S&W-3	Operations Storm Water Pollution Prevention Plan	AGREED	12/13 Agreed Memo
S&W-4	Erosion & Sedimentation Control Plan-Operations	AGREED	12/13 Agreed Memo
S&W-5	NPDES	AGREED	12/13 Agreed Memo
S&W-6	Reclaimed Water Use Plan	AGREED	12/13 Agreed Memo
S&W-7	Water Sampling	AGREED	12/13 Agreed Memo
S&W-8	Process water	AGREED	12/13 Agreed Memo
Traffic & Transport			

Condition Number	Condition Description	Status	Location
TRANS-1	Caltrans Weight Limits	AGREED	12/13 Agreed Memo
TRANS-2	Encroachment	AGREED	12/13 Agreed Memo
TRANS-3	CHP & Caltrans Permits	AGREED	12/13 Agreed Memo
TRANS-4	Parking & Staging Plan	AGREED	12/13 Agreed Memo
TRANS-5	Const Traffic Control Plan	AGREED	12/13 Agreed Memo
TRANS-6	HRSG Stacks & FAA	AGREED	12/13 Agreed Memo
TRANS-7	Repair Vista del Mar	AGREED	12/13 Agreed Memo
Transmission Line Safety			
TLSN-1	Line Const Compliance	AGREED	12/13 Agreed Memo
TLSN-2	EMF Measurements	AGREED	12/13 Agreed Memo
TLSN-3	Community Notification	AGREED	12/13 Agreed Memo
Transmission Systems Eng.			
TSE-1	Master Dwgs. & Specs.	AGREED	12/13 Agreed Memo
TSE-2	Engineer Assignments	AGREED	12/13 Agreed Memo
TSE-3	Design Changes	AGREED	12/13 Agreed Memo
TSE-4	Switchyard Work	AGREED	12/13 Agreed Memo
TSE-5	Transmission Facilities	AGREED	12/13 Agreed Memo
TSE-6	Transmission Changes	AGREED	12/13 Agreed Memo
TSE-7	CA-ISO Notification	AGREED	12/13 Agreed Memo
TSE-8	Inspections	AGREED	12/13 Agreed Memo
Visual Resources			
VIS-1	Facility Visual Enhancement Plan	AGREED	12/31 Agreed Memo
VIS-2	Perimeter Screening & On-sit Landscaping	AGREED	12/31 Agreed Memo and 1/7 PHC Language published above.
VIS-3	Design Treatment of Seawall	AGREED	12/31 Agreed Memo
VIS-4	Architectural Screening	AGREED	12/31 Agreed Memo
VIS-5	Structure Surface Painting & Treatment	AGREED	12/31 Agreed Memo
VIS-6	Project Lighting	AGREED	12/31 Agreed Memo
VIS-7	Site Lighting	AGREED	12/31 Agreed Memo
VIS-8	Construction Lighting	AGREED	12/31 Agreed Memo
VIS-9	Temporary Landscaping & 45th Street Berm	AGREED	12/31 Agreed Memo

Condition Number	Condition Description	Status	Location
Waste Management			
WASTE-1	Hazardous Waste Generator ID	AGREED	12/13 Agreed Memo
WASTE-2	Enforcement Action	AGREED	12/13 Agreed Memo
WASTE-3	Waste Management Plan	AGREED	12/13 Agreed Memo
WASTE-4	RPE for Remediation	AGREED	12/13 Agreed Memo
WASTE-5	Reporting of Contaminated Soils	AGREED	12/13 Agreed Memo
WASTE-6	Remedial Investigation Workplan	AGREED	12/13 Agreed Memo
WASTE-7	Runoff Prevention	AGREED	12/13 Agreed Memo
WASTE-8	ACM & RBM Surveys	AGREED	12/13 Agreed Memo
Worker Safety			
WORKER-1	Demo & Const S & H Plan	AGREED	12/31 Agreed Memo
WORKER-2	Ops & Maint S & H Plan	AGREED	12/31 Agreed Memo
WORKER-3	Workers inside Tanks	AGREED	12/13 Agreed Memo

APPENDIX C
EL SEGUNDO POWER PROJECT
PREPARATION TEAM

Executive Summary.....James W. Reede, Jr.

Introduction.....James W. Reede, Jr.

Project Description.....James W. Reede, Jr.

Air Quality.....Joseph M. Loyer

Public Health.....Obed Odoemelam

Worker Safety and Fire Protection.....Alvin Greenberg / Rick Tyler

Transmission Line Safety and Nuisance.....Obed Odoemelam

Hazardous Materials Management.....Ramesh Sundareswaran

Waste Management.....Alvin Greenberg

Land Use.....Mark Hamblin

Traffic and Transportation.....Steve Brown

Noise.....Jim Buntin

Visual Resources.....William Kanamoto / Eric Knight

Cultural Resources.....Dorothy Torres / Jeanette A. McKenna

Socioeconomic Resources.....Amanda Stennick / Michael Fajans

Biological Resources.....Dr. Noel Davis, Dr. Mike Foster, Dr. Pete Raimondi, Dr. Gregor Calliet, Shari Koslowsky and Rick York

Biological Resources "Alternative Cooling"……..James Schoonmaker/Susan Lee
Also listed in the prep team for this and not elsewhere: ..... Matt Layton and Dan Gorfain

Soil and Water Resources.....Joe Crea / Dominique Brocard
.....Tim Landis / Rich Sapudar

Geology and Paleontology.....Dal Hunter

Facility Design..... Shahab Khoshmashrab, Al McCuen and Steve Baker

Power Plant Reliability..... Steve Baker

Power Plant Efficiency..... Steve Baker

Transmission System Engineering ..... Mark Hesters / Al McCuen

Alternatives.....James W. Reede, Jr.

Compliance Monitoring and Facility Closure..... Donna Stone

Project Secretary..... Pat Owen