

**SUPPLEMENT DOCUMENT ITEM NO. 1
AUGUST 16, 2006**

COMMENTS RECEIVED AFTER JUNE 14, 2006



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San Diego Chapter

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August 1, 2006

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, 92123-4353
Attention: Mr. Charles Chen

Subject: Revised Tentative Order No. R9-2006-0065,
NPDES Permit No. CA0109223
Waste Discharge Requirements for the
Poseidon Resource Corp. Carlsbad Desalination Project (CDP)

Dear Chairman Minan and Members of the Board:

Introductory Comment: Since the initial Technical Order was released there has been additional information pertaining to the Encina Power Station operation that has direct bearing on this revised Tentative Order. The San Diego Union July 23 article by staff writer Michael Burge "Power Plans Could Change Desalination" reports major reduction in power delivered by EPS. According to NRG Energy Inc, the EPS operator, the power plant has been operating fewer days since April when the new SDG&E power plant in Escondido came on line. Steve Hoffman, regional president for NRG Energy stated that the plant capacity is diminished in the 15 to 20 percent range. He estimates that the power plant will be cold, not moving water [cooling water] for 60 to 100 days a year.

Key issues in the revised Technical Order R9-2006-0065.

- a. Fact Sheet page F-6, II B. Discharge Points and Receiving Waters paragraph 1. Historical flows
 - b. Entrainment and Impingement issues not adequately addressed
 - Fact Sheet Table 12, Summary of EIR Substantial Findings Related to Water Quality
 - Section VI C 2e. Staff Responses to Comment, Comment 4
1. **Fact Sheet page F-6, II B. Discharge Points and Receiving Waters.** Paragraph 1 describes the historical EPS cooling water flows; average 576 MGD and exceeds 304 MGD greater than 99 percent of the time. 304 MGD is critical because it is the lower flow limit sufficient to provide adequate dilution of the desalination concentrate in the combined CDP/EPS discharge. The recent reduction in the plant operating capacity with periods when the plant is not operating from 10 to 60 day a year substantially reduces the source water supply for desalination. The Order needs to be revised to account for this as well as the expected demolition of the EPS.
 2. **Entrainment and Impingement issue not adequately addressed.** This issue has been contested in the joint comment letter submitted by a coalition of environmental organizations including the Sierra Club on the EIR for the Precise Development Plan & Desalination Plant.

Fact Sheet Table 12. We do not agree with the Summary of EIR Substantial Findings Related to Water Quality page F-19, Impingement and Entrainment, which states “No Significant Impact”. A slightly expanded assessment of the impingement and entrainment is given in the staff response comment 4 submitted by the Sierra Club. On page 4 of the response to comments, it misleads the reader by using the term “larvae” when it should state “fish larvae” and uses the term “all the organisms entrained” in the sentence beginning with “Species of direct...”. This is patently false as the consultant report did not evaluate all organisms in the intake report.¹ It only addressed larval fish species, Cancer crabs, and spiny lobster.

There are other important organisms in the source water including benthic invertebrate larvae and many other planktonic life forms, all of which have a necessary niche in the marine ecosystem. These were not included in the consultant report. Entrainment losses of these organisms upset the natural diversity of the ecosystem. The consultant report states that the frequently entrained organisms are very abundant in the area of the EPS intake and the losses due to the EPS are insignificant.

This abundance argument was used by the same consultant in the NPDES permit for the South Bay Power Plant. Dr. Seaby, an international expert on impingement and entrainment refuted this argument. His report² is included in the Environmental Health Coalition report “Deadly Power”, which should be in the South Bay Power Plant NPDES file at the RWQCB. Refer also to the article by Reed Super and David Gordon on minimizing adverse environmental impacts of once-through cooling.³ The CDP EIR does not consider the cumulative impacts on the marine life of the three other power plants using once-through-cooling (SONGS 2 and 3 and the South Bay Power Plant) and other anthropogenic caused impacts. The California Ocean Protection Council and the State Lands Commission both adopted resolutions to phase out power plants using once-through-cooling recognizing their significant impacts to marine life. The declines of the state’s fisheries are due in part to impingement and entrainment of marine organisms. If the abundance argument were true then why is there a decline in fisheries?

Improved knowledge of the impacts of the impingement and entrainment on larval organisms is needed. The California Energy Commission presentation at a 316(b) workshop for the State Water Resources Control Board⁴ listed potential research priorities. One topic is the identification of new tools or technologies for detecting entrainment effects, such as technologies to identify species that are entrained and new sampling methodologies for quantifying the spatial and temporal effects (including cumulative effects) of cooling water intake. The need for this research supports our position that the impingement and entrainment assessment has not been adequately addressed.

There is still another serious flaw in the consultant report. It assesses the entrainment losses in the source water for the CDP using 106 MGD, the flow rate required to produce 50 MGD of product water. It fails to acknowledge that the CDP requires additional seawater to dilute the brine concentrate. The total minimum is 304 MGD as noted in comment 1 above. This

¹ Tenera Environmental, “Carlsbad Desalination Facility Intake Effects Assessment”, draft March 3, 2005

² Seaby, R.M.H, “Notes on the South Bay Power Plant (SBPP) 316(a, b) Application”, 9 July 2004, Pisces Conservation Ltd, IRC House, The Square Pennington, SO4 8GN, England available in Environmental Health Organization report “Deadly Power” available at <http://www.environmentalhealth.org/DeadlyPowerCover.html>

³ Super, Reed W. and David K Gordon “Minimizing Adverse Environmental Impact: Howe Murky the Waters” *The Scientific World Journal*, June 7, 2002, pp 219-237.

⁴ McKinney, Jim and Joe O’Hagan “California Energy Commission Experience With Power Plant Licensing and Once-Through Cooling” http://www.swrcb.ca.gov/npdes/docs/wrkshp_laguna2005/pres_cecmckinney.pdf

minimum flow rate should be used to assess the impingement and entrainment impacts of the CDP. The 106 MGD would be applicable for entrainment loss studies if the brine concentrate were not discharged into the ocean or a non-seawater source were used as the diluting media. The Special Studies Flow, Entrainment and Impingement Minimization Plan will need to determine the intake flow that provides sufficient dilution of the brine concentrate in the effluent discharged into the receiving waters.

3. Section VI C 2e. Special Studies Flow, Entrainment and Impingement Minimization Plan

This paragraph as written is very confusing. We recommend that it be revised for clarity to summarize the special studies described in the Fact Sheet page F-49. Referring to the Fact Sheet, the intent is to prepare a plan for the conditions in which the flows are less than the historical flows. We should note when flows are less than historical flows and if the temperature of the source water is lower than the historical temperatures that these conditions can modify the operating parameter of the desalination process and affect the dilution of the effluent in the receiving waters due to the lower effluent temperature.

The plan is to minimize impingement and entrainment but “minimize” is not defined. Minimize should be in the context of 316(b), which requires the best available technology to *minimize the adverse environmental impacts*. Refer to the previously cited article by Super and Reed article on this subject.

The recent news concerning the reduced plant capacity raises the question if the NRG Energy would be willing operate the intake pumps to provide the source water when EPS is not on line for extended periods of time.

This concludes our comments.

Thank you.

Sincerely,



Ed Kimura
Sierra Club
San Diego Chapter



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CONTROL BOARD
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Comments on Tentative Orders R9-2006-0043 and R9-2006-0065

Dear Mr. Robertus:

On behalf of Surfrider Foundation ("Surfrider"), we submit these comments on Tentative Orders R9-2006-0043, NPDES Permit No. CA0001350 for the Encina Power Station ("EPS") and R9-2006-0065, NPDES Permit No. CA0109223 for the Carlsbad Desalination ("Desal") Project. Surfrider represents nearly 60,000 members -- all of whom are dedicated to the restoration and protection of our nation's coast and ocean. This letter expands upon the concerns we expressed in our June 5, 2006 letter to the Board regarding Tentative Order R9-2006-0065, which is incorporated herein by reference. For the reasons explained below, Surfrider continues to believe that adoption of these tentative orders and issuance of new five-year NPDES permits for the EPS and Desal Project is premature.

1. Tentative Order R9-2006-0043 (EPS Facility)

As you know, the State Water Board is presently considering the adoption of new state guidance for cooling systems at coastal power plants that would expand upon the "Phase II" regulations recently issued by the U.S. Environmental Protection Agency pursuant to section 316(b) of the Clean Water Act. The proposed policy, which was the subject of a State Board workshop in Sacramento on July 31, 2006, would use the state's residual authority under the Clean Water Act, as well as its own separate authority under the Porter-Cologne Act, to build upon the federal regulations in a way that is more protective of California's marine and coastal resources. It is our understanding that this new state guidance could well be finalized in 2007 and could significantly alter the conditions currently incorporated into proposed NPDES permit CA0001350. In light of these developments, it is premature and inappropriate for the Regional Board to issue a full five-year permit, effective until October 2011, without considering the implications of potentially more stringent state standards to be adopted over the next year.

Equally important, it has recently become public knowledge that NRG Energy, Inc., the parent company of EPS facility owner and operator Cabrillo Power I LLC, intends within three years to dismantle the existing Encina Power Station and replace it with an updated and smaller unit, at a different location on the property, that utilizes an air cooling system, thereby eliminating the use of "once-through cooling" entirely at the site.¹ There thus appears to be no need for the Regional Board to issue a full five-year NPDES permit for the existing EPS plant.

Given the rapidly changing regulatory and business environment for this facility, Surfrider urges the following course of action with respect to the EPS permit:

1. The Regional Board should defer consideration of the EPS permit at the August 16 meeting, continue this agenda item to the next Board meeting, and use the intervening time to work with the facility owner to explore and verify its future plans at the site.
2. If the news reports of NRG's future plans at the site are accurate, the Regional Board should then tailor its renewal of the NPDES permit for the existing facility to the particular circumstances presented here. For instance, the permit could be issued for a more limited period of two or three years, with the express condition that at the end of the permit period, "once through cooling" systems will no longer be allowed for this site, in connection with either the existing plant or a new facility, thereby essentially phasing out this destructive practice. In return, the Regional Board might then consider foregoing the requirements for a Comprehensive Demonstration Study contained in section VII.C.1.b of the draft NPDES permit. If the new plant uses air cooling (or closed cycle cooling towers), it will essentially meet the performance standards set forth in EPA's Phase I and Phase II rules without the need for an impingement and entrainment study, a restoration plan, or any of the other analyses required for facilities that do not use alternative cooling technologies to meet the performance standard. This approach would be cost effective, both conserving staff permitting resources and saving the operator the money it would otherwise have to spend on studies, while also ensuring maximum long-term protection of our coastal resources.
3. If the news reports are inaccurate and NRG intends to continue operating the existing facility for some longer period of time, the Regional Board should then give more serious attention to how it will, within the confines of the proposed permit, both incorporate the requirements of the Phase II rule and build in sufficient flexibility to accommodate likely rule or policy changes at the state level over the next year or two. These objectives could be achieved, first and foremost, by limiting the duration of the renewed permit to two years and including an express requirement that the permit be reopened upon (i) submission of the Comprehensive Demonstration Study or (ii) adoption of a final state policy on once-through cooling. As it presently stands, the draft permit does not contain

¹ See Attachments 1 & 2: "Desalination plant project moving ahead despite agency's withdrawal." North County Times (July 29, 2006); "County Water authority deep-sixes seawater desalination plan" (July 28, 2006).

any requirements or direction to the discharger once the Comprehensive Demonstration Study is submitted on January 9, 2008. Additionally, even as the facility is completing its Comprehensive Demonstration Study, the Regional Board has a duty to apply "best professional judgment" to its evaluation of cooling system impacts. 40 CFR 125.95(a)(2)(ii) ("Between the time your existing permit expires and the time an NPDES permit containing requirements consistent with this subpart is issued to your facility, the best technology available to minimize adverse environmental impact will continue to be determined based on the Director's best professional judgment."). Thus, the Board cannot and should not merely rubber stamp the existing operations, but must give serious consideration to interim protective measures for minimizing adverse environmental impacts, including such things as daily, seasonal or annual flow restrictions, equipment retrofits, etc.

As you may be aware, the Santa Ana Regional Water Board is presently considering a draft permit for the existing Huntington Beach Generating Station that incorporates much of the proposed State Board policy on once-through cooling and includes an express reopener provision to amend the permit in light of the results of the Comprehensive Demonstration Study. The EPS permit, proceeding on a similar timetable, should include no less stringent provisions.

B. Tentative Order R9-2006-0065 (Desal Project)

Surfrider continues to believe that the draft NPDES permit for the Desal Project is premature and should be deferred until issues concerning the future of the EPS facility are resolved. In particular, although the City of Carlsbad has now certified its EIR for the Desal Project, that document is based on the assumption that the Desal Project will essentially "piggy back" on the outfall stream from the EPS once-through cooling system. This foundational assumption appears no longer to be true. In fact, it is more than reasonably foreseeable that the Desal Project will need to operate as a stand-alone facility, unconnected to the power plant, within the next two or three years -- probably well before the Desal Project is even constructed and operating. Thus, the EIR is already out-of-date and must be supplemented to evaluate a project that will likely have a different infrastructure configuration, different environmental impacts, different potential siting and design alternative, and different mitigation options.

As we discussed in our June 5, 2006 letter on this proposed permit, as a policy matter the Regional Board can and should defer consideration of proposed NPDES Permit No. CA0109223 until it has full information regarding both the proposed project and its environmental impacts and alternatives. The revisions in the draft permit that require the facility to submit salinity and toxicity studies after adoption of the order do not satisfy our concerns in this regard. The purpose of the environmental analysis is two-fold. First, it is designed to provide decisionmakers and the public with an understanding of the project's impacts before it is approved and thereby gains irreversible momentum. Second and equally important, environmental review under CEQA requires an evaluation of alternatives that may eliminate or mitigate adverse impacts. Here, for instance, the impacts and wisdom of approving the proposed Desal Project may change dramatically with the decommissioning of the EPS facility. Given that cooling water discharge will soon no longer be available for diluting the brine discharge, the environmental review

should look at alternative source streams, such as subsurface intake systems, to minimize intake impacts and alternative discharge regimes, such as mixing the brine stream with sewage treatment discharges, to minimize receiving water impacts. These alternatives have not yet been analyzed. The post-adoption Flow, Impingement and Minimization Plan requirement added to the revised draft permit does not address this deficiency because it does not inform the decisionmaker before approval of the project. As the state agency responsible for the protection of water quality in the near-shore marine environment, the Regional Board has authority to require additional, supplemental environmental review before making any decision to approve a permit where, as here, the project is substantially changed from the project considered in the original EIR. See 14 CCR §§ 15096(e), 15162, 15052.

Moreover, we believe that the Regional Board has independent authority under the Porter-Cologne Act to evaluate intake impacts from a stand-alone Desal Project under section 13142.5(b) of the Water Code, which provides: "For each new or expanded coastal power plant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measure feasible shall be used to minimize the intake and mortality of all forms of marine life." Because the Desal Project, as proposed, is an "industrial installation using seawater . . . for industrial processing" seawater into potable drinking water, the Regional Board can and should give close scrutiny to all feasible site, design, technology and mitigation measures that will minimize intake and mortality of marine life. That analysis has yet to be completed for the Desal Project.

In sum, Surfrider urges the Board to deny the requested NPDES permit for the Desal Project unless and until a more thorough environmental review of a stand-alone desalination facility is completed. This approach is the only way for the Board to ensure that a potentially inappropriate project does not gain irreversible momentum before its impacts and alternatives are fully understood. If the Board does move forward to issue an NPDES permit for the Desal Project at this time, that permit should be strictly limited to the project actually evaluated in the EIR. This objective could be accomplished, for instance, by (i) providing that the permit automatically terminates if and when an inflow water stream from the EPS plant is no longer available for dilution and (ii) expressly specifying that the permit does not create any rights or expectation for a future permit once the present EPS cooling system ceases operations.

Once again, thank you for your consideration of Surfrider's continuing concerns over these two projects. If you have any questions about these comments, please feel free to contact us at the above-listed telephone number.

Sincerely yours,



Deborah A. Sivas

Received 8/9/06 4 pm



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August 9, 2006

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**Subject: Comments on Tentative Order No. R9-2006-0065 NPDES No. CA0109223
Waste Discharge Requirements for the Poseidon Resource Corporation, Carlsbad Desalination Project**

Dear Chairman Minan and Members of the Board:

San Diego Coastkeeper (Coastkeeper) is a non-profit environmental organization protecting the region's bays, beaches, watersheds and ocean. Coastkeeper has concerns over the revisions made to Tentative Order No. R9-2006-0065 NPDES No. CA0109223 (permit) and recent developments in the future of the Encina power station (EPS). The Surfrider Foundation, San Diego Chapter concurs with our comments. Therefore, we ask that you delay issuing the permit until the future of the EPS and the Carlsbad Desalination Project (CDP) are more certain. For more detailed comments on EPS please see our EPS comment letter of August 9, 2006.

Encina's western regional president for NRG, Steve Hoffman, recently announced that EPS has been operating fewer days since a new Escondido power station owned by SDG&E came on-line in April. Furthermore, he estimates that the plant's capacity has decreased from 15 to 20 percent and that the plant is cold for 60 to 100 days a year. NRG also plans to demolish the EPS and build a new power plant that does not rely on once-through cooling. The current EPS could be shut down within five years. The closing of EPS makes the CDP stand-alone scenario much more realistic than anticipated in the EIR and the tentative permit. The current analysis for salinity, acute toxicity, entrainment and impingement, and thermal effects is inadequate in light of the news that EPS will shut down. Coastkeeper also believes that concerns raised in a letter from the California Coastal Commission in response to the Huntington Beach Poseidon Seawater Desalination Project are applicable to CDP. (CCC Letter available at <http://www.ci.huntington-beach.ca.us/citydepartments/planning/major/poseidon.cfm>)

I. OTC Impacts are Inadequately Considered in the NPDES Permit for CDP

If the EPS plant is decommissioned and CDP is allowed to use EPS pipes and channels for intake and outfall, CDP would essentially be prolonging the life of the once-through cooling system and continuing to adversely affect the environment. The Ocean Protection Council and the State Lands Commission have passed resolutions not to issue licenses for new once-through cooling (OTC) plants and to encourage the State Water Resources Control Board to eliminate OTC plants. It is the intent of section 316(b) of the Clean Water Act (CWA) to eliminate the use of once-through cooling plants and minimize their adverse environmental impact. Extending the mechanism of EPS's adverse impacts on the environment would essentially be an end run attempt to evade the efforts of the CWA and California agencies to phase out the use of once-through cooling plants.

The RWQCB has the authority to require a subsequent EIR to determine the effects of the stand-alone facility because "new information of substantial importance, which was not known and could not have

been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete" and "the project will have one or more significant effects not discussed in the previous EIR" and "significant effects previously examined will be substantially more severe than shown in the previous EIR." (14 CCR §15162(a)(3)(A)&(B)) This permit should not be approved without considering the environmental impact of a stand-alone facility.

II. Permit Insufficiently Discusses Effects of Salinity on Acute Toxicity

The permit uses historical data to calculate "worst-case scenario" intake flows from EPS available for use by the desalination facility. If the power plant shuts down, or merely diminishes its activity as planned, this historical data is no longer an accurate indication of flow. If EPS is not operating as an OTC plant, the 200 MGD mix water for dilution of CDP concentrated reverse osmosis (RO) brine water would have to be generated by CDP. Without flowing through EPS, the discharge would no longer be heated. The salinity calculations assume *heated* outflow from EPS mixing with CDP RO brine, and are therefore inaccurate in a stand-alone scenario. (Permit Table 9, p. 12; Table 6, p. F-12; section c.2, p. 22; footnote 5, p. F-42)

Additionally, if the EPS continues to operate, but has fluctuations in use as expected, semi-annual monitoring of salinity effects is insufficient to fully capture the effects of varying salinity on marine life. (Permit p. F19) The Regional Board staff's response to the potential issue of receiving water salinity states that no acute toxicity effects would occur at a salinity level below 40 ppt (Response to comments at Comment 7, p.7). Due to the likely increase in salinity because of decreased flow and/or lack of elevated temperature in the outflow, 40 ppt is no longer an accurate figure. (Permit, p. F-19) Therefore, the required additional salinity and acute toxicity studies should be conducted before approval of the permit. (Permit p. F-19, F-47, F-48)

III. Impingement and Entrainment Impacts are Understated and Inadequately Analyzed in the NPDES Permit

The impacts of impingement and entrainment by EPS, and therefore CDP, have been underestimated. The flow, entrainment, and impingement minimization plan required in the permit should be completed before approval of the permit. (Permit, p. 23 § e; p. F-49 § e) The permit states on page F-37 that "information submitted by the discharger indicated that salinity concentrations up to 44 ppt will not likely [sic] cause violations of the Ocean Plan's acute toxicity standards." However, no reference or support is given for this statement except for the word of the discharger. Also, the 2005 *California Energy Commission Staff Report, Issues and Environmental Impacts Associated with Once Through Cooling at California Coastal Power Plants (CEC Staff Report)*, states that:

The cumulative ecological effects of coastal power plant entrainment and impingement relative to all impacts to coastal waters, while likely to be of concern, are difficult to quantitatively estimate given the number of different impacts, the large spatial scales over which they occur, difficulties in attributing changes in populations to any particular impact, and lack of knowledge about impact interactions. (*CEC Staff Report*, p.2)

The same report goes on to say that EPS's environmental impacts have been incompletely assessed and may adversely affect sandy beach, rocky shore, and kelp forest, and could potentially eliminate about 7,300 acres of habitat production. (*CEC Staff Report*, p. 27) The report also states that, "nearly all of the entrainment impacts in these early studies were poorly assessed, most often due to problems with study designs and sampling methods." (*CEC Staff Report*, p. 24) Furthermore, the report states that the 1997

SDG&E study that concludes that impingement and entrainment losses at EPS are "insignificant" has "little scientific basis." (*CEC Staff Report, Appendix-Support Studies and Technical Appendices*, p. 27) To rely on the SDG&E study in setting the salinity concentration, is unwise in light of the CEC Staff Report's conclusions.

IV. Thermal Plan Exception for EPS Should not be Applied to CDP

EPS currently receives an exception from the Thermal Plan, but if EPS is shut down, this exception must not be applied to CDP, as envisioned in the permit. (Tentative Order No. R9-2006-0043, Encina NPDES Permit, p. 6) In 2005, a USEPA outside consultant submitted comments about the previously mentioned 1997 SDG&E Supplemental Report "raising concerns about the thermal modeling and biological analysis used in the study." (Tentative Order No. R9-2006-0043, Encina NPDES Permit, p. 25) At the State Water Resources Control Board once-through cooling workshop on December 7, 2005, staff recommended including the 316(b) policy of minimizing adverse environmental impacts of once-through cooling plants in the Thermal Plan.

One of the exceptions to the Thermal Plan that EPS currently receives is for heat shock treatments. Intake tunnel heat shock treatments are routinely used by EPS to clear intake valves every five to eight weeks and results in temperatures as high as 120 degrees Fahrenheit. The heating and cooling cycle lasts between six to eight hours. (Tentative Order No. R9-2006-0043, EPS NPDES Permit, p. F-12, F-13) These heat treatments are not mentioned in the CDP permit, but in the stand-alone scenario CDP would have to perform the routine maintenance of the intake valves. The heat shock treatments can result in fish kills like the April 30th to May 1st 2006 heat treatment event that resulted in over 500 dead fish. Please see our comment letter for EPS PIC on July 7, 2006. Additionally, EPS "discharges onto a sandy beach and the thermal plume may impact the beach as well as a local kelp forest. Effects, however, are essentially unknown because of inadequate studies." (*CEC Staff Report*, p. 25)

The CDP permit calls for semi-annual thermal mapping but semi-annual mapping is not enough to fully characterize the effects of the heat shock treatments and changes in outflow from EPS. (Permit, p. F-20)

V. Effects of Discharge of Reverse Osmosis Product Water on Salinity have not been Tested

The effects of discharging product water from RO back into the Encina effluent channel have not been studied. The permit states that this discharge of RO product water does constitute a bypass, but gives no explanation of why this exemption is given. (Permit, p. 11 footnote 2) The permit bypass exemption seems to rest on the statement that:

The flow and salinity of the additional CDP effluent under operating conditions when either pretreatment process water or reverse osmosis product water is directed back into the EPS effluent channel would be identical to the flow and salinity of the source water directed to the CDP during such temporary periods. As a result, no water quality impacts would occur as a result of such temporary process water diversions. (Permit, p. 6 section B)

However, this assertion is not supported by any cited data or results. The salinity of the reverse osmosis product water, which would be up to potable water standards, would not have the same salinity as the CDP source water, which is seawater. If the reasoning for the above assertion is that the concentrated

brine discharge would mix with the RO product water, therefore resulting in no net salinity effect, this is not clear from the quoted section of the permit or anywhere else in the permit.

It is also unclear whether the brine discharge and RO product water discharge would be at the same location or whether they would occur at the same volume. Footnote 15 on page E-7 of the permit requires daily monitoring for temporary discharge periods of RO product water to the EPS effluent channel. However, tests should be completed to determine the effects of this discharge on the marine environment before the RO product discharge is allowed. Monitoring will not prevent adverse effects or fully characterize the effect of the discharge, especially if these temporary discharges are to be infrequent.

VI. Re-Opener Provision is an Insufficient Safeguard Against Instability of EPS and CDP

The response to comments by staff repeatedly refers to the availability of the re-opener provision as a precaution against the possibility of a stand-alone facility. However, this is not a valid safeguard against uncertainties in the desalination plant's effects on the environment and the future of EPS.

The process of re-opening a permit is arduous and slow. A search for re-openings of permits at the SWRCB yielded a result of about 27 cases in the last 19 years, or about 1.5 permits per year, a truly small number compared to the thousands of NPDES permits that have been issued. Furthermore, the quickly changing conditions of the project will result in a permit that does not accurately reflect the situation in the foreseeable future. Standard provisions in NPDES permits require re-issuance every five years to deal with the change in circumstances that may have come about since the first issuance of the permit.

The tenuous nature of this project and the highly likely and un-analyzed scenario of a stand-alone facility create uncertainty greater than that of a standard permitting process. This uncertainty coupled with the difficulty of re-opening an NPDES permit results in a safeguard of limited use and warrants a delay in issuance of the permit. This is also appropriate given the lack of hardship to the applicant, since CDP is not scheduled to be operational for at least five years.

Furthermore, the Encina permit, which also has many issues, is docketed to be heard on the same day as the CDP permit. As stated in the Stanford Legal Clinic comment letter of June 5, 2006, a change in the Encina NPDES permit will affect CDP operations. The scope of the Encina NPDES permit should be determined prior to issuing a permit for a co-located CDP.

Although Coastkeeper understands the RWQCB's commitment to clean water, changes in Board members and staff may lead to confusion in the interpretation of the re-opener provision. In order to bolster the meaning of the permit as it is understood today, specific language as to what warrants changing or withdrawing the permit is required.

VII. RWQCB has Independent Authority to Evaluate Marine Impacts of CDP

The RWQCB has authority to evaluate the mitigation measures for environmental impacts of CDP under the doctrine §13142.5(b) of the Water Code:

For each new or expanded coastal powerplant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life.

CDP is an industrial installation using seawater for industrial processing – the process of creating potable water from seawater. The CDP EIR and NPDES Permit have not analyzed the best available site, design, technology, and mitigation measures to minimize mortality of marine life. This applies to impingement and entrainment, heat shock treatment fish kills, acute toxicity, and any other destructive process causing marine mortality. Furthermore, due to the deficiencies in the previous entrainment and impingement studies completed at EPS, the RWQCB should require a new study before granting a permit to either CDP or EPS. The RWQCB has this authority under §13142.5(d) of the Water Code:

Independent baseline studies of the existing marine system should be conducted in the area that could be affected by a new or expanded industrial facility using seawater in advance of the carrying out of the development.

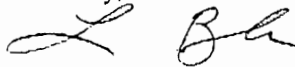
This section calls for baseline studies “in advance of the carrying out of the development.” Thus, it is premature to grant CDP a NPDES Permit without completing baseline studies of the existing marine environment and assessing the best available site, design, technology, and mitigation measures for CDP.

VIII. CDP NPDES Permit Should be Delayed

In conclusion, Coastkeeper urges the Board to delay issuing an NPDES permit to CDP. The circumstances surrounding the desalination plant are unstable. The stand-alone facility is a much more real possibility than previously anticipated in this permitting process. CDP will likely have to obtain a new permit to address this inadequacy and to consider the stand-alone facility in the future. CDP should not be allowed to piggy-back on the environmental degradation of EPS in effectively prolonging the effects of once-through cooling by utilizing the same mechanisms as the power plant. “No net effect” is not a realistic assessment of the situation, especially because the true effects of EPS on the environment have not been thoroughly studied. The delay in permitting will allow a true analysis of the effects of a stand-alone facility and a relevant permit to be issued.

Thank you for the opportunity to comment on this important issue. Please contact Gabriel Solmer at 619 758-7744 or gabe@sdcoastkeeper.org with any questions or responses.

Sincerely,



Livia Borak, Legal Intern
San Diego Coastkeeper



Gabriel Solmer, Supervising Attorney
Environmental Law & Policy Clinic
San Diego Coastkeeper



California Coastal Coalition
1133 Second Street Suite G
Encinitas, CA 92024

JMC 5/8
Mike M
pls have this included in
late mailing for 16 Aug mtg.
760.944.3564 tel
760.944.7852 fax
steveaceti@calcoast.org

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STEVEN ACETI, J.D.
Executive Director

Via Facsimile: (858) 571-6972

June 2, 2006

Mr. John Robertus
Executive Officer
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA. 92123-4340

RE: Carlsbad Desalination Project Tentative Order No. R9-2006-0065, Item 11,
June 14, 2006

Dear Mr. Robertus:

The Carlsbad Desalination Project would offer many benefits to the citizens of California and the California Coastal Coalition is pleased to offer our full support of the Carlsbad Seawater Desalination Project.

The California Coastal Coalition (CalCoast) is a non-profit advocacy group comprised of 35 coastal cities; five counties; the Association of Monterey Bay Area Governments, the San Diego Association of Area Governments and the Southern California Association of Governments; along with business associations and allied groups committed to restoring California's coast through sand replenishment, increasing the flow of natural sediment, wetlands recovery and improved water quality.

As a co-sponsor of the California Public Beach Restoration Act (AB 64-Ducheny), our organization is especially concerned about any potential impacts to the coastline during the construction and operation of the desalination plant.

We have given considerable consideration to Poseidon's proposal and find that the project includes the necessary design, protections and mitigation for one to conclude it represents an appropriate use of coastal property and public trust resources.

The project impacts on the coastal environment are benign and in many aspects are beneficial, for example:

CalCoast is an advocacy organization comprised of coastal communities and interest groups

- The dedication of land for increased public access and recreation opportunities;
- Restore and enhance the marine environment;
- Generate revenue for South Carlsbad Coastal Redevelopment plan to be used for enhancement of public infrastructure in the coastal zone.

It is clear upon reviewing Tentative Order for the proposed desalination plant, the project can be constructed and operated in a manner that is fully protective of ocean waters in the San Diego Region.

Sincerely,



Steve Aceti, JD
Executive Director
California Coastal Coalition



FARM BUREAU SAN DIEGO COUNTY

1670 East Valley Parkway, Escondido CA 92027-2409
Phone: (760) 745-3023 • Fax: (760) 489-6348 • E-mail: sdfb@sdfarmbureau.org

August 4, 2006

John Minan
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

2006 AUG -7 A 9:11

San Diego Regional Water Quality Control Board

RE: Carlsbad Desalination Project Tentative Order No. R9-2006-0065

Dear Chairman Minan:

As the 12th largest farm economy among all counties in the nation, the farmers of San Diego County recognize the importance of developing environmentally responsible and affordable water supplies.

San Diego is host to more than 5,000 farmers producing more than \$1.5 billion in crops each year. When all economic factors are considered, including payroll, purchase of goods and transportation, agriculture has a total value to the local economy of \$5.1 billion.

Due to San Diego's dependence on imported water supplies, our region endures water prices that are among the highest in the nation. For many local farmers, the cost of water can impact their ability to stay in business. With the heavy demand and lack of supply of water in this region, we feel it is imperative that San Diego develop new supplies to meet this demand and escalating costs.

In the long run, imported water will be more expensive due to the costs of transportation, storage, and likely economic and environmental mitigation costs for the damage caused by extracting that water from its current use. To that end, we encourage the efforts made by the City of Carlsbad and Poseidon Resources to develop locally-controlled affordable water supplies in an environmentally responsible manner.

It is apparent the cost of importing water to this region will only continue to escalate and desalinated water will eventually be the more affordable and better quality source of water. To maintain agriculture in San Diego county, water must be abundant, of acceptable quality and affordable. Creating new local water supplies will help offset expected price increases that could be damaging to San Diego's farm economy.

We applaud the efforts of the City of Carlsbad and Poseidon Resources for taking the steps to develop new potable water supplies and urge your approval of the permit before you.

Sincerely,

Eric Larson
Executive Director

cc: Eric Anderson
Alan Barrett
Daniel Johnson
Janet Keller
Jennifer Kraus
Susan Ritschel
Richard Wright
John Robertus



San Diego County Water Authority

1677 Sweetwater Avenue • San Diego, California 92112
(619) 437-6600 (TAX 619) 572-6348 www.sdcwa.org

San Diego County
WATER QUALITY
CONTROL BOARD

Handwritten notes and signature

2006 AUG 11 P 1:42

August 7, 2006

Mr. John H. Robertus
Executive Officer
San Diego Regional
Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Subject: Tentative Order No. R9-2006-0065, Waste Discharge Requirements for the Poseidon Resource Corporation, Carlsbad Desalination Project

Dear Mr. Robertus,

New water supplies are a critical issue facing this region. We will add nearly one million more people by 2030 and 60 percent of those people are births within the county. New reliable water supplies are essential to our ability to maintain our regional economy and our quality of life for our children and grandchildren.

Seawater desalination is one of the few options we have in San Diego County to develop significant new local water. The State of California, in the California Water Plan Update 2005, included desalination as resource management strategy to meet California's future water needs. The Water Authority is committed to, and counting on seawater desalination as a new water supply for the county. We expect that up to 10 percent of our water supply in 2020 will come from seawater desalination.

As the regional wholesale supplier of water for more than 60 years, we support the development of reliable local supplies including seawater and groundwater desalination, conservation, and water recycling to meet the growing regional need for water.

Sincerely,

Robert R. Yamada
Seawater Desalination Program Manager