Case No. S160211

IN THE SUPREME COURT
OF THE STATE OF CALIFORNIA

VOICES OF THE WETLANDS,

Petitioner,

v.

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD; CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – CENTRAL COAST REGION; DUKE ENERGY MOSS LANDING LLC; and DUKE ENERGY NORTH AMERICA, LLC,

Respondents.

Appeal from the Superior Court of California, County of Monterey
Case No. M54889
The Honorable Robert A. O'Farrell, Judge

On Review from the Court of Appeal of the State of California
Sixth Appellate District
Case No. H028021

OPENING BRIEF ON THE MERITS

Deborah A. Sivas (Cal. Bar No. 135446)
Robb W. Kapla (Cal. Bar No. 238896)
Kimiko Narita (Cal. Bar Student No. 24096)
Allen Gleckner (Cal. Bar Student No. 24095)
Michael S. Nunez (Cal. Bar Student No. 24085)
Environmental Law Clinic
MILLS LEGAL CLINIC AT STANFORD
LAW SCHOOL
559 Nathan Abbott Way
Stanford, California 94305-8610
Telephone: (650) 723-0325
Facsimile: (650) 723-4426

Attorneys for Petitioner for Review
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Facsimile: (650) 723-4426

Attorneys for Petitioner for Review
VOICES OF THE WETLANDS

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ISSUES PRESENTED

1. May a trial court, after conducting a full trial on the merits under California Code of Civil Procedure section 1094.5 and finding that an agency's decision was not supported by the weight of the evidence, (a) decline to enter judgment or issue a writ of mandate setting aside the unlawful decision and then (b) admit newly produced evidence that was not before the agency at the time of the original decision for the purpose of upholding the original decision?

2. May the state permitting agency charged by the federal government with implementing the Clean Water Act, 33 U.S.C. § 1251 et seq., deviate from controlling federal law by (a) considering after-the-fact environmental enhancement activities as part of its compliance determination under the statute's technology-forcing requirements and (b) allowing a discretionary and factually unsupported cost-benefit exception to the statute's "best technology available" requirement?

INTRODUCTION AND SUMMARY OF ARGUMENT

The Moss Landing Power Plant at issue in this case sits at the mouth of Elkhorn Slough, from which it withdraws up to 1.224 billion gallons of cooling water each day. Twenty-eight percent of the Slough's total water volume circulates through the plant on a continuous basis. All living

organisms entrained in the facility's cooling system – billions of fish and invertebrate larvae and other plankton that form the base of the food web – are killed before the heated water is ultimately discharged into Monterey Bay. This "once-through cooling" system diminishes the biological productivity of the Slough by up to 40 percent. Regulators have deemed the plant's ecological impacts to be "significant," in part because Elkhorn Slough is one of California's last remaining coastal estuaries and serves as the primary nursery for the Monterey Bay National Marine Sanctuary.

To avoid such adverse impacts, many power plants throughout the nation employ alternative cooling technologies that drastically reduce or entirely eliminate the need for cooling water. Consistent with this industry practice, the U.S. Environmental Protection Agency has determined that, barring unusual circumstances, the once-through cooling technology utilized by the Moss Landing plant is not the "best technology available to minimize adverse environmental impact," as required by section 316(b) of the federal Clean Water Act, 33 U.S.C. § 1326(b).

In 2000, the Moss Landing plant sought permission to construct two new, state-of-the-art gas turbine generating units designed with the same once-through cooling technology it had employed at the site for decades. The state agency charged with implementing the Clean Water Act in California approved a permit for the new units without meaningful

consideration of alternative cooling technologies. Pursuant to California Code of Civil Procedure section 1094.5, Petitioner Voices of the Wetlands challenged the agency's determination that a once-through cooling system constitutes the best technology available for the Moss Landing facility. Following a bench trial on the merits, the superior court agreed with Petitioner, finding that Respondents prejudicially abused their discretion because the best technology determination was "not supported by the weight of evidence" before the agency at the time of the permit decision. Inexplicably, however, the trial court refused to enter the remedy requested by Petitioner and required by law – namely, a writ of mandate setting aside the unlawful agency determination. Instead, the court merely remanded the matter to the agency without entering judgment or vacating any part of the agency approval.

This legal error set in motion a cascade of events that ultimately undermined Petitioner's ability to obtain a full and fair hearing of its statutory arguments. On remand, the agency declined to reopen the "best technology available" determination previously found by the trial court to be unsupported by the record. Instead, it selectively accepted new evidence and new arguments – not including Petitioner's submission – and concluded that it need not revisit its prior permit decision. Respondents then returned to the trial court with over 6,000 pages of new evidence that was not before

the agency at the time of the initial permit decision. Relying on the information and testimony elicited during the agency remand, the trial court reversed its prior ruling and held that the original permit decision issued in 2000 was adequately supported by the weight of the post-decisional evidence produced in 2003. Departing dramatically from existing precedent and bedrock principles of administrative law, the appellate court affirmed the trial court process.

In its final judgment for Respondents, the trial court summarily dismissed Petitioner's separate substantive legal claims that the agency's best technology determination in this case violated section 316(b) of the Clean Water Act. Most significant, the court rejected Petitioner's argument that the agency unlawfully considered the applicant's "environmental enhancement" funding in determining the best available cooling water technology for the Moss Landing plant. The trial court's holding, which was affirmed on appeal, squarely contravenes applicable federal court precedent on an important question of federal law, putting California at odds with the rest of the nation. The lower courts also upheld Respondents' use of an arbitrary cost-benefit analysis to evaluate compliance with section 316(b). While economic considerations may inform the "best technology available" determination, permit-writing agencies must both articulate a discernable standard for assessing costs and support their conclusions with

facts in the record. In this case, Respondents did neither.

STATEMENT OF THE CASE

I. LEGAL BACKGROUND

Congress enacted the Clean Water Act in 1972 to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Administered by the U.S. Environmental Protection Agency ("EPA"), the statute established the National Pollutant Discharge Elimination System ("NPDES") permitting program to regulate the discharge of any "pollutant" from any "point source" into U.S. waters.[1] 33 U.S.C. § 1311; Weinberger v. Romero-Barcelo, 456 U.S. 305, 319 (1982). The Clean Water Act is a model of cooperative federalism, establishing minimum federal standards of environmental protection and allowing states that qualify for enforcement delegation to set more stringent standards for local water bodies, if they choose. Like most other states, California administers the NPDES program within its borders; in particular, EPA has authorized the State Water Resources Control Board ("State Board") and the nine Regional Water Quality Control Boards ("Regional Board") to implement the NPDES permit program. Cal. Water Code § 13377; 39 Fed. Reg. 26,061 (July 16, 1974); 54 Fed. Reg. 40,664 (Oct. 31,

[1] The term "pollutant" includes heated water. 33 U.S.C. § 1362(6). A "point source" is defined as "any discernible, confined and discrete conveyance." Id. at § 1362(14). Thus, the discharge of heated water from a power plant cooling system requires an NPDES permit.

1989). The NPDES permits issued by the Regional Boards must comply with all minimum federal requirements of the Clean Water Act. 33 U.S.C. § 1342(b); 40 C.F.R. §§ 123.22-.25; Cal. Water Code §§ 13372, 13377.

At issue here is section 316(b) of the Clean Water Act, which mandates that NPDES permits for power plants "shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. § 1326(b).[2] After EPA's first attempt to promulgate section 316(b) implementing regulations failed, the agency issued "Draft Guidance for Evaluating the Adverse Impact of Cooling Water Intake Structures on the Aquatic Environment" in 1977 ("Draft Guidance").[3] This guidance, which directs permit-writing agencies to evaluate section 316(b) compliance on a case-by-case basis, concludes that "[a]n open system large volume intake in an area of high biological value does not represent best technology available to minimize adverse environmental impact and will generally result in disapproval."

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[2] EPA considers "adverse environmental impact" to be "a level of impingement or entrainment of aquatic organisms that is recurring and nontrivial." 65 Fed. Reg. 49,060, 49,074 (Aug. 10, 2000).

[3] The original regulations published at 41 Fed. Reg. 17,387 (Apr. 26, 1976) were held procedurally defective in Appalachian Power Co. v. U.S. Environmental Protection Agency, 566 F.2d 451 (4th Cir. 1977), and EPA subsequently withdrew them. 44 Fed. Reg. 32,956 (June 6, 1979). The Draft Guidance governed section 316(b) determinations until replacement rules were developed. 65 Fed. Reg. at 49,063.

RAR:002423.[4] Exceptions to the general rule require site-specific assessment demonstrating that "involvement of the biota is low or survival of those involved is high, and subsequent reduction of the populations is minimal." Id. Where structural alterations (e.g., fish screens, water velocity reduction, and intake location changes) "would not minimize adverse impact, consideration should be given to reduction of intake capacity which may necessitate installation of a closed cycle cooling system." RAR:002424; see also 41 Fed. Reg. at 17,388.

In August 2000, EPA proposed to replace this case-by-case approach with national performance standards for new facilities that require environmental protection commensurate with that attainable through use of a closed-cycle cooling system – a reduction in water intake of roughly 95 percent. 65 Fed. Reg. at 49,077. Afer exhaustive study, EPA identified a strong industry trend toward installation of closed-cycle recirculation technology, id. at 49,072, and determined that the proposed performance standard was "economically practicable." Id. at 49,087. The rulemaking

[4] The administrative record in this case was submitted to the trial court in three separate parts. This brief uses the following nomenclature: (1) "AR:" and "State Board AR:", respectively, for correspondingly numbered pages in the original Regional Board and State Board record lodged in the trial court on January 25, 2003; (2) "RAR:" for correspondingly numbered pages in the record of the remand proceedings lodged in the trial on October 14, 2003; and (3) "SAR:" for correspondingly numbered pages in the supplemental remand record certified on January 26, 2004. Trial court documents not contained in one of the administrative records are included in Petitioner's Appendix ("App:").

notice emphasized the importance of protecting the "abundance and diversity of aquatic life within" coastal estuaries like Elkhorn Slough. Id. The final so-called "Phase I" rule established a national performance standard that requires new facilities to "reduce . . . intake flow, at a minimum, to a level commensurate with that which can be attained by a closed-cycle recirculating cooling water system." 40 C.F.R. § 125.84(b). In adopting it, EPA explained that "a closed-cycle recirculating cooling system is a commonly practiced technology" and "industry standard." 66 Fed. Reg. 65,625, 65,278, 65,283 (Dec. 18, 2001).

The Phase I rule was challenged and largely upheld by the United States Court of Appeals for the Second Circuit in Riverkeeper, Inc. v. U.S. Environmental Protection Agency ("Riverkeeper I"), 358 F.3d 174 (2d Cir. 2004). That decision addressed two issues of relevance here. First, the Second Circuit rejected EPA's adoption of an alternative compliance method to meet the performance standard using after-the-fact restoration measures, such as fish restocking or habitat improvements, to offset fish and wildlife impacts. The court explained that restoration measures only correct for impacts; they do not minimize impacts in the first place, as required by the plain text of section 316(b). Id. at 189. Second, the court upheld the inclusion of a variance provision in the Phase I rule expressly because it "does not leave alternative requirements to the Agency's

'unfettered' discretion." Id. at 194.

In 2004, EPA finalized a similar "Phase II" rule for existing facilities. Like the Phase I rule, the Phase II rule established a performance-based compliance standard that can be achieved through a reduction in intake water "commensurate with a closed-cycle recirculating system" or one of four compliance alternatives. 40 C.F.R. § 125.94(a). This rule also was challenged and reviewed by the same Second Circuit panel. Riverkeeper, Inc. v. U.S. Environmental Protection Agency ("Riverkeeper II"), 475 F.3d 83 (2d Cir. 2007), rev'd sub nom on limited grounds, Entergy Corp. v. Riverkeeper, Inc., 129 S. Ct. 1498, 1510 (2009). In the portion of its Riverkeeper II decision that was not accepted for certiorari by the U.S. Supreme Court, the Second Circuit strongly reiterated its prior holding in Riverkeeper I that "[r]estoration measures are not part of the location, design, construction, or capacity of cooling water intake structures . . . Accordingly, the EPA impermissibly construed the statute by allowing compliance with section 316(b) via restoration measures." 475 F.3d at 110.

II. FACTUAL BACKGROUND

A. The Elkhorn Slough Coastal Estuary

The Elkhorn Slough coastal estuary at the center of this case "adjoins the much larger Monterey Bay National Marine Sanctuary near Moss Landing Harbor about midway between the cities of Santa Cruz and

Monterey." AR:304234. It is one of the last large coastal wetlands remaining in California and of vital importance to the larger Monterey Bay coastal ecosystem. AR:300863, 303666, 304239.[5] Because California has lost more than 75 percent of its coastal marshes to human development, the Slough represents a "particularly valuable" resource. AR:300871.

Considered an "ecological gem," Elkhorn Slough is "an estuary of great habitat diversity and species richness." AR:300863, 300871. It provides habitat for hundreds of resident and migratory bird species and supports a "great diversity of rare plants and animals." AR:300863, 304239. Along the shores of the marsh are two heron rookeries, a small breeding population of snowy plovers, and nesting pairs of golden eagles, white-tailed kites and many other species of raptors. Altogether, 400 species of invertebrates, 260 species of birds, and 80 species of fish have been identified in the Slough, including commercially important dungeness crab and endangered tidewater goby. Elkhorn Slough is home to significant numbers of marine mammals, including harbor seals, southern sea otters and sea lions. It also serves as an important nursery and source of nutrients for Monterey Bay and functions as a filter for sediment and pollution runoff

[5] The main channel of the Slough winds inland seven miles and is flanked by a broad salt marsh second in size only to the San Francisco Bay marsh, with the Slough as a whole draining a watershed of approximately 43,000 acres. AR:303666, 304238. Today, the wetlands of Elkhorn Slough cover approximately 3,000 acres, a mere ten percent of their size in the 1880's. AR:304238.

from surrounding upland uses. These functions are especially significant because the Slough opens into one of the deepest and most productive oceanic resources along the California coast, the Monterey Submarine Canyon. See generally AR:300863, 300871, 303666-67, 304239.

The significance of Elkhorn Slough has been widely recognized. The State of California designated the Slough as an ecological preserve. The National Oceanic and Atmospheric Administration included Elkhorn Slough's tidal waters as part of the Monterey Bay National Marine Sanctuary and established a National Estuarine Research Reserve on its shores, the only one in California north of San Diego. The American Bird Conservancy designated the Slough as a "Globally Important Bird Area" because it harbors significant breeding and wintering populations of the threatened western snowy plover, as well as a host of other migrant and wintering shorebirds, including the endangered brown pelican. And the U.S. Fish and Wildlife Service designated Elkhorn Slough as "critical habitat" for the western snowy plover pursuant to the Endangered Species Act. AR:303666-67, 304239-40. As the California Energy Commission concluded, "Elkhorn Slough is considered a significant biological resource," AR:304240, that "supports one of California's most threatened ecosystems, the coastal estuary." AR:304239.

B. The Moss Landing Expansion

The Moss Landing Power Plant first commenced operations in 1950, when it consisted of five operating units that Pacific Gas & Electric ultimately decommissioned in 1995. These units utilized once-through cooling water technology that drew intake water from Moss Landing Harbor at the mouth of Elkhorn Slough, ran it through the facility, and discharged it back into the Slough. Two newer units were constructed in 1968 and continue to operate today, producing roughly 1,500 megawatts ("MW") of electricity and using the same once-through cooling water technology. AR:300048. With the dawn of electricity deregulation in California, Duke Energy purchased the Moss Landing facility in 1998 and applied to the California Energy Commission to construct and operate an expansion. AR:303190.

The expansion proposed by Duke included two new, state-of-the-art 530-MW natural gas-fired generating units, with an estimated capital cost of $475 million. AR:303190-91. Like their 50-year-old predecessors, the new units were designed to utilize once-through cooling technology and to draw water from the Elkhorn estuary. AR:304111. The expanded plant can "suck through its cooling water intake system" up to 1.224 billion gallons of saltwater per day, or roughly 28 percent of the entire water volume of the harbor and slough on a continuous basis for the next several decades.

AR:303669.

C. The Permitting and Environmental Review Process

Duke began the permitting and environmental review process with an application for expansion to the California Energy Commission in May 1999. That application disclaimed any significant adverse impacts on water or biological resources in Elkhorn Slough, even after a supplemental application clarified that the expansion would increase cooling water intake flow rates from the current level of 532,000 gallons per minute to 878,000 gallons per minute. AR:300299, 300373, 300998. Duke's application did not actually assess alternative cooling water systems. Instead, it offered unsupported assertions that closed-cycle recirculation cooling towers would have potential visual, noise or "nuisance" water deposition impacts and concluded that "the proposed once-through cooling water system is preferred." AR:301058-59. Air cooling – another alternative that uses no intake water at all – was dismissed in the same cursory manner. AR:301059-60.

To comply with the Clean Water Act, Duke also applied to the Regional Board for a new NPDES permit to cover the proposed expansion units and to replace its expiring permit for the existing units. AR:301520-635. The Regional Board processed the NPDES permit application in parallel with the Energy Commission siting process. The Energy

Commission acted as the "lead agency" for environmental evaluation of the project under the California Environmental Quality Act, Cal. Pub. Res. Code § 21000 *et seq.*, and prepared the environmental review document – called the Final Staff Assessment ("FSA") – for the proposed expansion. AR:304502-04.

To assist in its review of environmental impacts, the Regional Board required Duke to undertake certain studies related to the plant's thermal discharge and cooling water intake impacts and convened a Technical Working Group. See AR:304505-09. The working group consisted of Duke representatives, agency representatives, and certain outside consultants charged with providing advice on the biological impacts associated with the proposed expansion. The group did not discuss or analyze the engineering or economic feasibility of alternative technologies or reach any conclusions on what constituted best technology available ("BTA") under section 316(b). See AR:305782-898. Regional Board project manager Michael Thomas made it clear that these BTA determination issues were not part of the group's mission: "Michael T . . . also said that Duke could not definitively say that they have BTA. He stated that the TWG focused on biological issues only. He felt that BTA would be achieved through mitigation." AR:305892 (emphasis added).

The working group's biological evaluation fed directly into the

environmental review prepared by the Energy Commission and relied upon by the Regional Board in its NPDES permitting decision. Because all floating organisms entrained in the plant's intake water are carried to their death, the two new units alone cause an estimated 13 percent loss of the fish larvae in Moss Landing Harbor and Elkhorn Slough. When both the new and existing units are operating, the percentage loss is "several times greater," as high as 40 percent. AR:303670. These lost fish larvae, as well as the crab, clam and other pelagic eggs and larvae that also are entrained in unquantified numbers, serve as the biological building blocks for the Elkhorn Slough ecosystem. The FSA concluded that such a substantial loss of productivity at the lower levels of the food web "constitutes a significant adverse impact" to the watershed. AR:306670, 304277 (noting that "[t]hese pelagic organisms are important living material that provide food (primary productivity) for many creatures in the harbor and slough ecosystems. The loss of this amount of productivity is significant.").

D. The "Best Technology Available" Determination

The Regional Board staff undertook a separate section 316(b) compliance determination based primarily on the "Moss Landing Power Plant Modernization Project 316(b) Resource Assessment" ("Section 316(b) Report") prepared by Duke. AR:302856-3187. Although the report recognized that a closed-cycle system would reduce entrainment impacts by

up to 95.2 percent, AR:303129, it provides only a short, cursory discussion of alternative cooling systems. AR:303145-52. Borrowing directly from Duke's initial permit application, the report states that mechanical cooling towers will increase capital costs by $12 million, natural cooling towers by $13 million, and an air cooling system by $30 million. It dismisses these alternative cooling options as infeasible and too expensive. AR:303160.

The Energy Commission's FSA contains a table of alternative technology options used or proposed at nearby facilities and Duke's proposed lifetime cost estimates for each technology. AR:303674. In a short textual discussion, the original FSA states that "[t]he feasibility of the various BTAs are weighed against the effectiveness to reduce cooling water system adverse impacts to biological resources and the costs of wetlands restoration and other Elkhorn Slough enhancements. A specific mitigation/compensation amount for Elkhorn Slough enhancement (wetland acres to be restored and other enhancements) is yet to be determined." AR:303672. Less than two weeks later, the Energy Commission issued an "Errata" for this section of the document, deleting all discussion of BTAs and replacing it with: "The agencies and the project applicant agreed to seven million dollars ($7,000,000) for mitigation/compensation for the biological losses of this project." AR:304702-04.[6]

[6] For the Court's convenience, the relevant Errata pages are reproduced in Attachment A.

Also relying on Duke's Section 316(b) Report, the Regional Board issued a draft NPDES permit that proposed to adopt two important findings: (1) "the costs of alternatives not being implemented are wholly disproportionate" to the benefits gained by such alternatives; and (2) minimization of adverse impacts as required by Section 316(b) would be achieved by an environmental enhancement program that uses permanent preservation or direct enhancement of Elkhorn Slough watershed resources to offset the project's significant productivity impacts. AR:304775-76. No supporting analysis for these conclusions was provided in the public notice, nor is one contained in the final administrative record.

After a flurry of negative comments by the public and several other state and federal administrative agencies,[7] the Regional Board issued a "Staff Report" that attempted to blunt the criticism. Among other things, the Staff Report conceded that because the project will result in a biological productivity loss of 13 to 40 percent (depending on whether only the new units or the entire facility are considered), an "evaluation" of technological alternatives to minimize entrainment impacts is required. AR:305051. The "evaluation" that followed, however, was merely a reproduction of the perfunctory BTA table contained in – and later deleted from – the Energy Commission's environmental review document, accompanied by a short

[7] See, e.g., AR:304839-43, 304847-57, 304875-77, 304878-83, 304919-20, 304930-34, 304941-46, 304974-76; 305213-30, 305231-33, 305236-40.

narrative explaining that "Regional Board staff considers the costs listed in Table 2 to be wholly disproportionate, or unreasonable relative to the entrainment impacts at Moss Landing." Id. The Staff Report, like the predecessor documents on which it relied, did not assess section 316(b) factors or explain the "wholly disproportionate" decision criteria it used.

On October 27, 2000, the Regional Board approved new NPDES permit No. CA0006254 for the existing Moss Landing Power Plant units and the proposed expansion. Findings 48 through 51 incorporated the agency's section 316(b) determination. Finding 48 adopted the Staff Report's recommended conclusion, without further analysis, that "the costs of alternatives to minimize entrainment impacts are wholly disproportionate to the environmental benefits." AR:305756-57. It also incorporated staff's recommendation for funding of an "environmental enhancement program" to offset the project's significant impacts on Elkhorn Slough. AR:305757. Findings 49, 50 and 51 explained that funding of the mitigation program was integral to the Regional Board's determination of BTA under section 316(b). AR:30575-61.

III. PROCEDURAL BACKGROUND

A. Petitioner's Legal Challenge and the Trial

As provided by California's Porter-Cologne Water Quality Act,[8]

[8] Cal. Water Code §13330. Prior to filing the case in superior court, Petitioner timely appealed the NPDES permit decision to the State Board.

Petitioner filed a timely petition for writ of mandate pursuant to California Code of Civil Procedure ("CCP") section 1094.5, alleging that the Regional Board's decision constituted a prejudicial abuse of discretion because it (1) failed to consider, analyze, or make specific findings regarding BTA for the Moss Landing Power Plant cooling water intake system, (2) illegally and improperly considered economic costs in permitting the once-through cooling water system, and (3) illegally and improperly substituted an environmental enhancement program for BTA under section 316(b). App:21-24.[9]

Following a full trial on the merits, the superior court issued an Intended Decision in Petitioner's favor. The court found that "[t]he record supports the . . . expressed conclusions of [then Regional Board member Shallcross] that the best technological alternatives were not evaluated in the manner intended by the mandate of the Clean Water Act" and concluded that the Regional Board's BTA determination was not supported by the weight of the evidence because "there is no evidence in the record of a

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State Board AR:002-06. The State Board dismissed the section 316(b) issues as "non-substantial." Id. at 193-94.

[9] On the cost issue, Petitioner alleged and argued that even if federal law allowed application of a "wholly disproportionate" standard, the record evidence did not support such a finding. On the enhancement funding program, Petitioner alleged and argued that mitigation was neither allowed by law nor supported by evidence in the record. App. 23-24. Despite extensive merits briefing of these issues, the trial court's subsequent intended decision did not address them. RAR:000009.

comprehensive, definitive consideration of cooling water alternatives by the Regional Board to apply Best Technology Available to the Moss Landing Power Plant. The evidence is at best meager, and at worst, speculative and based on historical conjecture." RAR:000006.

In accordance with CCP section 1094.5(f), the trial court directed that "[a] writ of mandate shall issue compelling the Regional Board to conduct a thorough and comprehensive analysis of Best Technology Available applicable to the Moss Landing Power Plant." RAR:000007. The Intended Decision became the final Statement of Decision and the court directed Voices to "prepare an appropriate judgment." RAR:0009. The Statement of Decision did not address Petitioner's separate and extensively brief substantive claims under the Clean Water Act.

In preparing the judgment, the parties disagreed as to whether CCP section 1094.5 required the Court to vacate the underlying unlawful decision. Consistent with the court's decision and its own petition for writ of mandate, App:24-25, Petitioner proposed a standard form final judgment and writ of mandate directing Respondents to set aside the unlawful decision pursuant to CCP section 1094.5(f). App:55-62. State Respondents and Duke sought an alternative order of "remand to the Regional Board for further analysis of the BTA issue," apparently in lieu of a writ of mandate, and requested that the court "defer entering a judgment until there has been

a return from the Regional Board in response to that remand." App:63-64. The trial court ultimately concluded that it had the "inherent authority" to remand the matter for further administrative proceedings without vacating the unlawful permit decision and directed the Board "to conduct a thorough and comprehensive analysis" with respect to the BTA finding. RAR:000011.

Despite its finding that the BTA determination in the permit was "not support by the weight of the evidence," the court did not issue either a judgment in Petitioner's favor or a writ of mandate vacating any portion of the flawed NPDES permit decision. Instead, it instructed Respondents to advise the Court when the Regional Board had complied with the remand order. RAR:000012. The Sixth Appellate District Court of Appeal summarily denied Petitioner's subsequent petition for writ of supersedeas, which sought to compel the trial court to issue a writ vacating the illegal agency decision.

B. The Administrative Remand Process

After remand, the Regional Board issued a "Notice of Public Hearing" for May 15, 2003. The notice clarified that the Board did not intend to set aside the prior permit decision, but instead would convene a hearing to provide the parties with an opportunity "to present evidence and analysis regarding the BTA alternatives, their costs and their environmental

benefits." RAR:000015. It explained that "the Regional Board will consider the evidence, including expert opinions and analysis, analysis of studies, reports and scientific literature, legal and policy arguments, the administrative record and public comment to determine whether the weight of the evidence supports retaining Finding 48 [on BTA] as it currently appears in the NPDES permit, or whether to consider amendment of the NPDES permit . . . " RAR:000016.

Petitioner formally objected to the proposed form and format of the remand hearing, citing legal authority for the unremarkable proposition that the Regional Board could not consider new evidence to support an old decision and arguing that "the only proper way to remedy the legal defect found by the court is to reopen the permit for the consideration of new evidence and possible amendment." RAR:000023-24. The Regional Board rejected this request and moved forward with the remand hearing as planned. RAR:000032-33.

In advance of the remand hearing, Respondents' staff prepared two reports for the Regional Board. The first was a "Staff Report" that briefly (1) identified three feasible cooling alternatives for the Moss Landing plant, (2) quoted from a newly-commissioned, unpublished and non-peer-reviewed white paper by the agency's biological consultant, and (3) affirmed staff's prior use of a so-called "habitat equivalency method" to

monetize the adverse environmental impacts caused by the plant's once-through cooling system. RAR:000044-48. The Staff Report relied on at least five other documents that post-date the original October 27, 2000 permit decision. RAR:000049-51. The second report was a "Legal Analysis" prepared by staff counsel advising the Regional Board that it "should not revisit issues regarding the environmental enhancement program." RAR:000440.

Duke also submitted voluminous new testimony analyzing the relative costs and benefits of BTA alternatives and discussing the purported benefits of the environmental enhancement program on which the permit decision was based. Duke engaged a team of 11 experts and consultants, each of whom conducted new research and analysis based on new, post-October 2000 evidence. See RAR:000512. All of this new information was considered by the Regional Board and ultimately incorporated into the "remand" record prepared for the trial court. RAR:000473-725.

In its submission, Duke described the "biological benefit" of its "Base Case" scenario versus various alternative technologies. It defined the Base Case as once-through cooling plus environmental enhancement funding and claimed that the benefits of this approach were "Substantial." See RAR:000477. In contrast, Duke described the biological benefits of all

other technology as "Negligible." Id.[10] In addressing the efficacy of BTA alternatives, Duke focused on the mitigation funding it had already provided and outlined various post-permit activities by the Elkhorn Slough Foundation allegedly being funded or leveraged by this mitigation money. RAR:000479, 000682-83. Thus, the ability of environmental enhancement funding to offset cooling system impacts was a key feature of Duke's presentation to agency decisionmakers.

In contrast, Petitioner's attempt to participate in the remand proceeding was constrained because the unlawful permit decision was not vacated and reopened for public input, as Petitioner previously requested of both the trial court and the Regional Board. As provided by the hearing notice, Petitioner timely submitted its "rebuttal" arguments and evidence in direct response to the new information and testimony by Regional Board staff and Duke. SAR:0059-73. This submission challenged the propriety of the "wholly disproportionate" test, the legality of using the environmental enhancement fund to offset project impacts, and Respondents' acceptance of new evidence to support a three-year-old permit decision. The day after the remand hearing, Petitioner learned that these timely written arguments

[10] During the remand process, Duke and Regional Board staff began referring to the environmental enhancement funding requirement in the permit as a "habitat enhancement plan" or "HEP," even though the permit itself contains neither a plan nor any specific requirement to enhance habitat.

had been incorrectly excluded on timeliness and relevance grounds and that Board decisionmakers, therefore, never considered them. RAR:000823-24, 000828-30; SAR:0075.[11]

During the remand hearing itself, agency legal counsel strongly admonished the Chairman of the Regional Board to prohibit any discussion related to the environmental enhancement funding. RAR:000904-05, 000911-12. For instance, on advice of counsel, the Chairman cut off testimony by Petitioner's economics expert, Dr. Brent Haddad, on the proper methods for measuring the ecological benefits of alternative cooling technologies, noting that such testimony was "beyond the scope" of the hearing. RAR:001054-55. But it was apparent to everyone in the room that mitigation measures and valuation questions could not be disentangled from the staff's BTA analysis. The Board's own consultant provided extensive testimony about the origins of the environmental enhancement fund[12] and the Board engaged in a lengthy, confused colloquy over the propriety of

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[11] In a subsequent exchange of correspondence, Petitioner demonstrated conclusively that its comments were, in fact, timely submitted and that they related directly to the issues addressed at the remand hearing. See SAR:0075-78 (Petitioner's letter), SAR:0080-84 (staff counsel's response); SAR:0086-88 (Petitioner's reply).

[12] Regional Board staff and Duke were permitted by the Chairman to put on a string of consultants who discussed the biological impacts of the power plant, the environmental value of mitigation enhancement, and the cost and feasibility of various cooling system alternatives. See, e.g., RAR:001080-100, 001131-35.

various pieces of testimony. At one point, a frustrated Board member complained: "Mr. Chair, this sounds to me like we can't have our cake and eat it too. Either we discuss the habitat enhancement program or we don't. I don't understand how on the one hand counsel can tell us this is not on the table, but now our testimony is talking about the calculations in effect rebutting somebody's criticism of the habitat enhancement program. Let's have it or not." SAR:0029-32.

At the conclusion of the remand hearing, the Regional Board did not reopen the old permit or issue a new permit; instead, it passed a resolution reaffirming its prior findings that "the costs of alternatives to minimize entrainment impacts are wholly disproportionate to the environmental benefits" and that Duke "will fund a mitigation package to directly enhance and protect habitat resources in the Elkhorn Slough watershed." RAR:001203-04. This action was subsequently memorialized in a written resolution of the Board. SAR:0017.

Petitioner subsequently appealed this matter to the State Board, SAR:0038-90, which summarily dismissed the appeal. SAR:0001. Petitioner then filed a second petition for writ of mandate with the trial court.

C. Post-Remand Proceedings in the Trial Court

Pursuant to agreement of the parties, all issues concerning the

remand were subsequently litigated in the first-filed petition, and the second case was later voluntarily dismissed. After further briefing and hearing, the superior court issued an Intended Decision and subsequently entered a Statement of Decision, prepared by Duke's counsel, denying Petitioner's petition. App:75-84. The Statement of Decision states:

> It was certainly this Court's expectation that the Board would more fully consider additional relevant evidence on the issue of best technology available ("BTA"). To meaningfully comply with the remand, a more complete inquiry into BTA necessitated the receipt of further information. . . . This Court has the inherent authority – separate and apart from C.C.P. 1094.5 – to remand to agency for further proceedings without entry of judgment.

App:78.

Despite extensive briefing of the Clean Water Act substantive issues at trial and the absence of any discussion of these issues in the original post-trial decision, the trial court summarily rejected them in the final Statement of Decision: "the Court's October 2002 decision was a ruling against Petitioner on the claims concerning the propriety of the environmental mitigation project in the permit and the propriety of the wholly disproportionate test applied by the Board to the BTA analysis." App:80. With respect to the intervening contrary holding in Riverkeeper I, the Statement of Decision concluded that "[t]he Court agrees with Respondents and Real Parties that Riverkeeper is not controlling here." Id. The trial court entered Respondents' [Proposed] Judgment Denying Peremptory Writ

of Mandate on August 17, 2004, and the Notice of Entry of Judgment Denying Peremptory Writ of Mandate was filed on August 20, 2004. App:85-91. Pursuant to CCP section 904.1(a)(1), Petitioner timely appealed the final judgment on October 5, 2004.

D. The Appellate Court Decision

While the appeal was pending, the Second Circuit decided Riverkeeper II, affirming its prior holding in Riverkeeper I that restoration measures are not technology and, therefore, cannot be used to satisfy section 316(b). Nevertheless, the Sixth Appellate District fell in line with trial court on each issue raised by Petitioner.

With respect to the trial court proceedings, the appellate court noted that "[c]ertainly, the usual practice in mandamus proceedings is for the court to issue a writ to explain its decision and to order the agency to comply with it." Voices of the Wetlands v. Cal. State Water Resources Control Bd., 69 Cal. Rptr. 3d 487, 517 (2007). But it concluded that "[w]hile the peremptory writ offers one familiar, well-accepted way for the court to secure the agency's compliance, the statute does not demand its exclusive use for this purpose." Id. As an alternative to a writ setting aside the unsupported decision, the appellate court held that trial judges have "inherent" authority to issue an interlocutory remand designed to produce additional evidence. Id. at 519.

With respect to the use of restoration measures in determining section 316(b) compliance, the appellate court recognized the unequivocal holding on the issue in Riverkeeper I and Riverkeeper II, but went on to endorse the opposite result in this case. The court left open the legal question of whether California could follow a different rule. Voices of the Wetlands, 69 Cal. Rptr. 3d at 547. It held, however, that the Regional Board did not consider the environmental enhancement funding plan in its BTA determination under section 316(b), despite the extensive and undisputed evidence to the contrary. Id.

Finally, with respect to the cost benefit analysis employed by the Regional Board in its section 316(b) determination, the appellate court concluded both that the agency acted within the scope of its discretion in using a reasonableness standard and that the trial court's "implicit finding that substantial evidence supports the benefit calculation" was proper, despite the lack of credible evidence in the record on this issue. Voices of the Wetlands, 69 Cal. Rptr. 3d at 550.

ARGUMENT

I. THE TRIAL COURT'S REMAND PROCESS WAS LEGALLY FLAWED AND UNDERMINED BASIC TENETS OF ADMINISTRATIVE PROCESS.

The trial court's order directing a post-trial remand without setting aside the unlawful agency decision violates CCP section 1094.5 and

establishes confusing precedent that jeopardizes basic principles of administrative law. The court's action had two unfortunate consequences. First, it deprived Petitioner of the relief it sought and to which it was entitled by the law. Second, it facilitated the court's later admission of new evidence that was not before the agency at the time of its decision, and thus not part of the original decision record, to support and uphold the original agency decision. The unorthodox remand process undercut the tenets of administrative law and procedure by encouraging an improper post hoc rationalization of the agency's decision and depriving Petitioner of a full and fair opportunity to protect its interests.

A. The Trial Court Abused Its Discretion by Refusing to Enter a Writ Following Trial and a Decision on the Merits.

1. The Only Remedy for a Successful Challenge under CCP Section 1094.5 Is Vacatur of the Unlawful Agency Decision.

Section 1094.5 strictly governs administrative writ of mandate proceeding. In response to a petition challenging an administrative decision, the agency must file the administrative record of the proceedings. CCP § 1094.5(a). That record must contain the evidence considered by the agency when it made its decision. Based exclusively on the agency's administrative record, the court holds a hearing – essentially a trial – to determine if the agency abused its discretion by not proceeding in a manner

required by law, issuing a decision that is not supported by the findings, or issuing findings that are not supported by the evidence in the record. CCP § 1094.5(a), (b); Pomona Valley Hospital Medical Center v. Superior Court, 55 Cal. App. 4th 93, 101 (1997) (holding that court hearing on writ for administrative mandamus is conducted solely on record before the agency). Where, as is the case here,[13] the court is directed to exercise its "independent judgment" on the evidence in the record, abuse of discretion is established where the findings are "not supported by the weight of the evidence." CCP § 1094.5(c).

Following trial on the merits, the court has only two options – it may either grant or deny the writ. "A hearing on a petition for writ of administrative mandamus is a trial of a question of fact for purposes of Code of Civil Procedure section 632 and requires a statement of decision." Giuffre v. Sparks, 76 Cal. App. 4th 1322, 3126 n.3 (1999) (citing Cooper v. Kizer, 230 Cal. App. 3d 1291, 1301 (1991)). After trial, the court must issue a decision and "judgment must be entered by the clerk, in conformity to the decision of the court, immediately upon the filing of such decision." CCP §§ 632, 664. Judgment is defined as "the final determination of the rights of the parties in an action or proceeding." CCP § 577. Thus, following trial and decision in their favor, writ applicants are entitled to a

[13] See Cal. Water Code § 13330(d); 13320.

determination of their rights. The trial court "shall enter judgment either commanding respondent to set aside the order or decision, or denying the writ." CCP § 1094.5(f) (emphasis added). If the court enters judgment for the applicant, "a peremptory mandate must also be awarded without delay." CCP § 1095 (emphasis added).[14] This statutory framework admits of no exceptions. See Smith v. Rae-Venter Law Group, 29 Cal. 4th 345, 358 (2002) (affirming that where "there is no ambiguity in the statute, 'then the Legislature is presumed to have meant what it said, and the plain meaning of the language governs'").

2. The Trial Court Improperly Declined to Issue a Judgment and Writ Setting Aside the Flawed BTA Determination.

Although the trial court issued a decision in Petitioner's favor, finding that the BTA determination was "not supported by the weight of the evidence," RAR:000007, 000009, it improperly refused to enter the relief that Petitioner requested and section 1094.5(f) mandates. Instead, the court remanded the matter to the agency for more analysis without issuing a judgment, without issuing a writ, and without setting aside the Regional Board's original, unsupported decision. RAR:0011-0012.

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[14] A peremptory writ is the actual document, separate from the judgment, directing the party to whom it is directed to do the act required to be done – here, setting aside the unsupported decision. CCP § 1087; Endangered Habitats League, Inc. v. State Water Resources Control Bd., 63 Cal. App. 4th 227, 73 Cal. Rptr. 2d 388

As the courts have confirmed, there is no authority in the writ statute under which a court can deny an applicant the relief to which it is entitled once the matter has been fully adjudicated. For example, in Resources Defense Fund v. Local Agency Formation Commission, 191 Cal. App. 3d 886 (1987), the trial court determined that the city's findings were inadequate because they failed to explain the decision. But instead of setting aside the findings, and "[i]n an apparent effort to remedy the fatal omission, the trial court entered an 'interlocutory judgment' remanding the matter to the city council for promulgation of appropriate findings." Id. This "judgment" effectively acted as a remand to the city council so it could make additional findings, at which point final judgment would be entered in the council's favor. Id. The appellate court reversed, holding that section 1094.5 prohibits interlocutory remand because "the procedure for remanding the matter to the agency is a remedy to be employed when granting the writ; it is not, however, a procedure to be employed prior to such judgment." Id. at 899-900.

Similarly, in Sierra Club v. Contra Costa County, 10 Cal. App. 4th 1212 (1992), the trial court found the county's findings to be "deficient" and remanded for additional findings without issuing a writ or setting aside the agency decision. Id. at 1216. After the county adopted the additional findings, the court entered judgment in its favor. Id. at 1216-17. The

appellate court reversed, holding that "once the trial court concluded there were defects in the [decision] it erred by not issuing the writ of mandate." Id. at 1220-22.[15]

Notwithstanding the unequivocal language of section 1094.5(f), the appellate court in this case found that the trial court had "inherent" authority to order a post-trial remand without setting aside the unlawful decision. Voices of the Wetlands, 69 Cal. Rptr. 3d at 518-19. Its holding mistakenly relies on Keeler v. Superior Court, 46 Cal. 2d 596 (1956), a case with virtually no similarities to this one. In Keeler, a state employee challenged his suspension, and the state sought to refer the matter back to the agency for findings concerning the suspension under new rules that made such findings mandatory. Id. at 598. The merits of the suspension were not before the Court – and presumably were not adjudicated prior to the remand. Id. After finding explicitly that section 1094.5 did not apply to the case, the Court looked to CCP section 187 for the court's inherent power to

[15] Respondents and the courts below incorrectly suggest that Rapid Transit Advocates, Inc. v. Southern California Rapid Transit District, 185 Cal. App. 3d 996 (1986), reached a different result. Rapid Transit Advocates involved a challenge to agency findings that implicitly incorporated the voluminous EIR already contained in the record. To resolve any ambiguity, the court granted a mid-case remand so that the agency could clarify its findings by expressly incorporating the EIR. Thus, the case did not involve a remand for additional analysis or evidence. Id. at 1002-03. To the extent that Rapid Transit Advocates can be read in any way to sanction post-trial, pre-judgment remands for the purpose of obtaining new evidence, it is inconsistent with the statute and should be overruled.

control the course of the litigation. Id. at 600. Section 187 provides that "if the course of proceeding be not specifically pointed out by this Code or the statute, any suitable process or mode of proceeding may be adopted which may appear most conformable to the spirit of this code." CCP § 187. Thus, the Court concluded: "In view of the present record the cause is not one in which the superior court is acting to review an administrative decision after a hearing and no reason appears why the court cannot, in the exercise of its inherent power, remand the case for further proceedings before undertaking to decide the petitioner's application." Id. at 600-01. As another court later explained, Keeler "has no relevance to this [section 1094.5] case" because "[t]he required 'course of proceeding' is set forth in subdivision (e) of section 1094.5" Ashford v. Culver City Unified School District, 130 Cal. App. 4th 344, 351 n.9 (2005) (emphasis in original).

Section 1094.5(e) provides that "[w]here the court finds that there is relevant evidence that, in the exercise of reasonable diligence, could not have been produced or that was improperly excluded at the hearing before respondent, it may enter judgment as provided in subdivision (f) remanding the case to be reconsidered in the light of that evidence." In other words, a court may remand a case for new evidence under section 1094.5(e) only through entry of a judgment under section 1094.5(f). And section 1094.5(f) requires that such a judgment "shall" command the agency to "set aside the

order or decision." Accordingly, section 1094.5(e) does not authorize the court to remand an administrative mandamus action for new evidence without a judgment and writ setting aside the decision. As the Ashford court correctly recognized, "[i]f we did not regard that subdivision as providing a specific limitation on the power of a court to remand an administrative matter for a new hearing, then the more general provisions of subdivision (f) of section 1094.5 would effectively render subdivision (e) superfluous." 130 Cal. App. 4th at 351.

B. The Trial Court Improperly Admitted and Considered Post-Decisional Evidence to Uphold the BTA Determination.

The trial court compounded its original error by relying on post-decisional evidence to reverse its earlier finding that the BTA determination was not supported by the weight of the evidence. The court found itself in this position because it previously had remanded the matter without vacating the underlying unlawful decision,[16] and Respondents subsequently declined to reopen any part of the offending NPDES permit on remand.

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[16] As the facts described above show, the trial court did not set aside (and the Regional Board did not reopen) the 2000 permit or the BTA determination. In its original decision, the appellate court apparently believed otherwise, holding that the trial court "set aside" the agency decision. When Petitioner pointed out this factual error in its petition for rehearing, the court merely amended its decision by inserting "effectively" into the sentence: "the trial court effectively ordered the agency to set aside a discrete and segregable part of its decision." App:110. Insertion of that word, however, does not make it so.

Instead, the Regional Board accepted reams of new evidence – over 6,000 pages in all (App:76) – and submitted it to the trial court for the post-remand proceedings. After reviewing this additional evidence from the 2003 remand, the trial court reversed its earlier decision and found that the original 2000 permit decision was supported by the record.

The trial court's acceptance and consideration of the 2003 evidence was clear error. "The general rule in [section 1094.5] actions is that judicial review is conducted solely on the record of the proceeding before the administrative agency." Sierra Club v. Cal. Coastal Comm'n, 35 Cal.4th 839, 863 (2005) (citing Pomona Valley Hosp., 55 Cal. App. 4th at 101). The reviewing court may receive additional evidence only if that evidence "in the exercise of reasonable diligence, could not have been produced or . . . was improperly excluded at the hearing before" the administrative agency, as provided by CCP section 1094.5(e). Sierra Club, 35 Cal. 4th at 863; No Oil, Inc. v. City of Los Angeles, 13 Cal.3d 68, 73 n.6 (1974); Eureka Citizens for Responsible Government v. City of Eureka, 147 Cal. App. 4th 357, 367 (2007). The court is confined to the original record unless one of these prongs is satisfied. Sierra Club, 35 Cal. 4th at 863; State of California v. Superior Court, 12 Cal.3d 237, 257 (1974). "In the absence of a proper preliminary foundation showing that one of the exceptions noted in section 1094.5, subdivision (e) applies, it is error for the court to permit the record

to be augmented." Pomona Valley Hosp., 55 Cal. App. 4th at 101; Sierra Club, 35 Cal. 4th at 863.

This "narrow" section 1094.5(e) exception for "truly new evidence, or emergent facts" discovered after the hearing (or improperly excluded from it) does not apply in any way here. Fort Mojave Indian Tribe v. Dep't of Health Svcs., 38 Cal. App. 4th 1574, 1595 (1995); Cadiz Land co. v. Rail Cycle, 83 Cal. App. 4th 74, 120 (2000). No party in this case has ever claimed, let alone demonstrated, the existence of newly discovered or improperly excluded evidence regarding the BTA analysis. The evidence accepted by the trial court to augment the administrative record in 2003 was largely produced for the remand itself, well after the 2000 permit decision that it intended to support. The court could not, therefore, admit this evidence to uphold the permit.

If the court intended for Respondents to produce or consider new evidence in reviewing the BTA determination, as it apparently did, the only proper course was issuance of a writ setting aside the unsupported agency decision and entry of judgment "remanding the case to be reconsidered in the light of that evidence." CCP § 1094.5(e). Had the court followed this path, all parties would have been free to submit evidence, testimony and legal arguments they believed relevant to the new decision. Instead, the remand process was constrained by the tortured logic of agency legal

counsel, and Petitioner's Clean Water Act arguments were brushed aside as "beyond the scope" of the interlocutory remand.

C. The Lower Court Holdings Undermine the Integrity of Judicial Review and Citizen Enforcement.

Section 1094.5 allows the public to hold agencies accountable by requiring that they proceed in a manner prescribed by law, that their decisions be supported by the findings, and that the findings be supported by substantial evidence. CCP § 1094.5(b). The trial court's deviations from the requirements of section 1094.5 and the appellate court's affirmation of these deviations threaten the integrity of the judicial review process.

The post-trial, pre-judgment remand undermined agency accountability by allowing the Regional Board to practice post hoc rationalization, which the courts have "soundly condemned." Resources Defense Fund, 191 Cal. App. 3d at 900; Bam, Inc. v. Bd. of Police Com'rs, 7 Cal. App. 4th. 1343, 1346 (1992) (holding that "[f]indings are not supposed to be a post hoc rationalization for a decision already made . . . the intended effect is to facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions.").

Yet the remand here was clearly designed to produce a post hoc rationalization for the "already made" BTA decision. The public notice for

the remand hearing conceded that the Regional Board's first step would be to find evidence to support its original decision: "To comply with the remand, the Regional Board will consider the evidence . . . to determine whether the weight of the evidence supports retaining Finding 48 as it currently appears in the NPDES permit, or whether to consider amendment of the NPDES permit." RAR:000016. The notice made clear that the Board would only consider amending the permit if it was unable to produce a post hoc rationalization for the existing permit.

More generally, post-trial, pre-judgment remands deny citizen groups finality on their meritorious claims. The process encourages agencies to seek limited remand after failing to succeed on the merits, rather than fully reconsider their faulty decisions. During a post-trial, pre-judgment remand, the agency can selectively pack the record with new evidence to target the court's concerns, without meaningfully reevaluating the action. If the court is still dissatisfied, there are no safeguards to preclude agencies from pursuing this strategy as many times as necessary. Such "repeated rounds of litigation, and uncertain, attenuated finality" will chill the ability of citizen watchdog groups to hold public agencies accountable for their decisions. Fort Mojave Tribe, 38 Cal. App. 4th at 1574.

II. RESPONDENTS' BTA DETERMINATION UNDER SECTION 316(b) IS INCONSISTENT WITH FEDERAL LAW AND UNSUPPORTED BY THE ADMINISTRATIVE RECORD.

A. Respondents Abused Their Discretion by Allowing the Moss Landing Plant to Comply with Section 316(b) through Environmental Enhancement Funding.

1. The Plain Text of Section 316(b) Precludes the Use of After-the-Fact Mitigation to Satisfy BTA.

The Clean Water Act is a technology-forcing statute. As the U.S. Supreme Court explained in Chemical Manufacturers Association v. Natural Resources Defense Council, Inc.,

> Congress intended to use the [Clean Water Act] standards as a means to "force" the introduction of more effective pollution control technology. . . . . In establishing BAT levels, it directed EPA to look at "the best performer in an industrial category." . . . By requiring that the standards be set by reference to [the] very "best" technology, the Act seeks to foster technological innovation.

470 U.S. 116, 155-56 (1985) (citations omitted). See also Natural Res. Def. Council, Inc. v. U.S. EPA, 859 F.2d 156, 208-09 (D.C. Cir. 1988); Natural Res. Def. Council, Inc. v. U.S. EPA, 822 F.2d 104, 123 (D.C. Cir. 1987); Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1057 n.79 (D.C. Cir. 1978).

In a portion of Riverkeeper II not reviewed by the Supreme Court, the Second Circuit confirmed the technology-forcing intent of section 316(b):

> Congress's use of the superlative "best" in the statute cannot be read to mean that a facility that achieves the lower end of the ranges, but could do better, has complied with the law. The statutory directive requiring facilities to adopt the best technology cannot be construed

> to permit a facility to take measures that produce second-best results, especially given the technology-forcing imperative behind the Act. Insofar as the EPA establishes performance standards instead of requiring facilities to adopt particular technologies, it must require facilities to choose the technology that permits them to achieve as much reduction of adverse environmental impacts as is technologically possible.

Riverkeeper II, 475 F.3d at 107-8 (citations omitted); see also Entergy Corp., 129 S. Ct. 1498, 1515 (Breyer, J. concurrence noting "Congress' technology-forcing objectives").

Especially in this context, section 316(b) cannot reasonably be read to allow an enhancement fund or other after-the-fact mitigation measures to satisfy BTA. Section 316(b) mandates that permit-writing agencies "shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. § 1326(b) (emphasis added). This provision is focused on the cooling water structure itself. In determining the "best" technology available for a particular plant, the permit-writing agency must evaluate four factors: (1) location (e.g., alternate placement of intake pipes); (2) design (e.g., fish screens, intake velocity and other design features); (3) construction (e.g., spatial orientation of intake system); and (4) capacity (e.g., total flow intake). In this way, section 316(b) fosters technological innovation that reduces or avoids the significant impacts from cooling systems before they occur. Nothing in the

language of section 316(b) suggests that agencies can satisfy their statutory obligations by sanctioning the impact and then trying to offset it later through enhancement activities elsewhere.

2. The Riverkeeper Cases Affirmed the Plain Meaning of Section 316(b) and that Interpretation Should Control Here.

As the federal appellate court recognized in the Riverkeeper cases, the plain language of section 316(b) does not allow for after-the-fact mitigation or restoration to satisfy BTA:

> Reclaiming abandoned mines to reduce acid mine drainage into the waterbody, removing barriers to fish migration, and creating buffers to reduce destructive runoff from agricultural lands, . . . however beneficial to the environment, have nothing to do with the location, the design, the construction, or the capacity of cooling water intake structures, because they are unrelated to the structures themselves. Restoration measures correct for the adverse environmental impacts of impingement and entrainment; they do not minimize those impacts in the first place.

Riverkeeper I, 358 F.3d at 189. Beyond the plain language of the statute, the Second Circuit cited supporting legislation history, prior agency interpretation of section 316(b), and EPA's own statements concerning the significant complexity and difficulty of "planning, implementation, and evaluation of restoration measures for populations of aquatic organisms and ecosystems as a whole." Id. at 190 (quoting 66 Fed. Reg. 65,285, 65,314). For all of these reasons, the court rejected EPA's argument that restoration measures are a permissible consideration in determining BTA.

In Riverkeeper II, the court strongly reaffirmed that allowing compliance with section 316(b) through environmental restoration measures constitutes an impermissible construction of the statute. 475 F.3d at 109-10. The court explained that "restoration measures substitute after-the-fact compensation for adverse environmental impacts that have already occurred for the minimization of those impacts in the first instance." Id. at 110 (citing Riverkeeper I, 358 F.3d at 189). As such, they are "'plainly inconsistent' with the statute's text" and "contradict the unambiguous language of section 316(b)." Id. Because restoration measures are unrelated to the structures themselves, "a rule permitting compliance with the statute through restoration measures allows facilities to avoid adopting any cooling water intake structure technology at all, in contravention of the Act's clear language as well as its technology-forcing principle." Id. In short, restoration is not "technology" under section 316(b) and, therefore, cannot take the place of alternative cooling technologies to satisfy that statute's BTA requirement.[17]

This Court should defer to the Second Circuit's emphatic and well-reasoned reading of section 316(b) in Riverkeeper I and Riverkeeper II. California courts are bound by interpretations of federal statutes under the

[17] This plain text conclusion is not contradicted in any way by EPA's long-standing Draft Guidance, which focuses exclusively on intake structure design, location, construction, and capacity and does not discuss mitigation in the context of BTA determinations. RAR:002407-70

United States Supreme Court[18] and generally give "great weight" to lower federal court interpretations of federal law. See, e.g., Barrett v. Rosenthal, 40 Cal. 4th 33, 58 (2006); Etcheverry v. Tri-Ag Serv., Inc., 22 Cal. 4th 316, 320 (2000); Adams v. Pac. Bell Directory, 111 Cal. App. 4th 93, 97-8 (2003); Spellman v. Sec., Annuities & Ins. Services, Inc., 8 Cal. App. 4th 452, 459 (1992). Refusal to adhere to federal precedent generally only occurs where "federal decisions provide scant authority for the proposition urged or are divided on an issue." Conrad v. Bank of America, 45 Cal. App. 4th 133, 150 (1996). Neither circumstance is relevant here. Both of the Riverkeeper cases were consolidated multicircuit litigation addressing questions of national scope under federal law.[19] The U.S. Supreme Court declined to review the Second Circuit's holding on restoration measures. 129 S. Ct. at 1510. That holding is not only the definitive federal law of the land; it also is the most faithful reading of section 316(b).[20]

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[18] Rohr Aircraft Corp. v. San Diego County, 51 Cal.2d 759, 764 (1959) (citing U.S. Const., art. VI, cl. 2), rev'd on the merits, 362 U.S. 628 (1960).

[19] In both cases, petitions for review were filed in the Courts of Appeals for several circuits. Pursuant to federal law, on both occasions the petitions were consolidated by the United States Judicial Panel on Multidistrict Litigation and ultimately assigned for adjudication to the Second Circuit. See 28 U.S.C. § 2112(a). There is no question that the Riverkeeper decisions are binding on all lower federal courts across the nation.

[20] The Court should reject the Sixth Appellate District's invitation to interpret parallel state law differently. See Voices of the Wetlands, 69 Cal. Rptr. 3d at 546-47 (noting that Cal. Water Code § 13142.5 uses the term "mitigation measures"). In issuing an NPDES permit, a Regional Board

3. The Record Demonstrates Unequivocally that the Regional Board Used the Environmental Enhancement Fund to Determine BTA Compliance.

Both the trial and appellate courts below attempted to avoid the legal consequence of the Riverkeeper decisions by finding as a matter of fact that the Regional Board in this case did not use mitigation measures to satisfy section 316(b). App:80; Voices of the Wetlands, 69 Cal. Rptr. 3d at 547. This finding is demonstrably in error. Virtually all of the relevant evidence in the record, from the Moss Landing NPDES permit itself to the statements of Regional Board staff and decisionmakers, shows that the environmental enhancement fund was an integral and indispensable part of the agency's BTA compliance determination. In fact, before the Riverkeeper cases were decided unfavorably to them, Respondents argued precisely this point.

The best evidence on this issue is the NPDES permit itself. As part of permit Finding 48, the Regional Board explained that Duke will "fund a mitigation package to directly enhance and protect habitat resources in the Elkhorn Slough watershed as explained below." AR:305756-57. Below, in Findings 49, 50 and 51, the permit explains the central role that the enhancement fund played in the Regional Board's BTA analysis:

> [Finding] 49: Minimization of adverse impacts of the intake system to Elkhorn Slough watershed can be accomplished in two ways: 1) modification of the existing intake system to reduce entrainment and

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may not adopt standards that are less stringent than federal requirements. City of Burbank v. State Water Res. Control Bd., 35 Cal. 4th 613 (2005).

> impingement; and 2) environmental enhancement projects that result in permanent preservation or direct enhancement of Elkhorn Slough watershed resources. . . . modifications [required by the permit] alone are not sufficient to minimize adverse environmental effects of the intake system and to achieve compliance with the BTA requirements of section 316(b) because the modifications do not address entrainment impacts.
>
> [Finding] 50: The enhancement program, in addition to the modifications to the intake system described above, will minimize adverse environmental effects of the intake system on the Elkhorn Slough watershed resources so that Duke Energy can comply with Clean Water Act section 316(b). Adverse environmental effects will be minimized by increasing health and biological productivity of aquatic habitat in the Elkhorn Slough watershed.
>
> [Finding] 51: Based upon the above findings, implementation of the above described modifications, and complete funding of the environmental enhancement program, as described in the above finding, constitutes compliance with Clean Water Act section 316(b) by implementing BTA that minimizes adverse environmental effects on the environment due to operation of the modernized MLPP cooling intake system.

AR:305756-61 (emphasis added). The language of the permit could not be clearer: The Regional Board's finding of section 316(b) compliance turned in large part on adoption of the "environmental enhancement program."

During trial, Respondents argued strenuously that the permit meant just what it said. Counsel for the State asserted that: (1) "Section 316(b) Authorizes The Discharger To Employ A Suite Of Technologies, Including Environmental Enhancement Restoration Measures To Minimize Environmental Effects"; (2) "Regional Board staff decided . . . it would make sense to mitigate entrainment effects by attacking the slough's worst

problems thereby enhancing slough productivity . . . This led to the Environmental Enhancement Project that is the centerpiece of the NPDES permit"; (3) "those familiar with the slough believe that the restoration project as proposed and included in the permit would indeed adequately mitigate potential losses"; and (4) "As we have stated at length in the first pages of this brief, mitigation measures were studied, reviewed, modified, and later adopted by the Regional Board as appropriate mitigation for the once-through cooling system of this power plant. This determination . . . is consistent with EPA sanction BTA determinations." App:37, 49, 52-53 (emphasis added). Counsel for Duke took essentially the same position in her argument that "The Evidence Supports the Regional Board's Finding That the Environmental Enhancement Program, Together With Improvements To the Once-Through Cooling System, Constituted Compliance with Clean Water Act Section 316(b)." App:106 (emphasis added).

Counsel's view during trial, which changed dramatically after Riverkeeper I was decided, is consistent with both the language of the permit and all of the other relevant record evidence. The idea for the enhancement fund was first proposed by Duke. AR:304654. After the agencies determined that ecological impacts to the Slough are significant, permit-writer Michael Thomas seized upon the enhancement as a way to

achieve BTA. AR:305892. Staff and its consultants viewed once-through cooling plus enhancement funding as a "mitigation package." See, e.g., AR:305061, 306890-91.

Against this uncontroverted record, the appellate court concluded that there existed "substantial evidence to support the trial court's factual determination that the Regional Board did not adopt the mitigation plan as an alternative technology for purposes of section 316(b), but instead considered it only for its relevance in monetizing environmental impacts and benefits." Voices of the Wetlands, 69 Cal. Rptr. 3d at 547. The evidence cited by the appellate court consists of remarks by agency legal counsel and the Regional Board Chairman during the remand hearing, explaining that the mitigation plan was "outside the scope" of the remand process. Id.

The appellate court's analysis is seriously flaweds. While additional testimony and written submissions for the remand hearing were (theoretically) limited by legal counsel to arguments about alternative technologies, the evidence before the Regional Board on remand consisted of new material plus the entire record before the agency at the initial permit decision stage. The Board certainly was not constrained in its deliberations to newly submitted evidence. The scope of the remand evidence has no bearing on whether the original permit, as drafted and adopted, improperly

relied upon mitigation measures to determine section 316(b) compliance.

The appellate court seems to have confused the remand process with the permit decision. As explained above, the remand hearing was not the relevant decision point at issue in this case. This case challenges the NPDES permit issued in 2000 and still in existence today. Staff counsel's attempt to limit the evidentiary scope of the remand hearing in 2003 is irrelevant to the BTA determination made by the agency in 2000.

Moreover, the remand record actually supports Petitioner's contention that mitigation was critical to the BTA determination. During the hearing, Mr. Thomas explained the importance of the enhancement funding to his recommended course of action on BTA:

> [L]let's assume that the habitat cost would be 40 million or 45 million and the cooling towers are 50. . . . Then . . . I would say what's more beneficial to this area, spending $45 million on the habitat or $50 million [on cooling towers] . . . If the answer was $40 million on the habitat, I would go with that.

RAR:000942-43. Duke's presentation also was couched in terms of once-through cooling plus environmental enhancement funding versus alternative cooling technologies. See, e.g., RAR:000477-79, 000682-83. It was thus clear to Regional Board decisionmakers in the room that staff evaluated habitat enhancement against alternative cooling technologies.

Not surprisingly, he enhancement fund played a central role in the Board's BTA deliberations on remand. Each of the four decisionmakers

who voted to affirm the permit noted its importance. Board member Bowker stated:

> there's a real question about how much damage the entrainment actually does, entrainment of survivability of various species. So what it brings to my mind is that maybe one ought to think of the estuary as a system. . . . to use the money for habitat enhancement, may in the long run do more for the estuary than in, say going to whatever, dry cooling, whatever.

SAR:0020. Board member Young explicitly weighed technology costs against the enhancement package: "I feel comfortable with the approach that has been put on the table that has been adopted, the enhancement approach." SAR:0019. Board member Jeffries referred directly to "the mitigation plan" in voicing his support for a once-through cooling system and concluded: "[T]he money that is going to the Elkhorn Slough Foundation [from the enhancement fund] is going to help that [environmental degradation] in the long run." SAR:0020. Finally, Board Chairman Daniels expressed his belief that

> there definitely are some things that are really impacting the slough and money applied to those is definitely going to fix them, whereas money applied to changing the entrainment effect may not have any observable effect on the slough . . . that was pretty compelling to me.

SAR:0021. Thus, even in adopting the remand resolution, the Regional Board relied heavily on the enhancement fund to affirm its prior Section 316(b) decision, just as the original NPDES permit itself did.

4. Even If Mitigation Legally Could Satisfy Section 316(b), the Regional Board's Finding that the Environmental Enhancement Fund Will Offset Impacts Is Unsupported by Evidence in the Record.

Even if this Court were to ignore the Riverkeeper cases and embrace the use of restoration to satisfy section 316(b), it must nonetheless set aside Respondents' BTA determination as unsupported by the record. There is no evidence in the record that the enhancement fund will be spent on restoration or other activities that actually offset the impacts of once-through cooling. The permit articulates a "goal" to be achieved through purchase of land interests or easements, development of vegetated buffers, restoration of degraded wetlands, and other environmental stewardship activities, but contains no specifics or requirements for how this goal will be achieved. AR:305757-58

While some Regional Board decisionmakers probably thought otherwise, habitat "restoration" or replacement was not even the stated objective of the fund. The permit author himself stated that "there will be no creation of habitat. . . . And at no time did the technical workgroup discuss or intend that Duke Energy would be required to go out and create habitat. It is extremely expensive . . . " AR:306427; see also AR:305061, 305064

Nor is habitat restoration even feasible at Elkhorn Slough. The

"experts" involved in developing the enhancement fund idea were clear: The Elkhorn Slough Foundation director testified that "there is no place that you can restore 390 acres of tidally influenced land in Elkhorn Slough. All of the lands in Elkhorn Slough that can be tidally influenced are. . . . If you're using [the habitat equivalency approach] to say you need to come up with 390 acres of new wetland, you can't do it for saltwater wetlands." AR:306372. Consulting biologist Dr. Peter Raimondi explained at the permit hearing that "the lesson from many other wetland restoration projects is that they take a long time to work. . . . So you're exchanging functioning wetland in many cases for one that's experimental and it just doesn't seem like very good policy." AR:306890. During the remand hearing, Dr. Raimondi confirmed that "in the real world [habitat restoration] can't always be done because there – oftentimes there simply isn't enough property to go about purchasing." RAR:000934-35.

Even if sufficient habitat were available for restoration or other "enhancement," the record does not support the conclusion that fund expenditures can or will offset the power plant's "significant" impacts on the Slough's biological productivity. There are no studies or analyses concerning the efficacy of habitat restoration projects, RAR:001018-20, no studies on whether taking agricultural land out of production will increase estuary larvae production, RAR:001023-24, and no studies of baseline

estuary conditions or indirect impacts on non-fish species or ecological communities. RAR:000995-001002, 001004-05, 001007. See also AR:306330 (explaining that staff "did not look at secondary impacts" to the Slough). In short, there is no evidence that the enhancement "program" will produce even one additional fish or shellfish larvae, let alone replace the billions that churn through the facility and are destroyed. As Board member Press observed at the conclusion of the remand hearing, "nothing in the testimony by the scientists has said if you . . . protect an acre, you will get this much gobie productivity and that's what you need to do in order to offset entrainment." RAR:001184.

The enhancement fund approach used here illustrates precisely why mitigation measures should not be used to satisfy the BTA requirement of section 316(b). Protective technologies prevent the environmental harm from occurring in the first place, whereas even the best mitigation plan is a speculative gamble that some of the harm will be remedied in some way at some time in the future. Here, the enhancement fund is an even worse bet. As Regional Board member Shellcross explained:

> I'd like to see more specifics in the mitigation. And I would definitively like to see it tied in more with wetlands restoration, because that's basically what we based the whole seven million on, was some sort of tortured formula using wetlands restoration, and then we put a monetary amount on that and then came back and [sic] says, but we don't have to use it for wetlands restoration.

AR:306588.

B. Respondents' Determination that the Costs of Alternative Cooling Technologies Are "Wholly Disproportionate" to Their Benefits Was Arbitrary and Unsupported by the Record.

Although the Regional Board purported to apply a "wholly disproportionate" standard to determine that alternative cooling technologies are too costly at Moss Landing, its assessment was not guided by any defined criteria or parameters. Instead, one staff member concluded that costs were "unreasonable" and Board decisionmakers following that opinion declined to mandate widely available alternative cooling technology for the new generating units. The loose cost-benefit comparison used by the Regional Board in this case both lacked appropriate sideboards to curb agency discretion and was unsupported by the administrative record. The agency's reliance on it was, therefore, improper.

1. The Regional Board Did Not Articulate or Define Any Criteria for Evaluating Costs and Benefits.

Respondents borrowed the notion of a "wholly disproportionate" test from a few early EPA permit decisions that employed the formula. See In re Pub. Serv. Co. of New Hampshire, (Seabrook Station), 10 Env't Rep. Case (BNA) 1257, 1261 (EPA June 7, 1977) (finding that $100 million deep sea intake structure, in 1974 dollars, was not wholly disproportionate); In re Brunswick Steam Electric Plant, 1976 WL 25235 (EPA Office of

General Counsel Opinion No. 41, June 1, 1976) (finding that $106 million to construct and operate natural draft cooling towers not wholly disproportionate). EPA explained more recently in the draft Phase I rule that historically, cases in which costs have been determined to be wholly disproportionate involve older, existing facilities that will require retrofit, not new units like those at Moss Landing. 65 Fed. Reg. at 49,094.

The courts have not articulated the precise contours of the "wholly disproportionate" concept, but they have described it in terms of "disproportional compliance costs," Riverkeeper I, 358 F.3d at 193, or circumstances where costs are "wholly out of proportion" to environmental benefits. Entergy Corp., 129 S. Ct. at 1514 (Breyer, J., concurring). Here, the Regional Board did not find that the costs of alternative cooling technology were in any way unbearable or even extraordinary. Instead, staff found that an estimated lifetime cost of $50 to $114 million[21] for installing one of the readily-available alternative technologies on the new generating units was "outside the range that we would consider reasonable" or just "too expensive" in comparison to the $7 million enhancement fund that was incorporated into the permit instead. See, e.g., AR:306136, 306225. In contrast, more than three decades ago EPA determined that expenditures of over $100 million for cooling towers or deep sea intakes

[21] AR:303674 (stating Duke's own costs estimates).

were not wholly disproportionate to the environmental benefit of these technologies. Brunswick, 1976 WL 25235, at 69; Seabrook Station, 10 Env't Rep. Case at 1262.

Respondents' open-ended "wholly disproportionate" analysis led to exactly the unfettered (and unreviewable) discretion that courts reject. For example, in striking down a similar exception to "best technology" under another provision of the Clean Water Act, the Ninth Circuit Court of Appeals explained that the proposed exception

> is wholly silent as to what factors the agency is to consider in granting exceptions to [the BAT standard]. Agency discretion is unfettered. We find no discernible standard that limits this discretion and defines when requests for alternative limits should be granted or denied. This is contrary both to the letter and spirit of the Clean Water Act.

Natural Resources Defense Council v. EPA, 863 F.2d 1420, 1432 (9th Cir. 1988). The Second Circuit used this logic in Riverkeeper I to uphold EPA's more narrowly tailored Section 316(b) variance process for new facilities that face "disproportional compliance costs." It did so precisely because the variance standard "does not leave alternative requirements to the Agency's 'unfettered discretion,'" but instead "allows relaxation of the Rule's uniform technology requirements only insofar as necessary to account for unusual circumstances not considered by the Agency during its rulemaking." 358 F.3d at 193-94.

The mischief that can be wrought by unbounded discretionary exceptions to the statute's best technology requirements was fully evident here. Staff legal counsel advised Board decisionmakers that "I don't think there's any need for this board to make up a definition of their own other than to apply it on a case-by-case basis." RAR:000990. Unhindered by any accountability, the permit-writer – who was generally uncomfortable with the cost of alternatives (AR:36458) – testified that he had no particular way to determine when the balance tipped from acceptable to wholly disproportionate. RAR:000940-43. Therefore, he explained, he might well determine that the costs of closed-cycle technologies are wholly disproportionate to their environmental benefits even when the costs exactly equal the monetized value of the benefits. RAR:000988-89. Although the U.S. Supreme Court found in Entergy that EPA may consider costs in some fashion, there is no hint in the majority decision that permitting agencies can, consistent with the technology-forcing intent of the statute, carve out sweeping discretionary exceptions to BTA.

2. Respondents' Cost-Benefit Analysis of Cooling Water Alternatives Was Arbitrary and Unsupported.

The cost-benefit approach used by the Regional Board was flawed in at least two other significant ways. First, the monetized benefits calculated by the agency do not reflect the true ecological value of alternative

technologies. Second, the habitat replacement costs used by the agency to value benefits are not supported by any credible evidence in the record.

To value the environmental benefits of alternative cooling technologies, the Regional Board concocted a "habitat equivalency" formula.[22] This formula multiplies the loss in biological productivity from once-through cooling (here, calculated at 13% for the new generating units)[23] by the number of "wetted" acres in the Slough to arrive at an acreage equivalent of lost productivity (here, 13% loss x 3,000 wetted acres = 390 lost acres). AR:303671-73 (original draft); AR:304702 (revised). The Regional Board then placed a monetary value on each acre to arrive at the foregone "benefit" of using a once-through cooling system – here, $7 million. AR:304702.

As implemented in this case, the habitat equivalency analysis was limited to a handful of target fish species and did not assess the impacts on any non-fish species, such as clam, crab and other invertebrates, or on the larger ecological functioning and communities of Elkhorn Slough.

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[22] Tellingly, concerned with its legitimacy, EPA eliminated a similar habitat replacement cost method from its nationwide economic analysis of the Phase II rule. 69 Fed. Reg. 41,576(01) (July 9, 2004) at 41,625.

[23] Although the 2000 NPDES permit also covered the two existing generating units, the Board only evaluated biological degradation caused by the two new units. Had it properly accounted for the facility's overall environmental impact, it would have used a biological productivity loss estimate of 40 percent.

RAR:001002, 001004-05, 001007; AR:306330. EPA has recognized that where, as here, an environmental assessment focuses on a subset of impacted fish species, "the analysis is likely to lead to a potentially significant underestimate . . . of [the] regulatory benefits" from a closed-cycle system; this underestimate is caused by "considerable uncertainties" in the assessment and the omission of important relevant factors, such as the effects on invertebrates and fish-eating birds. 67 Fed. Reg. 17,122, 17,192 (Apr. 9, 2003).

The Regional Board's monetary valuation of replacement habitat was equally flawed. The environmental review documents originally cited wetlands restoration costs, "excluding endowment costs," for other projects along the California coast; they ranged from $60,000 to $260,000 per acre. AR:304703. Had the agency used these estimates, the foregone benefit against which other technologies were compared would have been between $23.4 million (390 acres x $60,000/acre) and $101.4 million (390 acres x $260,000). Instead, the Regional Board settled on a per-acre value of just under $18,000, as the rough midpoint of the $12,000 to $25,000 per acre estimate purportedly provided in a personal communication with biologist Peter Raimondi. AR:304703. During the remand hearing, Dr. Raimondi expressly disavowed having provided this estimate, suggesting that it may have come instead from a report by the Elkhorn Slough Foundation, the

major beneficiary of the environmental enhancement fund. RAR:001021-22. That report, however, does not provide any estimate, analysis or documentation of wetlands restoration costs. AR:300859-920. Nor is the estimate documented or explained anywhere else in the administrative record.

In short, the "centerpiece" of the Section 316(b) BTA analysis was the touted ability of a "environmental enhancement fund" to offset damage caused by installation of an outdated and destructive cooling technology. The amount of that fund, it turns out, was based on nothing more than an unrecollected personal communication with a consulting biologist. No credible evidence in the record supports the Regional Board's valuation of foregone benefits. To the contrary, by all indications the value of the ecological benefit of installing alternative technologies may be much higher than the agency estimated – maybe as high as $100 million, using Respondents' own formula, and potentially much higher if the full value of functioning ecological communities are properly considered.

CONCLUSION

For the foregoing reasons, the Court should reverse the lower court decisions and issue a writ vacating Respondents' unlawful BTA compliance determination under section 316(b).

Dated: Dec. 8, 2009

Respectfully submitted,

ENVIRONMENTAL LAW CLINIC
Mills Legal Clinic at Stanford Law School

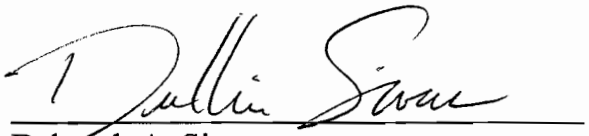
By: _____
Deborah A. Sivas

Counsel for Petitioner VOICES OF THE WETLANDS

CERTIFICATE OF WORD COUNT

I certify that the text of this Petitioner's Opening Brief on the Merits is printed in 13-point Times New Roman font and contains 13,998 words, exclusive of tables, as calculated by the word processing program used to generate it.

Dated: December 8, 2009



Deborah A. Sivas

ATTACHMENT A

University, California State University Monterey Bay and others have conducted studies on biology, ecology, geology, hydrology, restoration and landscape change. The State of California has designated Elkhorn Slough an ecological preserve, and the National Oceanic and Atmospheric Administration has included its tidal waters as part of the Monterey Bay National Marine Sanctuary, and established a National Estuarine Research Reserve on its shores (Elkhorn Slough National Estuarine Research Reserve). The California Department of Fish and Game, the Elkhorn Slough Foundation and The Nature Conservancy own land in the slough~~,~~ ~~and~~ The Elkhorn Slough Foundation ~~in cooperation with the California Department of Fish and Game manage the property. They have~~ has extensive plans for the conservation of additional property on the slough and throughout the watershed.and for improving and enhancing the quality and productivity of the slough ecosystem. The Elkhorn Slough is considered a significant biological resource.

Marine mammals such as harbor seals (*Phoca vitulina richardsi*), southern sea otters (*Enhydra lutris nereis*), and sea lions (*Zalophus californianus*) inhabit Elkhorn Slough, Moss Landing Harbor and nearby off shore waters (Duke Energy 1999i). Counts of harbor seals at a monitoring station 1.6 km east of the Highway 1 Bridge have steadily increased from 17 to 297 animals during the period from 1982 to 1995 (Fluharty 1999). Sea otter counts by the California Department of Fish and Game and the U. S. Fish and Wildlife Service in the Monterey Bay between the Capitola Pier and Seaside (north and south of Moss Landing respectively) indicate that observed numbers of sea otters here have shown a increasing trend from the mid-1980's to the mid-1990's. Declines in the sea otter population in the southern part of its range do not appear to be occurring in Capitola/Seaside area (Duke Energy 1999i). Southern sea otters are common inhabitants of Elkhorn Slough. Relative counts of sea lions in the Elkhorn Slough area have not been reviewed for this assessment.

Brown pelicans (*Pelecanus occidentalis californicus*) generally forage in offshore waters near Moss Landing and other parts of Monterey Bay but are also seen in Elkhorn Slough. A noteworthy incidental observation has been reported (Williams 1999) in which a pelican used a transmission line connected to the Moss Landing Power Plant as a perch to dive from while trying to catch fish. Western snowy plovers (*Charadrius alexandrinus nivosus)* are known to inhabit the Elkhorn Slough. The U.S. Fish and Wildlife Service has designated the Elkhorn Slough as critical habitat because of its nesting value for the western snowy plover (USFWS 1999).

PROJECT SPECIFIC IMPACTS

The site and laydown areas are in a highly disturbed industrialized area that, over time, has experienced the unassisted establishment of very small seasonal wetlands in the oil spill containment areas of some of the retired oil tanks (Duke Energy 1999c). Surveys were conducted for the Santa Cruz long-toed salamander (SCLTS) in one of the small seasonal wetlands that may be affected by the project, but no salamanders or larvae were observed. The field investigator, Mr. Bryan Mori, suggested that the habitat was marginal and relatively disconnected from known subpopulations nearby which could act as dispersal sites from which

breeding salamanders could emigrate to the location examined at the proposed project (Duke Energy 1999c). Although no salamanders were found, if actually present, he expected there would only be a few.

Soil erosion related to construction activities can impact aquatic biological resources if allowed to enter local waterways, but applying appropriate site-specific measures can mitigate potential erosion. A draft erosion control plan should be submitted to the Energy Commission for review and approval. Through implementation of an approved erosion control plan, that will be required in the Soil and Water Conditions of Certification for this project, it is anticipated that aquatic biological resources will not be significantly impacted by erosion impacts from the power plant site.

Low numbers of bird collisions with the project's new 145-foot tall turbine/HRSG stacks are estimated, because bird collision fatalities are more associated with relatively tall stacks ranging from 500 to 650 feet high (Goodwin 1975; Maehr et al. 1983; Weir 1974; Zimmerman 1975). The new stacks will be located close to the 500-foot stacks for Units 6&7 and the 180-foot tall boiler building suggesting that these existing tall and large structures would shield the smaller stacks to some degree. The new stacks are not expected to cause significant bird collisions.

In order to assess the affects of impingement, entrainment, and thermal discharge, and to determine best technology available (BTA) for the NPDES permit, the California Central Coast Regional Water Quality Control Board relies on the results of 316(a) and 316(b) studies. This information was valuable ~~is also crucial~~ for Energy Commission staff to estimate impacts to the marine and harbor/estuarine ecosystems. The data acquired by the 316(b) studies are critical in estimating impacts on species' populations and ecosystems that result from entrainment and impingement of organisms due to the once-through cooling water system. California Energy Commission staff and staff of the Central Coast Regional Water Quality Control Board work together and coordinate their review and impact determination and subsequent mitigation/compensation requirements. Generally a year of data is required to cover seasonal periods when distribution and abundance of marine and estuarine life forms can be significantly different. Important differences can occur between years also. In order to estimate the proportions of organisms that are being entrained in the power plant cooling system relative to the population from which they come; source water sampling must be done. This is usually done on a volumetric basis of organisms per cubic meter. Source water sampling was done only (a small number of nighttime samples was attempted but stopped due to safety reasons) during the day while the highest number of organisms have been entrained at night. To provide data for a valid comparison of the proportion of organisms entrained in relation to those in the source water, nighttime sampling is important. ~~Therefore, due to the uncertainty of the 316(b) fractional loss analysis, the following impact estimates should be considered a minimum. Two impact assessment methods are utilized below for entrainment losses. Both of these methods are very similar in concept and result in somewhat similar levels of mitigation/compensation.~~ Staff of the agencies ~~with permitting authority for~~ assessing the effects of this project are in agreement on the~~is~~ impact assessment approach (described below) as a reasonable way to determine mitigation/compensation levels. These agencies are the California Central Coast

Regional Water Quality Control Board, California Department of Fish and Game, California Coastal Commission, and the California Energy Commission. Estimates of proportional entrainment (fractional losses) of fish larvae to the source water of the harbor and slough, and the percent volume of cooling water entrained (contains biological resources that will be entrained) relative to the volume of source water in the harbor and slough are considered as a percentage of the slough's productivity and used to estimate equivalent habitat productivity losses. Fractional losses from the Elkhorn Slough are equivalent to a loss of habitat (wetland habitat for instance). ~~Determining reasonable and satisfactory mitigation amounts and costs for restoring wetland acres and other Elkhorn Slough enhancements is difficult, since there are a wide range of costs associated with these types of activities (see Table 5). Additionally, BTA alternatives will be considered, and balanced with environmental benefits and costs.~~

Impacts associated with the thermal discharge and impingement are not considered to be significant, however, ~~and~~ entrainment losses of marine and estuarine species due to the once-through cooling water system are considered to be significant. The new combined cycle power plant will entrain~~suck~~ through its cooling water intake system a minimum of six percent (6 percent to 28 percent with units 6&7 also operating) ~~(see Table 2)~~ of the water volume of the harbor and Elkhorn Slough on a daily, annual, and life-of-the-facility basis. Essentially all living material in this water volume will be lost. Additional losses of marine and estuarine biological resources will result from impingement and from thermal impacts due to the cooling water discharge influence. Impingement and thermal discharge losses are difficult to quantify for this project~~, but will contribute to overall ecosystem losses~~. Impingement will add to the harbor and Elkhorn Slough ecosystem losses, and the thermal discharge will result in some effects to the near-shore, soft benthos, sandy beach, and jetty (rocky substrate) biological resources. Neither~~T~~the thermal discharge or impingement are ~~by itself is not~~ considered to be a significant impact, but added to the entrainment losses, the overall losses will be significant~~ at this time~~. The true extent of the thermal influence~~effects~~ of the new combined cycle power plant has been estimated but ~~is unknown since the extent of the resulting thermal plume has not been determined adequately, and~~ won't be known until the new power plant operation begins. ~~Monitoring of these thermally affected systems in order to determine effects with any level of confidence is considered difficult due to the many confounding factors. Therefore, the unquantified impacts that will result due to the thermal discharge, will be considered along with other cumulative effects and mitigated/compensated by an additional increment of Elkhorn Slough wetland replacement acres, or associated enhancements.~~

~~Table 2 below shows the replacement wetland acres required to replace harbor and Elkhorn Slough ecosystem (biological resources values) losses. There are approximately 4000 wetted acres of surface water in Elkhorn slough. The percent of water volume and associated productivity losses are considered to require an acre-for-acre of wetlands restored to replace the productivity lost due to the cooling water system. In this case six percent of Elkhorn Slough surface volume (4000 acres) equals 240 acres of wetland needed to be restored in order to replace the lost productivity.~~

~~**BIOLOGICAL RESOURCES Table 2**~~

~~**Daily Cooling Water Intake Volume as a Percent of Harbor and Elkhorn Slough Water Volume and Equivalent Replacement Wetland Acres.**~~

	~~% of Volume[1]~~	~~Equivalent Wetland Ac.[2]~~
~~Combined Cycle Units 1&2~~	~~6%~~	~~240 Acres~~
~~Units 1&2 and Units 6&7~~	~~28%~~	~~1135 Acres~~

~~1. Volume of daily maximum cooling water intake and the volume of the Harbor and Elkhorn Slough were used.~~

~~2.~~1. ~~Elkhorn Slough has approximately 4000 surface (wetted area) acres. It is estimated that it will take an acre-for-acre replacement of new wetland to mitigate/compensate for the biological productivity lost due to the intake water volume as a percentage of the wetted area of the Elkhorn Slough. An example is 6% volume multiplied by 4000 acres of surface water area in the Elkhorn Slough equals 240 acres of wetlands that need to be replaced/restored to make up for the loss of biological resources.~~

Entrainment due to the Moss Landing Power Plant project (new combined cycle units 1&2) cooling water system will result in the loss of ~~carry~~ essentially all pelagic organisms in the volume of water entrained through the power plant ~~to their death. This is a similar way of assessing losses to the harbor and Elkhorn Slough ecosystem as discussed above.~~ In the case of the new combined cycle power plant this results in the loss of an average of 13 percent (see Table ~~2~~3) of the fish larvae (other pelagic eggs and larvae are also lost, such as crabs and clams) in the Harbor and Elkhorn Slough. If all units (units 1&2 and 6&7) are operating the percentage would be several times greater. These pelagic organisms are important living material that provide food (primary productivity) for many creatures in the harbor and slough ecosystems. The loss of this amount of productivity is significant. The Elkhorn Slough covers about 4~~3~~000 acres of wetted surface, and the loss of 13 percent of the fish larvae will require a ~~n acre-for-acre~~ replacement of wetland in order to replace the lost productivity of the harbor and Elkhorn Slough ecosystem. In this case 13 percent of the 4~~3~~000 acres of wetted surface equals ~~520~~390 acres of needed wetland acres restored. Table ~~2~~3 below illustrates these figures.

BIOLOGICAL RESOURCES Table 2~~3~~
Percentage of Fish Larvae Lost Due to the Cooling Water Intake System and Replacement Wetland Acres

SOURCE WATER	Large Volume	Small Volume
Unidentified Gobies	3%	11%
Bay Goby	4%	21%
Blackeye Goby	4%	7%
Longjaw Mudsucker	5%	9%
Combtooth Blenny	11%	18%
Pacific Herring	5%	13%
White Croaker	?	?
Pacific Staghorn Sculpin	4%	12%
Average % loss (small volume) (From 316 (b) report)		**13%**
13% of 4 3000 surface acres in Elkhorn Slough equals[1]		**~~520~~ 390 wetland replacement acres**

1. It is estimated that an ~~acre-for-~~acre of replacement/restoration ~~percentage of~~ wetland is needed to make up for each average percent of fish larvae (and other biological resources) removed from Elkhorn Slough ecosystem. This loss in productivity can be replaced by improving the quality and productivity of the Elkhorn Slough through wetland restoration type actions. Thirteen percent of 4 3000 acres equals ~~520~~ 390 acres of replacement wetland acres.

The above ~~two~~ assessment ~~methods are similar and~~ relies~~y~~ on the ~~same~~ concept of the operation of the once through cooling system resulting in loss of productivity to the harbor and Elkhorn Slough ecosystems and that in order to replace those losses, the productivity of the Elkhorn Slough ecosystem needs to be improved, thereby enhancing the ability of Elkhorn Slough to replace the primary productivity lost due to the combined cycle power plant operation. This requires restoration of wetland acres and other enhancement of the Elkhorn Slough ecosystem. As mentioned above, this approach to mitigating/compensating for the biological resources losses has been agreed to as reasonable and acceptable methods for determining mitigation/compensation, by staff of the state agencies involved in assessing the effects of~~permitting~~ the Moss Landing Power Plant project. These agencies are the California Central Coast Regional Water Quality Control Board, California Department of Fish and Game, California Coastal Commission, and the

California Energy Commission. A reasonable wetland replacement amount was selected ~~taken~~ from the range of acres and costs displayed in Tables 3 ~~2-6. will be considered along with BTA options that would eliminate or reduce biological resource impacts. A mitigation/compensation amount will be derived at a publically noticed workshop by the agencies and the project owner, prior to the Evidentiary Hearing. Those determinations will be presented at the Evidentiary Hearing.~~The agencies and the project applicant agreed to seven million dollars ($7,000,000.) for mitigation/compensation for the biological resources losses of this project.

~~Table 4 displays the range of losses and the restored wetland acres needed. Table 5 displays a range of wetland restoration costs and cost estimates. Table 6 displays the range of wetland restoration costs to be applied to Moss Landing Power Plant project. Table 7 lists other BTA options that would significantly reduce biological resources losses due to impingement, entrainment, and thermal discharge. In some cases these BTA options eliminate the cooling water system impacts (dry cooling) and in other cases the cooling water system impacts are significantly reduced (cooling towers) and would be balanced with reduced mitigation/compensation requirements. The feasibility of the various BTAs are weighed against the effectiveness to reduce cooling water system adverse impacts to biological resources and the costs of wetlands restoration and other Elkhorn Slough enhancements. A specific mitigation/compensation amount for Elkhorn Slough enhancement (wetland acres to be restored and other enhancements) is yet to be determined.~~

BIOLOGICAL RESOURCES Table 3
Range of wetland Restoration Costs'

390 acres at $12,000/acre	$4,680,000
390 acres at $25,000/acre	$9,750,000

1. Estimates of wetland restoration costs were provided by Dr. Peter Raimondi.

~~**BIOLOGICAL RESOURCES Table 4**~~
~~**Range of replacement Wetland Acres**~~

	~~% Loss~~	~~Restored Wetland Acres Needed~~
~~% volume of water (C C units)~~	~~6%~~	~~**240** Acres~~
~~% volume of water (All units)~~	~~28%~~	~~**1135** Acres~~
~~% fish larvae lost (small volume)~~	~~13%~~	~~**520** Acres~~

~~**BIOLOGICAL RESOURCES Table 5**~~

~~**Range of Wetland Restoration Costs (excludes endowment costs)**~~

~~Port of Santa Cruz[1]~~		~~$100,000 /acre~~
~~San Onofre[2]~~	~~Horseworld property~~	~~$260,000 /acre~~
	~~Airfield property~~	~~$152,750 /acre~~
~~Southern California Wetlands Restoration (Range)[3]~~		~~$60,000 /acre-~~ ~~$180,000 /acre~~
~~Estimate for Elkhorn Slough (with qualifications)[4]~~		~~$12,000 /acre-~~ ~~$25,000 /acre~~
~~**Range of costs per acre**~~		~~**$12,000---$260,000 /acre**~~

~~1. Personal communication with Mr. Tim Duff of the California Coastal Conservancy, regarding wetland restoration at the Port of Santa Cruz.~~

~~2. California Coastal Commission staff recommendation: Permit Amendment and Condition Compliance for San Onofre Nuclear Generating Station for mitigation of adverse impacts to the marine environment. October, 1996.~~

~~3. Personal communication with Dr. Peter Raimondi. Dr. Raimondi provides these estimates for wetland restoration work for which he has personal knowledge.~~

~~4. 1. Personal communication with Dr. Peter Raimondi. Dr. Raimondi estimates that with minimum earth movement and disposal costs, these would be reasonable estimates.~~

~~**BIOLOGICAL RESOURCES Table 6**~~

~~**Range of Wetland Restoration Costs for Moss Landing Power Plant Project[1]**~~

~~Method~~	~~Acres~~	~~$12,000/Ac~~	~~$260,000/Ac~~
~~Water Volume (small)~~	~~240~~	~~$2.88M~~	~~$62.0 M~~
~~Water Volume (large)~~	~~1135~~	~~$13.6M~~	~~$265.1M~~
~~% Fish Larvae Loss~~	~~520~~	~~$6.2M~~	~~$135.2M~~
~~**Range**~~	~~**240-1135 Ac**~~	~~**$2.88M**~~	~~**$265.1M**~~

~~**Range of acreage 240-1135 Acres**~~

~~***Range of Wetland Restoration costs $2.88M---$265.1M***~~

~~1. Does not include endowment for short-term and long-term Maintenance, management, monitoring, administration, operation, and etc.~~

~~**BIOLOGICAL RESOURCES Table 7**~~
~~**Best Technology Available: Intake and Discharge (CC only)**~~

~~Cost over project life~~	
~~Cooling Towers with Recirculating Cooling Water[1]~~	~~$60M~~
~~Cooling Towers—Natural Draft~~	~~$51M~~
~~Air Cooled Condenser (Drycooling)[2]~~	~~$114M~~
~~Offshore Intake~~	~~?????~~
~~Seasonal Operation Curtailment~~	~~$59M~~
~~Gunderboom~~	~~?????~~
~~Thermal Dischsrge—Multiport Diffuser (CC)~~	~~$29M~~
~~—Multiport Diffuser (Units 6&7)~~	~~$20M~~

~~1.The last four near shore power plants that applied to the California Energy Commission for Certification (Delta, Pittsburgh, Contra Costa, and San Francisco Energy) proposed cooling towers.~~

~~2.Three recent power plant projects have proposed dry cooling (Otay Mesa, Crockett, and Sutter).~~

CUMULATIVE IMPACTS

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

Considering the level of industrial development within the existing power plant complex at Moss Landing, Energy Commission staff does not regard the potential incremental terrestrial biological resources impacts of the proposed project as significant. The recommended mitigation measures will reduce impacts to acceptable levels.

With respect to the marine, harbor and estuarine environment, Energy Commission staff does not find the cumulative impacts to be significant. If units 1 & 2 and units 6 & 7 operating at the same time were considered a cumulative effect, they would be considered significant, but this assessment does not consider all units operating together as meeting the definition of cumulative. ~~The cumulative estuarine and marine losses due to the operation of the new units, 1&2, and the existing units, 6&7, will cause significant chronic loss of biological resources productivity impacts to the harbor and Elkhorn Slough ecosystems. Although the power plant has been operating since 1950 and no substantive mitigation/compensation for biological resources losses have been offered or required, staff considers only the future~~

~~chronic losses of productivity in this assessment. Mitigation/compensation is necessary in order to reduce cumulative impacts below a significant level. The resulting mitigation/compensation measures will consider estimates of impingement losses and adult equivalent losses for entrained species as well as any primary productivity losses and will be intended to support ongoing and planned management practices being implemented in the Elkhorn Slough National Estuarine Research Reserve. The mitigation/compensation for cumulative impacts will be in addition to project specific impacts discussed above. A specific mitigation/compensation amount for cumulative impacts will be determined for Elkhorn Slough enhancement (wetland acres to be restored and other enhancements). This mitigation/compensation will be added to the project specific impacts mitigation/compensation for a total mitigation/compensation package, and then presented at the Evidentiary Hearing.~~

FACILITY CLOSURE

For the eventual permanent closure of the power plant project, the project owner must utilize methods and measures that protect the environment and public health and safety. To achieve this, the project owner will develop an "on-site contingency plan" for facility closure as required in General Conditions of Certification. Detailed measures specifically addressing biological resources, such as structure removal and habitat restoration, should be done according to Biological Resources Condition of Certification **BIO-6**. The plan should also include the anticipated measures that would be implemented in case of a temporary, but prolonged closure.

MITIGATION

~~Small wetlands that have become established in oil spill retention areas around oil tanks scheduled for removal due to project construction should be mitigated for in a manner specified by the California Department of Fish and Game.~~

To mitigate for potential impacts to Santa Cruz long-toed salamanders (SCLTS), ~~that is, if the California Department of Fish and Game and the U. S. Fish and Wildlife Service are agreeable, it is suggested that the following be done:~~

~~A~~ a salamander exclusion fence or perimeter fence addition shall be constructed at the new power plant project perimeter (perimeter fence) in order to exclude any salamanders (SCLTS) that may venture onto the site. The fence should encircle the entire new power plant project construction site and construction support areas to exclude any SCLTS from moving into the project site. The exclusion fence should be installed before the rainy season (October 15) of the year construction begins and be maintained for the life of the project to reduce the likelihood of a loss of a SCLTS. If the project construction begins during the rainy season, the fence should be in place prior to construction.

~~During the initial grading process, biological monitors should be present to search through the spoils to recover any remaining salamanders. All SCLTSs collected should be photographed, sexed and measured, then relocated to a suitable off-site location.~~

To ensure the likelihood of successful completion of required mitigation, the project owner should designate a qualified biologist to advise the project owner or its project manager on the implementation of the Conditions of Certification, for this project and to supervise or conduct mitigation, monitoring, and other biology compliance efforts.

To promote project personnel's general understanding of environmental concerns associated with the project and enhance the likelihood of their compliance with conditions of certification, the owner should institute an employee environmental awareness program in which each of its own employees, as well as employees of contractors and subcontractors who work on the project site during construction and operation are informed about biological resource sensitivities associated with the project.

To make sure required biological resources mitigation measures are successfully completed during construction and operation of the project, a Biological Resources Mitigation Implementation and Monitoring Plan should be developed by the project owner and reviewed and approved by the Energy Commission Compliance Project Manager.

In order to prevent animals from becoming trapped in any trenches excavated while installing natural gas pipelines or other underground project features, the project owner, at the end of the workday, should have any open portions of the trench covered if left unattended or by checking the trenches regularly and removing any animals appropriately.

~~Best technology available for reducing impacts associated with the once-through cooling water system should be considered for this project.~~ For significant ~~marine and~~ harbor and estuarine biological resource losses ~~that exceed the capabilities of best technology available, reasonable and satisfactory compensation needs to be provided.~~ seven million dollars ($7M) will be provided by the project owner. The funds will be paid to the Elkhorn Slough Foundation. The total mitigation will be $7 million paid as follows. The first payment of $1.5 million will occur within 120 days after the start of construction for the new power generation units. The second and third payments of $750,000 each will occur at the date of Commercial Operation of Units 1 and 2 respectively. Four remaining payments of $1 million each will follow; the first two payments of $1 million each will be due one year from the Commercial Operation dates of Units 1 and 2 ($1 million each); the second two payments of $1 million each will be due two years from the Commercial Operation dates of Units1 and 2 ($1 million each)., ~~which is anticipated to be about June 2004.~~ These~~is~~ funds will be used for~~include~~ wetland restoration in the Elkhorn Slough and can include other conservation efforts, improvements and enhancements to increase the productivity of the slough ecosystem. This compensation ~~will~~ includes an endowment to accomplish short-term and long-term administration, management, maintenance, monitoring, research, and annual operation expenses in perpetuity.

~~A monitoring program to determine the actual impingement and entrainment losses of the new project and the cumulative operations of the power plant (new units 1&2 and existing units 6&7), and to characterize the extent of the thermal plume during~~

~~operation of the new units 1&2 and the cumulative operation (including units 1&2 and 6&7) of the facility (thermal plume condition is in Water Resources Section). These monitoring efforts will be designed prior to the start of the new units 1&2 operation and be conducted as the new units come on line. The study objectives, protocols, and length of the monitoring for the impingement, entrainment, and thermal plume, will be established by a technical advisory group made up of representatives of the California Central Coast Regional Water Quality Control Board, California Department of Fish and Game, California Coastal Commission, the California Energy Commission, and the project owner.~~

COMPLIANCE WITH LAWS, ORDINANCES, REGULATIONS AND STANDARDS

The U.S. Army Corps of Engineers has issued a "Letter of Permission" (Dated June 21, 1999) authorizing Duke Energy Power Services to make modifications to the Units 1-5 cooling water intake structure so it can be used for the new project. The U.S. Army Corps of Engineers has issued a determination (dated September 23, 1999) that the small wetlands in the some of the oil spill containment areas that will be affected by project construction are not waters of the U.S. As such, no permit is required under Section 404 of the Clean Water Act (33 U.S.C. 1344). The Central Coast Regional Water Quality Control Board has not issued an NPDES permit for the proposed project. The respective objectives of the 316(a) and 316(b) studies are to determine if Thermal Plan standards for new facilities can be met and that cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts. The California Energy Commission staff are coordinating closely with Central Coast Regional Water Quality Control Board staff on NPDES permit requirements. It is anticipated that the NPDES permit and the California Energy Commissions certificate will include the same requirements where jurisdictions overlap.

The suitability of thermal plume data assessed in the 316(a) study is supposed to allow for a determination of whether or not the proposed discharge is able to meet required standards which prohibit a discharge that exceeds the receiving water ambient temperature by more that 20°F for a specified period or 4°F above natural water temperatures at the shoreline, the surface of any ocean substrate, or the ocean surface beyond 1,000 feet from the discharge for a specified period. The project owner has determined the 20° F standard cannot be met and has requested an exception to this standard and requested a variance. The Central Coast Regional Water Quality Control Board regulatory process will make this determination. ~~The 4° F standard may not be met either (see Water Resources Section) although the project owner has not yet requested and exception to this standard. Not meeting these standards may increase the biological resources impacts of the project.~~ Staff has~~is~~ work~~ed~~ing with the Central Coast Regional Water Quality Control Board staff to assess ~~and mitigate~~ these ~~possible additional~~ impacts and has determined that the $7M mitigation/compensation will mitigate impacts to an acceptable level.

Likewise, for the 316(b) studies, the California Energy Commission staff are working with the California Central Coast Regional Water Quality Control Board staff to assess the impacts due to impingement and entrainment on species' populations and harbor and Elkhorn Slough ecosystems, and weigh those impacts against BTA alternatives that would eliminate or reduce the impacts. The once-through cooling water system impacts are considered significant, but with ~~reasonable and satisfactory~~ the $7M mitigation/compensation used to enhance Elkhorn Slough, ~~measures or BTA alternative(s)~~ it is anticipated impacts will be mitigated to an acceptable level.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Impacts associated with the project site and laydown area are likely to be insignificant, but where the potential for impacts to listed species exists, they can be mitigated to acceptable levels. ~~However, T~~the entrainment impacts from the once-through cooling water system ~~(impingement, entrainment, and thermal)~~ are considered to be ~~project specifically and cumulatively~~ significant. It is anticipated that with ~~sufficient~~ the mitigation/compensation provided ~~or~~ the ~~use of BTA alternatives those~~ impacts can be mitigated to an acceptable level.

RECOMMENDATIONS

~~Until T~~the mitigation/compensation package for the once-through cooling system impacts has been ~~is determined and~~ agreed to by the staff of the agencies and the project applicant (California Central Coast Regional Water Quality Control Board, California Department of Fish and Game, California Coastal Commission, the California Energy Commission, and Duke Energy Moss Landing LLC), ~~, the proposed project should not be approved~~. ~~When t~~The mitigation/compensation amount of $7M is ~~determined to the satisfaction of~~ acceptable to both the California Energy Commission staff and the Central Coast Regional Water Quality Board staff for their NPDES permit, ~~, these mitigation/compensation measures should be incorporated~~ The following Biological Resources Conditions of Certification should be adopted by the Energy Commission ~~into Energy Commission staff's proposed Conditions of Certification. It is anticipated this agreement will be reached by the Evidentiary Hearing.~~ I recommend the project be approved.

CONDITIONS OF CERTIFICATION

BIO-1 Any ground disturbing activity (at the site and/or ancillary facilities) other than allowed geotechnical work shall not begin until an Energy Commission Compliance Project Manager (CPM) approved designated biologist is available to be on site.

The designated biologist must meet the following minimum qualifications:

1) a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field,

PROOF OF SERVICE

LYNDA F. JOHNSTON declares:

I am over the age of eighteen years and not a party to this action. My business address is 559 Nathan Abbott Way, Stanford, California 94305-8610.

On December 8, 2009, I served the foregoing **OPENING BRIEF ON THE MERITS** on all persons named below by placing true and correct copies thereof

☒ in a sealed envelope, with postage fully prepaid, in the United States Mail at Palo Alto, California, addressed as follows:

Clerk, Civil Division
MONTEREY COUNTY SUPERIOR COURT
1200 Aguajito Road
Monterey, California 93940

Trial Court

Clerk, Civil Division
CALIFORNIA COURT OF APPEAL
Sixth Appellate District
333 West Santa Clara Street, Suite 1060
San Jose, California 95113-1717

Court of Appeal

☐ for facsimile transmission to each recipient identified below to the facsimile number appearing after such recipient's name and mailing address.

☒ for Federal Express next-day delivery service, addressed as follows:

Anita E. Ruud, Deputy Attorney General
John Davidson, Supervising Deputy Attorney General
Edmund G. Brown, Jr., Attorney General
CALIFORNIA ATTORNEY GENERAL'S OFFICE
455 Golden Gate Avenue, Suite 11000
San Francisco, California 94102-7004

Attorneys for Respondents CALIFORNIA STATE WATER RESOURCES CONTROL BOARD and CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – CENTRAL COAST REGION

Sarah G. Flanagan, Attorney at Law
PILLSBURY WINTHROP SHAW PITTMAN L.L.P.
50 Fremont Street, P. O. Box 7880
San Francisco, California 94120-7880

Attorneys for Respondents DUKE ENERGY MOSS LANDING LLC and DUKE ENERGY NORTH AMERICA, LLC

Keith G. Wagner, Esq.
LIPPE GAFFNEY WAGNER LLP
9333 Sparks Way
Sacramento, California 95827-1040

Attorney for Amicus Curiae PLANNING AND CONSERVATION LEAGUE

I declare under penalty of perjury (under the laws of the State of California) that the foregoing is true and correct, and that this declaration was executed December 8, 2009 at Stanford, California.

Lynda F. Johnston
LYNDA F. JOHNSTON