

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
TENTATIVE ORDER NO. R9-2009-0038  
NPDES NO. CA0109223**

**AMENDING ORDER NO. R9-2009-0065 (NPDES NO. CA0109223)  
WASTE DISCHARGE REQUIREMENTS  
FOR THE POSEIDON RESOURCES CORPORATION  
CARLSBAD DESALINATION PROJECT,  
DISCHARGE TO THE PACIFIC OCEAN VIA THE ENCINA POWER STATION  
DISCHARGE CHANNEL**

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**Poseidon Resources Corporation's Responses to Marco Gonzalez's Oral Testimony  
At the February 11, 2009 Regional's Board Hearing  
Regarding Poseidon's Proposed Carlsbad Desalination Project**

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**Comment 1:**

“Porter-Cologne Section 13142.5 is the cornerstone of where you begin your, and really, end your consideration. It says that the desalination plant shall use the best available site to minimize the intake and mortality of marine life.”

**Response:**

The Commenter incorrectly paraphrased Section 13142.5(b) by omitting a critical term from the statute.

Section 13142.5(b) provides: “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.” (Emphasis added.)

The Commenter omitted, both during his oral testimony and in his PowerPoint Presentation, the word “feasible” – an important qualifier in determining whether a project has satisfied the statutory standard.

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**Comment 2:**

“[This] means you have to put the desal plant in a place where you can minimize the intake and mortality of marine life. That doesn't mean you consider where you put the physical plant, you consider where you put the intake. All of the alternatives analysis that's been given to you talks about where you locate the actual physical plant.”

**Response:**

To the extent that Commenter is suggesting that the physical location of the plant should not be considered, this argument is without merit. Section 13142.5(b) specifically states that: “For each new powerplant or industrial installation...the best available site...feasible shall be used to minimize the intake and mortality of all forms of marine life.” The plain language of the statute contemplates that the relevant siting is of the plant. Based on common usage of the “site,” it is reasonable to infer that this word refers to the location of “where you put the physical plant.”

In this case in particular, the location of the physical plant is paramount in the analysis under Section 13142.5(b) because it is a key feature of the Project that will minimize intake and mortality of marine life. By co-locating with the Encina Power Station (EPS), i.e., the Project will be able to take advantage of EPS’s pre-existing intake and discharge system and the seawater discharged by EPS for cooling operations. The Project will convert EPS’s discharged water into potable water; in essence, Poseidon is reclaiming a waste discharge and restoring it to beneficial use. When the CDP is able to operate in this downstream mode, the Regional Board has recognized that impacts attributable to the CDP are minimal. Only when the EPS does not produce enough cooling water discharge will the CDP require that sea water be withdrawn solely to meet its needs.

In addition to reducing the unnecessary intake of seawater by providing for the reuse of discharged water for desalination, co-locating with EPS allows the Project to avoid the myriad environmental and economic costs that would be associated with the construction of a new intake system.

Poseidon evaluated numerous alternative intake systems, such as subsurface intake and an offshore intake, all of which were determined to be infeasible and/or more environmentally damaging than use of the existing EPS intake. As new intake systems, these systems would necessarily have been in different locations than the existing intake; therefore, it is not true that Poseidon did not consider other intake locations, in addition to other plant locations. Regardless, as explained above, this is not the standard under Section 13142.5(b) and Commenter has proposed no basis for such a reading of the statute.

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**Comment 3:**

“[W]e’ve only, since day one, talked about one intake. And that’s the intake at the Encina Power Station. Now, there may have been an alternative study done for subsurface intakes at the Encina Power Station, but we’ve seen no alternative location anywhere around the coast.”

**Response:**

The Commenter appears to suggest that Poseidon did not consider any alternative locations for the Project. To the extent he is making such an argument, he is incorrect. As explained in Chapter 2 of Poseidon’s Flow, Entrainment and Impingement Minimization Plan (“Minimization Plan”), Poseidon considered three possible sites within the City of Carlsbad: (1) the Encina Power Station; (2) the Encina Water Pollution Control Facility; and (3) the Maerle Reservoir. In any event, As staff explained in its March 27, 2009 report, the Regional Board already passed

on Project siting when it granted the NPDES permit for the Project in 2006. Commenter did not raise the issue then, and in any case, Commenter's challenge to that permit was unsuccessful. This issue is closed. Commenter is raising it far too late and is barred from doing so at this juncture under basic principles of administrative procedure and exhaustion of remedies.

Chapter 2 of the Minimization Plan explains the bases for rejecting the alternative sites. The Encina Water Pollution Control Facility was rejected because it would be able to accommodate only a plant big enough to produce 10 MGD of water, which would be insufficient to meet user demands. Because of its lack of proximity to the intake system, this site also would require the construction of a 2-mile long water transport pipe. These factors, among others, made that site infeasible. The third site option, Maerkle Reservoir, located 10.6 miles east of the proposed site, was rejected for similar reasons and because the necessary construction changes would increase construction costs, and therefore water costs, to such a degree as to make the Project infeasible without any measurable environmental benefit. Insufficient space exists in the public rights-of-way between the Maerkle site and the ocean to accommodate the needed pipelines, and it would be extremely disruptive to construct pipelines outside existing rights-of-way. After considering these alternative locations, the Regional Board Staff agreed that the site selected by Poseidon satisfies Water Code Section 13142.5(b). The alternative sites analysis was focused on the Carlsbad area for the reasons set forth in the response to the following comment, and there was no requirement to analyze sites that could not feasibly accomplish the Project's purpose.

Poseidon did analyze an alternative desalination project proposed for Dana Point, which would use slant well technology. This technology was found infeasible for the Project because, among other things, pilot testing indicated that the water quality would be difficult if not impossible to treat, and the many slant wells that would be required on the beach would disrupt public access and recreation. The Coastal Commission found the multiple smaller slant wells required would result in far greater environmental impacts than the Project, and would also be insufficient to address water needs.

Locating the Project at the EPS site assures that the Agua Hedionda Lagoon will have continued stewardship for the life of the Project. As explained in Poseidon's April 2, 2009 comment letter, the ecosystem productivity of the Lagoon is tied to the presence of EPS or another industrial steward to maintain it. If left to its natural state, the Lagoon would return to mudflats, rather than the rich estuarine environment that we presently enjoy.

Again, the Regional Board staff agrees with Poseidon that the site selected is the best. Poseidon further addressed issues relating to siting in its April 2, 2009 comment letter.

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**Comment 4:**

“And you will hear Poseidon at some point say, ‘But wait a second, this is a Carlsbad-specific project. We define our project so narrowly that it has to be in Carlsbad.’ No, it doesn't. Look at all the water agencies that are purchasing water. They're not getting it directly piped. It's paper transfers, as anybody who deals with water knows.”

**Response:**

To the extent that Commenter criticizes the reasons why the Project’s location is Carlsbad, his argument is unavailing. The objectives of the Project are to provide a local and reliable source of potable water to supplement imported water supplies available to the *City of Carlsbad and the San Diego region* in order to reduce local dependence on imported water and provide water at or below the cost of imported water supplies. The Project will supply Carlsbad with 100% of its drinking water needs, and approximately 21,000 AFY of potable water created at the desalination plant (out of a total output of 56,000 AFY). The Project's location is critical for serving Carlsbad and the surrounding water districts in a feasible manner because of its close proximity to the existing intake and outfall structure and key delivery points of the distribution system of Carlsbad, the largest water user.

An additional objective of the Project is to locate and design a desalination plant in a manner that maximizes efficiency for construction and operation of the Project at the same it minimizes the environmental effects. The location at the EPS allows the Project to optimize the cost of delivery of desalinated water produced at the facility and the environmental impacts associated with the construction and operation of the Project. It also avoids the construction of new intake and discharge facilities, providing significant environmental and cost benefits.

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**Comment 5:**

“[I]n their presentation, they say this is a regional problem. The drought is a statewide problem. Locating a desalination plant that’s purportedly going to meet the County Water Authorities fabricated need for 56,000 acre feet is not a Carlsbad local issue.”

**Response:**

Commenter’s argument is flawed to the extent it attempts to minimize the urgent need for water in the Carlsbad region. The fact that the drought is a statewide problem does not, and should not, in any way undermine the fact that Carlsbad residents, as well as residents in the surrounding areas, have a pressing need for water. The Commenter offers no support for his allegation that the County Water Authority has fabricated a need for 56,000 acre-feet of water. Through the Project, Carlsbad will ensure that 100% of its potable water requirements are obtained from a local, drought-proof source that is not subject to the variations of drought or political and legal constraints. Such water supply security is a central component of siting the Project in Carlsbad.

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**Comment 6:**

“Your standard of review under Porter-Cologne says you have to choose the best available site to minimize intake and mortality of marine life. We don’t even have that analysis. We don’t even know where the best available site is because they’ve only looked at one site.”

**Response:**

See Response to Comment 3.

**Comment 7:**

“The best available design to minimize intake mortality, we’ve only looked at a 50 MGD site --- or design. We haven’t looked at a 30 or a 20.”

**Response:**

Section 13142.5(b) requires the Project to use “the best available site, design, technology, and mitigation measures *feasible* ... to minimize the intake and mortality of all forms of marine life.” Even though not legally required, Poseidon still conducted an analysis, in which it determined that 50 MGD of fresh water will be an economically viable enterprise. A reduced output alternative (25 MGD) was analyzed in the Project’s Environmental Impact Report (“EIR) and found insufficient to meet project objectives with no environmental benefits. The EIR considered an alternative site that could only produce 10 MGD due to outfall constraints, which was inadequate to satisfy even Carlsbad's demand. The Coastal Commission also found that replacing the Project with multiple smaller desalination facilities would result in far greater environmental impacts and costs, would not address the water needs of Carlsbad and the San Diego area, and would not conform to Coastal Act policies.

Poseidon’s analysis revealed that a 50 MGD facility is necessary to produce sufficient water to satisfy Carlsbad’s demand, the demand of other local agencies, and the Project’s planned contribution of desalinated water as a component of regional water supplies, all of which are key objectives that could not be met with a scaled down project.

Notably, the Department of Water Resources 2006 Water Plan Update indicates the Project will produce about 10% of the desalinated water needed in California by 2030, and the Metropolitan Water District of Southern California identified a need for 150,000 AFY of desalinated water to ensure regional reliability, including 56,000 AFY from the Project.

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**Comment 8:**

“We’ve invalidated all of the alternative intakes that could be done here in Carlsbad, because they don’t meet the criteria for producing 50 MGD.”

**Response:**

Producing sufficient water to satisfy Carlsbad’s demand, the demand of other local agencies, and the Project’s planned contribution of desalinated water as a component of regional water supplies are key objectives that could not be met with a scaled down project. The EIR analyzed a reduced output alternative (25 MGD) and found it was insufficient to meet objectives with no environmental benefits. The EIR also considered an alternative that could only produce 10 MGD due to outfall constraints, which was inadequate to satisfy even Carlsbad's demand.

The other sites were rejected for reasons aside from the scale of Project feasible at the particular site. The Encina Water Pollution Control Facility was rejected because also of its lack of proximity to the intake system; distance would have required the construction of a 2-mile long

water transport pipe. Maerkle Reservoir, located 10.6 miles east of the proposed site, was rejected for similar reasons and because the necessary construction changes would increase construction costs, and therefore water costs, to such a degree as to make the Project infeasible without any measurable environmental benefit. Moreover, insufficient space exists in the public rights-of-way between the Maerkle site and the ocean to accommodate the needed pipelines, and it would be extremely disruptive to construct pipelines outside existing rights-of-way.

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**Comment 9:**

“The best available technology and the best available mitigation measures, remember to minimize intake, because this is important when you consider the standard that Poseidon thinks applies to it. And I’m taking this straight from the letter that they submitted back in – on March 2nd, 2008, before that last approval, conditional approval. And it’s important because this was threaded through everything that they did. Look at what they talk about. They think 13142.5 says that you have to choose site design technology and mitigation to minimize the impacts to marine life.”

**Response:**

The Minimization Plan’s clear objective is to minimize intake and mortality of marine life; the focus is not on “impacts.” Intake and mortality of marine life is minimized by minimizing impingement and entrainment. The word “impacts” has occasionally been used to refer to entrainment and impingement – that is, functionally for this Project the minimizing of intake and mortality and reduction of “impacts” are very similar – minimization of entrainment and impingement. To the extent Commenter believes something beside entrainment and impingement is relevant, he has not provided any such information as to what that would be.

As described fully in the Minimization Plan and Poseidon’s April 2, 2009 comment letter, the Project satisfies Section 13142.5(b) by specifically providing for the minimization of entrainment and impingement.

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**Comment 10:**

“And you see they went into great detail to – to specify that their Marine Life Mitigation Plan at that point dealt with the best site to minimize impacts to marine life, the best design to minimize impacts. And so we have to ask ourselves, what’s the difference between minimize intake and minimize impact? It’s really a plain reading. It’s common sense. One, it’s the wrong standard. You’ve got to go by with what the statute actually says.”

**Response:**

See Response to Comment 9.

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**Comment 11:**

“316(b) says on its face that you have to minimize adverse environmental impacts with respect to the location design, construction, and capacity of cooling water.”

**Response:**

The Minimization Plan does not attempt to invoke the 316(b) standard; as explained in Response to Comment 8, the Plan reduces impingement and entrainment. Of course, since the Commenter offers no meaningful distinction between “adverse impacts” and “intake and mortality” for the purposes of this Project, this criticism is without substantive merit.

Commenter inaccurately paraphrases the law by omitting critical language from the statute. Section 316(b) of the Clean Water Act provides: “Any standard established pursuant to section 1311 of this title or section 1316 of this title and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the *best available* for minimizing adverse environmental impacts.” (Emphasis added.) Commenter omitted the critical word qualifier “best available,” which is an important qualifier in determining whether a Project has satisfied this standard. Section 13142.5(b) similarly requires the “best available,” but provides an additional qualifier – “feasible.”

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**Comment 12:**

“316(b) does not apply.”

**Response:**

To the extent Commenter asserts that Section 316(b) does not provide the legally applicable standard for this Project, we agree. The appropriate standard is Water Code Section 13142.5(b). The Minimization Plan directly addresses this standard and assures the Project complies with the governing statutory standard.

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**Comment 13:**

“So the question we ask ourselves, why is Poseidon applying 316(b) standard, or language regarding impacts instead of intake when we all know that 13142.5 is the applicable standard.”

**Response:**

The Minimization Plan does not attempt to invoke the 316(b) standard; as explained in Response to Comment 8, the Plan reduces impingement and entrainment. Of course, since the Commenter offers no meaningful distinction between “adverse impacts” and “intake and mortality” for the purposes of this Project, this criticism is without substantive merit.

Poseidon agrees that 316(b) does not provide the legally applicable standard for this Project. The appropriate standard is Water Code Section 13142.5(b). The Minimization Plan directly addresses this standard and assures a Project in compliance therewith.

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**Comment 14:**

“[T]he problem is that liberal construction of 316(b) no longer exists. The idea that a technology forcing statute in the Clean Water Act could be read to allow you to have the impact and then go mitigate elsewhere, it’s been turned on its head by the RiverKeeper case.”

**Response:**

This comment is non-sensical. Poseidon agrees that the 316(b) does not provide the legally applicable standard for the Project; *Riverkeeper* interpreted 316(b). To the extent that Commenter is criticizing Poseidon for using mitigation, that criticism is plainly contrary to the law. Section 13142.5(b) specifically calls for the use of feasible mitigation measures. As a factual matter, unlike in *Riverkeeper*, the Minimization Plan does not call for the use of mitigation *in lieu of* or as a technology – the Minimization Plan provides for the use of site, design, technology *and* mitigation measures to minimize the intake and mortality of marine life.

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**Comment 15:**

“Now, we will agree, 316(b) doesn't apply.”

**Response:**

See Response to Comment 12.

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**Comment 16:**

“But the important thing to realize is even using the liberal standard as Poseidon interprets it, the courts have said that doesn't fly.”

**Response:**

See Response to Comment 13.

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**Comment 17:**

“And your own State Water Resources Control Board, in a document last year, or maybe a year and a half ago, the scoping document on once-through cooling addresses there is a very concrete distinction between minimizing intake and minimizing impacts. You have to cross that threshold. You have to do the analysis.”

**Response:**

To the extent Commenter is referring to the scoping document adopted by the Regional Board in March 2008 entitled, “Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling,” it is worth noting that such document dealt with the proposed development of a state policy for water quality control to establish requirements for implementing section 316(b) for existing coastal and estuarine power plants. All agree Section 316(b) does not provide the legally applicable standard for this Project. It also should be noted that a scoping document is not a policy, but a working document that does not necessarily translate into a mandate.

To the extent the Commenter is suggesting that the wrong standard has been or is being applied, see response to Comment 9.

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**Comment 18:**

“Now, we're seeing in our legal briefing, where the Coastal Commission is kind of juggling and trying to say, "Well, we impliedly kind of did this already. “But I ask you, look in your packets, and tell me where you see the minimization of intake spotlighted with respect to site design, technology and mitigation measures.”

**Response:**

The Coastal Commission did a comprehensive analysis of Project-related entrainment before approving the Marine Life Mitigation Plan. This is among the tasks the Regional Board is being asked to do under Section 13142.5(b) when evaluating whether the Minimization Plan provides for the minimization of intake and mortality of marine life.

The Minimization Plan details how all four elements under Section 13142.5(b) – site, design, technology, and mitigation – will be used to minimize intake and mortality.

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**Comment 19:**

“The fact of the matter is it's a more restrictive standard, and it applies before the impact takes place. It just hasn't been addressed. It hasn't been appropriately considered. And until it gets done, it's a fatal flaw that frankly, it is fatal.”

**Response:**

See Response to Comment 9.

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**Comment 20:**

“Remember, all of these power plants, they're doing their mitigation. Look at the Southern California Edison mitigation upon which the Applicant is relying. It's a big off-site mitigation.

It's 30 years after they started operating. Are we going to wait that long to see a successful mitigation? And we don't even know if that's successful, because frankly, it's not fully constructed yet or operational.”

**Response:**

The success of the Southern California Edison’s mitigation for the San Onofre Nuclear Generating Station to which Commenter refers is well documented. The Marine Life Mitigation Plan’s strict performance standards and success criteria were developed during the interagency process at the direction of the Coastal Commission using this successful mitigation project as a model. The determination to adopt such standards as part of the Poseidon’s MLMP was strongly supported by Coastal Commission staff through the MLMP approval process. The success of the Project’s mitigation is assured because Poseidon must comply with these standards, which will be enforced by the Coastal Commission and the Regional Board.

To the extent Commenter is suggesting that the Project will be operating for 30 years before the mitigation site is constructed, that is false. The Project has not yet been constructed, is not currently operating, and is not currently resulting in any intake or mortality of marine life. The proposed wetlands will be designed and implemented as the Project is under construction and will be developed in the early years of plant operation. Further, the mitigation required is sufficient to fully offset impingement and entrainment associated with *stand-alone* operations, even though it is unknown if/when the Project will operate in such a mode.