REGIONAL COMMENT LETTERS

COMMENT 8

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

November 4, 2002

Mr. Ricky Ramos
City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648

Dear Mr. Ramos:

Draft Environmental Impact Report for the Poseidon Seawater Desalination Project

The Metropolitan Water District of Southern California (Metropolitan) has received a copy of the Draft Environmental Impact Report (Draft EIR) for the Poseidon Seawater Desalination Project. The proposed project entails the construction and operation of a 50-million gallons per day seawater desalination facility within the city of Huntington Beach (City). The facility would consist of seawater intake pretreatment facilities, a seawater desalination plant utilizing reverse osmosis technology, product water storage, two pump stations, materials storage tanks, and 42- to 48-inch diameter product water transmission pipelines up to ten miles in length in Huntington Beach and Costa Mesa. The facility would utilize existing seawater intake and outfall pipelines for operations. The proposed desalination facility would be located on seven acres of the existing 22-acre AES Huntington Beach Generating Plant located at 21730 Newland Street, off Pacific Coast Highway. The proposed project includes construction of an underground pump station in a portion of unincorporated Orange County, south of Bonita Canyon Drive, near the eastern border of the city of Newport Beach. a

Both Metropolitan and its member agencies have a responsibility to provide adequate, reliable, high quality water supplies to meet current and projected water demands in Southern California. To that end, alternative water supplies must be explored beyond the additional development of current imported supplies. Over the past several decades, Metropolitan has explored the potential of seawater desalination as a water resource alternative for Southern California. More recently, Metropolitan's Board of Directors adopted policy principles in February 2001, which define a strategy for the development of brackish and seawater desalination. These policy principles will serve as guidelines in defining the future direction of seawater desalination development through strategic b

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planning processes. This letter contains Metropolitan's views, as a potentially affected public agency, on the scope and content of the Draft EIR. General comments are contained within the following paragraphs; specific comments to the Draft EIR are contained within a separate section following the general comments.

Our review of the Draft EIR indicates that Metropolitan has no facilities in the vicinity of the proposed desalination plant. However, Metropolitan owns and operates facilities in the vicinity of the off-site proposed underground booster pump station location. The Irvine Cross Feeder and the East Orange County Feeder No. 2 are within the proposed location for the underground booster pump station. The underground booster pump station is proposed to be located at the convergence of the East Orange County Feeder No. 2 and the Irvine Cross Feeder. According to the Draft EIR, this proposed location is within the Orange County Resource Preservation Easement. The booster pump station is proposed to connect to Metropolitan's Service Connection OC-44 of the East Orange County Feeder No. 2, which is owned and operated by Metropolitan. b

Metropolitan is concerned with potential impacts to the East Orange County Feeder No. 2, the Irvine Cross Feeder, and Service Connection OC-44 as a result of the construction of the proposed booster pump station. Metropolitan requests that the City consider Metropolitan's facilities in its project planning and identify potential impacts to these facilities as a result of project implementation. Service Connection OC-44 is owned and operated by Metropolitan and, therefore, coordination with Metropolitan should occur prior to project implementation. c

Further, Metropolitan requests that the City address operational impacts and mitigation measures, if any, related to the introduction of desalinated seawater into Metropolitan's regional distribution system. More specifically, Metropolitan recommends that the City conduct a hydraulic analysis that supports the operational feasibility of connecting to Service Connection OC-44, the East Orange County Feeder No. 2, and the Irvine Cross Feeder. Based on preliminary evaluation of the proposed introduction of desalinated seawater into Metropolitan's regional distribution system, hydraulic conditions would exceed the design gradients of the Irvine Cross Feeder and the reach from Service Connection OC-44 turnout to Coastal Junction Pressure Control Structure at the East Orange County Feeder No.2. d

In order to avoid potential conflicts with Metropolitan's rights-of-way and because the booster pump station is proposed to connect to Service Connection OC-44, we require that design plans for any activity in the area of Metropolitan's pipelines or facilities be submitted for our review and written approval. In addition, Metropolitan must also be allowed to maintain its right-of-way and access to our facilities at all times in order to repair and maintain the current condition of those facilities.

The City may obtain detailed prints of drawings of Metropolitan's pipelines and rights-of-way by calling Metropolitan's Substructures Information Line at (213) 217-6564. To assist the City in preparing plans that are compatible with Metropolitan's facilities and easements, we have enclosed a copy of the "Guidelines for Developments in the Area of Facilities, Fee Properties, and/or Easements of The Metropolitan Water District of Southern California." Please note that all submitted designs or plans must clearly identify Metropolitan's facilities and rights-of-way. e

Metropolitan believes that the general discussion of seawater desalination in the Draft EIR should convey the message that desalination is necessary to ensure future water supply reliability. In addition, Metropolitan requests that an expanded discussion of water quality impacts and benefits, as a result of the seawater desalination project, be added to the Draft EIR. f

Metropolitan does not believe that the issue of potential water quality impacts of blending desalinated water supplies with imported water supplies has been addressed adequately. It is unclear how backwash solids will be treated prior to discharge. The chemicals ferric chloride and polymer were described to treat the influent water, however, it is not clear how residual solids would be removed. Page 4.3-9 describes clarifiers, but these clarifiers are not described in the project description or on schematics (note Exhibit No. 6). An expanded discussion is necessary.

Metropolitan requests that the effect of blending water sources with differing temperatures be discussed in the Draft EIR. The report should also demonstrate that blending desalted water with other sources produces an aesthetically acceptable end product. Additionally, the report should also demonstrate that the delivered water must be acceptable to all downstream users for its aesthetic qualities, temperature, and all regulated and unregulated constituents. It appears that few of the downstream users have been consulted in this regard. g

Specific Comments:

Section 3.4 (Project Characteristics), page 3-20: In the Water Delivery subsection, no information was provided to support the statement that delivery reliability would be improved by the proposed project. Delivery reliability depends on numerous factors such as storage, multiple pipelines, and multiple power sources (and backup power supplies). Though the project would add additional treatment capacity, the lack of significant storage may limit the improvement in reliability. Additionally, on page 3-16, the report states that the desalination facility output may be reduced for electricity conservation. It is unknown how this would be implemented. That is, would the power source be interruptible by the electricity provider? Would flow reductions for electricity conservation be offset by other regional water supplies? Adequate storage for a new supply is integral to improving reliability. h

Section 3.5 (Project Needs and Objectives), page 3-20, 2nd paragraph, 1st sentence: The phrase "(except in times of extreme drought)" implies that there were numerous occasions where the imported water system did not meet all of the region's supplemental water supply needs. However, March 1991 to March 1992 was the only one-year period that all of the region's supplement water supply needs were not met. This was the last year of a six-year drought. Metropolitan requests that this statement be revised to more accurately reflect that there was only one year where all of the region's supplemental water supply needs were not met. i

Section 3.5 (Project Needs and Objectives), page 3-21, 2nd paragraph, 1st sentence: Revise this sentence to read, "Solutions to potential water shortage and reliability problems include water management programs on imported water systems as well as an increased reliance on many different sources of water supply and a continued emphasis on water conservation through implementation of State-approved Best Management Practices (BMPs)." j

Section 3.5 (Project Needs and Objectives), page 3-21, 2nd paragraph, last sentence: No offset is needed according to Metropolitan's plan. Additional supplies are necessary to accommodate expected increases in population and economic activity. A report on Metropolitan's Water Supplies, dated February 11, 2002 is provided for your information. k

Section 3.5 (Project Needs and Objectives), page 3-21, 3rd paragraph, 5th sentence: Revise the fifth sentence to read, "Depending upon technological advancements and economic constraints, the IRP projected that as much as 800,000 acre feet of recycled water could be made available to the region by year 2020." l

Section 3.5 (Project Needs and Objectives), page 3-21, 3rd paragraph, 6th sentence: Revise the sixth sentence to read, "Recycled water projects will certainly be relied upon to help meet projected growth in the region. m

Section 3.5 (Project Needs and Objectives), page 3-21, 4th paragraph, 2nd sentence: Revise the second sentence to read, "Consequently, seawater desalination was also one of several potential resource options identified in the 1996 IRP." n

Section 3.5 (Project Needs and Objectives), page 3-21, 4th paragraph, 4th sentence: Revise the fourth sentence to read "The IRP stated that based on feasibility studies on potential projects, about 200,000 acre-feet per year (of desalinated ocean water) could be developed by 2010 (p.3-12)." o

Section 3.5 (Project Needs and Objectives), page 3-21, 4th paragraph, 5th sentence: Revise the fifth sentence to read, "The proposed Poseidon Seawater Desalination Project represents an opportunity to develop approximately 56,000 acre-feet per year, or approximately one-fourth of the potential for seawater desalination development identified by the 1996 IRP." p

Section 3.5 (Project Needs and Objectives), page 3-22, 1st paragraph, last sentence: Metropolitan disagrees with the statement, "In general, anticipated statewide shortages can be expected to translate to equivalent local and regional shortages, with similar economic and environmental effects." Senate Bill (SB) 221 and SB 610 require demonstration of water supply reliability prior to development. Revise the text to include the statement referenced above and include the information provided in the comment regarding SB 221 and 610. q

Section 3.5 (Project Needs and Objectives), page 3-23, Table 3-2: Table 3-2 does not include planned projects and Metropolitan does not believe that this table should be used as the basis for developing conclusions related to future water supply needs. Metropolitan requests that Table 3-2 and the paragraph on page 3-22 that references the table be deleted. r

Section 3.7 (Agreement, Permits, and Approvals Required), page 3-25: Add Metropolitan as a responsible agency for access to its rights-of-way. s

Section 4.6 (Public Services and Utilities), page 4.6-11: In the Water Compatibility subsection, the report states, "...MWD water would most likely have a slightly higher level of organic carbon content and disinfection by-products...," but offers no evidence for this statement. Metropolitan requests supporting evidence. t

Section 4.6 (Public Services and Utilities), Table 4.6-1, pages 4.6-12 – 4.6-16: Table 4.6-1 describes product water qualities from the proposed project and other sources. Certain constituents such as chloride and sodium are substantially greater than from other sources. (Bromide would also be greater, though it in not described in this table). Though chloride, sodium, and bromide do not have direct public health significance, their impact on either reuse (basin-wide chloride objectives) or the formation of disinfection by-products (bromide) should be explored. u

Section 4.6 (Public Services and Utilities), page 4.6-17: In the Water Compatibility subsection, the report states, "Impacts in regards to water compatibility are not anticipated to be significant." No data or reports were described to support this statement. Proposed bench- and pilot-scale studies completed during the design phase may be too late to adequately address concerns regarding water compatibility. The compatibility issue must be further investigated. v

Section 4.6 (Public Services and Utilities), page 4.6-17: In the first sentence of the Water Quality subsection, the report states, "The final product water will be disinfected at the proposed desalination facility with free chlorine using sodium hypochlorite to meet the Department of Health Services (DHS) treatment technique requirements for potable water disinfection of a surface water source." More information is needed on this process. For example, what are the expected disinfection by-products formed by this process? How will chlorine residual be measured, particularly in the presence of relatively high (~0.5 mg/L) bromide concentrations? [Chlorination of water with high bromide results in the formation of bromine, which may complicate the measurement of and disinfection by free chlorine]. w

We appreciate the opportunity to provide input to your planning process and we look forward to receiving future environmental documentation on this project. If we can be of further assistance, please contact me at (213) 217-6364.] X

Very truly yours,

Marty Meisler
Manager, Environmental Planning Team

JAH/rdl/ly
(Public Folders/EPU/Letters/28-OCT-02.doc – Ricky Ramos)

Enclosures: Planning Guidelines
Copy of "Report on Metropolitan's Water Supplies" (February 11, 2002)

Response No. 8

Metropolitan Water District of Southern California
Environmental Planning Team
Marty Meisler, Manager

8a. This paragraph provides a summary of the project description, and does not require a response.

8b. This text provides a description of MWD and its responsibilities, and also provides information regarding MWD facilities within the vicinity of the underground booster pump station site. No response is necessary.

8c. All of the facilities identified in this comment were addressed in the Draft EIR. Coordination with Metropolitan will be a prerequisite to project implementation.

8d. Refer to Response 14d, below.

8e. Design plans will be submitted to Metropolitan as requested. Metropolitan will maintain its right-of-way and access at all times.

8f. The Draft EIR does attempt to convey the message that seawater desalination is necessary to ensure future water supply. Along with conservation, imported water supplies, groundwater supplies and water reuse programs, seawater desalination is an important component in the portfolio of water resources. The Draft EIR has described that many of the potable water system and water quality issues are operational in nature (see Responses 14k and 14l, below, for example) and will be addressed through institutional arrangements with Metropolitan Water District and other interested agencies.

The California Department of Health Services (DHS) granted conceptual approval for the project's desalination facility to use reverse osmosis technology (refer to Exhibit 2 of these responses, *CONDITIONAL CONCEPTUAL APPROVAL LETTER, CALIFORNIA DEPARTMENT OF HEALTH SERVICES*). DHS has been studying this proposal for two years. The DHS conceptual approval means that reverse osmosis and the other proposed treatment processes will effectively remove chemical contaminants and inactivate/remove microorganisms found in the ocean water, thus producing potable water meeting all drinking water quality standards. Final approval is granted by DHS through the issuance of a water supply permit allowing construction of the plant, its operation and delivery of potable water to the participating water suppliers in the area.

Monitoring conducted over the past year has demonstrated that chemicals regulated in drinking water do not exceed respective primary drinking water standards in the ocean water proposed to supply the desalination plant intake. As demonstrated in the Draft EIR, projected levels of regulated chemicals in the desalinated water will be below respective drinking water standards.

A major benefit of using ocean water as the source of drinking water from a water quality perspective is that it is already cleaner than most surface water and groundwater sources. Surface waters are impacted by controlled and uncontrolled discharges, such as industrial/agricultural uses and urban runoff. Groundwater sources may be contaminated with industrial chemicals or have higher levels of naturally-occurring toxins than ocean water, such as inorganic arsenic or hexavalent chromium. Another water

quality benefit as a result of the seawater desalination project concerns the reverse osmosis process proposed for the plant. Reverse osmosis is much more effective in removing chemical and biological constituents than conventional water filtration. In contrast, most groundwater sources have no form of treatment except for residual chlorination.

8g. The issuance of a permit by DHS for the desalination plant will depend on a demonstration that the plant can be operated in a manner consistent with regulatory requirements and that the quality of the product water complies with all the relevant standards governing domestic water supply as specified in Title 22 of the California Code of Regulations. These water quality standards include both health-based and aesthetic considerations in the form of primary (health-based) and secondary (aesthetic) standards. The project applicant will demonstrate through bench-scale and pilot-scale experiments (already underway) that plant operational procedures exist in the form of post-RO stabilization that will allow desalinated water to be blended with imported water and groundwater in such a way as to produce aesthetically acceptable water. The project applicant will consult with the downstream users in regard to the aesthetic issues raised by Metropolitan.

The blending of the product water of the seawater desalination plant with other water supply sources will not result in significant environmental impacts. Table 4.6-1 (pages 4.6-12 through 4.6-16) of the Draft EIR provides a detailed comparison of the desalination plant product water and all other sources of potable water with which the desalinated water will be blended, in addition to the safe drinking water quality standards established by the California Department of Health Services. A review of this table indicates that the desalination plant product water will be in compliance with all applicable regulatory requirements, will be compatible with the product water of all the other sources, and will be of better water quality in terms of total dissolved solids compared to most of the other sources of potable water. The desalination plant product water corrosion control and disinfection practices and chemicals will match those of the other utilities delivering potable water to the same distribution system. Specific detailed information related to product blending and corrosion control methods and strategies will be provided during the DHS water permitting process. Also refer to Response 14l, below.

The residuals generated as a result of the intake seawater pretreatment by coagulation and flocculation will be minimal because of the low turbidity of the intake seawater (typically two to six nephelometric turbidity units [NTU]) and the small dosage of chemicals needed for pretreatment (typically coagulant of 3 to 5 mg/L and polymer of 0.5 to 1.0 mg/L). The intake seawater solids will be removed with the waste filter backwash.

Under the proposed primary waste filter backwash handling alternative (Backwash Handling Alternative 1), the waste filter backwash will be conveyed to the ocean after blending with the desalination plant concentrate and the power plant cooling water. The total suspended solids (TSS) concentration of this blended discharge will be well within the limits established by the 2001 California Ocean Plan. The discharge of the blended concentrate and filter backwash water is widely practiced at seawater desalination plants worldwide and has proven to be environmentally safe. Therefore, the Backwash Handling Alternative 1 is the primary alternative proposed for implementation.

The feasibility of Backwash Handling Alternative 1 will be further explored during the NPDES permitting stage of this project. If a further detailed analysis and review indicates that Alternative 1 is not feasible, then the on-site residuals handling alternative

(Backwash Handling Alternative 2) will be constructed. This alternative would include treatment of the waste filter backwash residuals by sedimentation and dewatering. Under this backwash handling alternative, the supernatant from the backwash sedimentation basins and the clear liquid stream from the dewatering system would be discharged through the power plant outfall. The dewatered filter backwash residuals would be disposed off-site to a sanitary landfill.

The waste filter backwash clarifiers described on page 4.3-9 of the DEIR ("Waste Filter Backwash Clarifiers" section) are a part of the more elaborate Backwash Handling Alternative 2. If such clarifiers are constructed, they would be designed for combined treatment of filter backwash and plant site stormwater runoff.

The second stormwater treatment method, described in "Sedimentation in Separate Clarifiers" section, page 4.3-9 of the DEIR, was introduced to indicate how the stormwater runoff will be treated if the Backwash Handling Alternative 1 is implemented and waste filter backwash clarifiers are not available. As described on page 4.3-9, the plant stormwater will be treated in a separate clarifier dedicated for this purpose only.

The waste filter backwash clarifiers are not presented on Exhibit 6 of the DEIR, because they are not a part of the proposed prime treatment alternative (Backwash Handling Alternative 1). As described above and shown on Exhibit 6, Flow Stream 5 (Filter Backwash Water) will be conveyed to the desalination plant effluent outfall, blended with Flow Stream 4 (Concentrated Seawater) and discharged into the power plant cooling water outfall. The clarifiers for stormwater sedimentation are not a part of the desalination process flow treatment and therefore are not shown on Exhibit 6.

Exhibits 3, 6, 7 and 8 indicate where the solids handling and associated chemical dosing system will be located, if the waste filter backwash has to be treated prior to discharge to accommodate Backwash Handling Alternative 2. This area is also designated for the construction of clarifiers for stormwater treatment under Backwash Handling Alternative 1.

8h. As explained in the sentence on page 3-20 of the Draft EIR, the increase in delivery reliability for the regional system that results from the project is solely due to the fact that the project introduces a new source of supplemental water supply located in Southern California and is drought proof. Variability in sources of supply is a factor in delivery reliability. In addition, the desalination project design will allow maximizing electricity conservation by the following three operational practices:

1. Reducing Plant Production Capacity During Off-peak Hours: The desalination plant will be designed with provisions to run with only 10 out of its 13 reverse osmosis (RO) trains during the eight peak power consumption hours of the day and will have all 13 RO trains in operation during the 16 off-peak hours of the day. The design provisions that make this possible are: construction of one additional RO train and a product water storage capacity of 10 million gallons. During the off-peak hours, the desalination plant will produce 20 percent extra flow (i.e., 10 million gallons minus 20 percent of 50 million gallons per day = 10 million gallons) which will be stored in the product water storage tank and pumped into the distribution system during peak hours. This peak/off-peak operations schedule will allow 20 percent power conservation.

2. Using State-Of-The Art Energy Recovery Devices: The desalination plant will be equipped with energy recovery equipment which will allow reusing at least 30

percent of the energy introduced with the high-pressure pumps of the RO system.

3. The desalination plant will use warm power plant cooling water to reduce the overall power demand with at least 10 percent. The beneficial reuse of the thermal energy in the power plant discharge will result in significant conservation of power.

The effect of the power conservation measures listed above is additive: i.e. the total amount of power conserved will be approximately 60 percent (20 percent from off-peak use + 30 percent from energy recovery + 10 percent from use of warm power plant water) as compared to conventional desalination plant designs.

8i. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8j. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8k. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8l. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8m. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8n. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8o. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8p. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8q. Comment noted. No revision of the original sentence is necessary. The sentence: "Senate Bill (SB) 221 and SB 610 require demonstration of water supply reliability prior to development" has been added, as shown in Section 3.0, *ERRATA*.

8r. Comment noted. The table is included because it is the best information available from the Department of Water Resources to date.

8s. Section 3.0, *PROJECT DESCRIPTION,* of the EIR has been amended to reflect this change. Refer to Section 3.0, *ERRATA*.

8t. Total Organic Carbon (TOC) data have been collected for one year from samples representative of the quality of the proposed desalination plant intake water. The highest level of detected TOC was 0.7 mg/l. Based on these data, it is now anticipated that the desalination plant product water will contain less than 0.5 mg/l of TOC before chlorination. Historically, the TOC leaving Metropolitan's Diemer plant exceeds two mg/l. Based on the difference in TOC levels, it is difficult to come up with a scenario that

would predict higher levels of disinfection byproducts (DBPs) in the chlorinated, desalinated water compared to Metropolitan's treated imported supply. Numerous accounts in the literature confirm that seawater treated by RO and disinfected with free chlorine does not form appreciable levels of DBPs, and rarely greater than the 40– 50 micrograms per liter of total trihalomethanes leaving the Diemer plant. The same is true for the other class of DBPs regulated in drinking water, called haloacetic acids. Further control of DBP formation will include the addition of ammonia after chlorine contact to form a combined disinfectant residual, the same process Metropolitan uses to control additional DBP formation in their distribution system.

8u. Comment noted. See Responses 14h and 14i, below.

8v. Bench- and pilot-scale studies are currently underway and should be completed well in advance of preliminary design.

8w. Operational issues pertaining to DBPs are currently being investigated both at the bench- and pilot-scale level. Treatment techniques directly related to the operation of the plant disinfection process fall under the regulatory requirements of the applicable surface water treatment and disinfection/disinfection byproduct rules.

8x. This paragraph provides contact information for the agency, and does not require a response.

State of California—Health and Human Services Agency
Department of Health Services

California Department of Health Services
DIANA M. BONTÁ, R.N., Dr. P.H.
Director

GRAY DAVIS
Governor

August 6, 2002

Ms. Josie McKinley, Project Manager
Poseidon Resources Corporation
3760 Kilroy Airport Way, Suite 260
Long Beach, CA 90806

Dear Ms. McKinley:

SYSTEM NO. 3010110 - ORANGE COUNTY DESALINATION PROJECT

This letter is in response to your letter dated July 10, 2002, and our subsequent meeting to discuss the letter and inspect the proposed site at Huntington Beach. Your letter was in response to our May 10, 2002 letter in which we raised several questions regarding the project. The proposed Orange County Ocean Desalination Plant will be located at the AES Huntington Beach, L.L.C. power plant. We have reviewed the supporting technical material included in your July 10 letter further supporting the Report titled "Poseidon Resources, Orange County Desalination Plant: Watershed Sanitary Survey Report" prepared by Archibald & Wallberg Consultants.

Conditional conceptual approval is hereby granted for the Orange County Ocean Desalination Plant at Huntington Beach. The conditional conceptual approval includes the following treatment process: chemical coagulation, flocculation, filtration, reverse osmosis, free chlorine contact time and chloramines. The entire treatment process will be granted 3-log removal of Giardia and 4-log removal of viruses. Following the Department's policy on multibarrier treatment, the Orange County Ocean Desalination Plant will need to provide 0.5-log inactivation of Giardia and 2-log inactivation of viruses. Final approval will be granted through the issuance of a water supply permit allowing construction of the plant, its operation and delivery of potable water to the participating water suppliers in the area. The Domestic Water Supply Permit application needs to be submitted to our Santa Ana District office for processing prior to construction. The following items were addressed in your letter:

1. Poseidon indicates the toxins associated with potential red tide/algal bloom episode(s) in the waters around the plant intake should not pass through the various treatment processes. The information you submitted indicates that the proposed treatment process (chemical coagulation, flocculation, filtration, reverse osmosis and free chlorine) will remove the algae particles and also the biotoxins from the water. Your review also indicates there are no cited

reports of toxins problems associated with ocean water desalination treatment facilities. You also indicate if a problem were to occur the treatment plant could be shut down. Parameters need to be developed which would trigger a plant shutdown. We will require that a monitoring program be developed by Poseidon if it is shown to be a problem. Based on the information contained in your letter we do not expect this issue to be a major obstacle. We however request that a more detailed report be submitted validating your conclusions. We also feel a study needs to be conducted which verifies the biotoxin is removed by the reverse osmosis and disinfection treatment processes.

2. The additional information submitted indicates the pretreatment filtration process to be provided ahead of the reverse osmosis membranes is adequate. A modified direct filtration process is described. Flocculation will be provided in a basin and in the pipeline prior to the filters. It has been shown that the reverse osmosis (RO) treatment process does not remove all virus and adequate disinfection (CT and free chlorine along with chloramines) is needed. The process will include about 5 hours of free chlorine contact time. If additional virus removal credit is requested through the treatment plant or reverse osmosis process, a study will need to be conducted.

3. The proposed piping modifications to address the source of bacteria and ammonia in the intake vault must be successful in addressing these contaminants. Follow-up monitoring must document that the source has been permanently removed. If these modifications are not successful in correcting the unidentified source of bacteria and ammonia in the intake, the Department's position concerning the level of treatment needed will be different than that which is outlined in the Sanitary Survey Report. The Department will require 4-log giardia and 5-log virus removal/inactivation if the intake coliform and ammonia levels are not reduced after the modifications are completed.

4. There were recent news releases which indicated the effluent plume may be responsible for some of the Huntington Beach area high beach bacteriological results.. The Orange County Sanitation District (OCSD) is reviewing its 301 waiver to full secondary treatment along with providing disinfection of the wastewater treatment plant's ocean discharge. If it shown to be a source of bacteria, the Department will require 4-log giardia and 5-log virus removal/inactivation for the desalination treatment plant.

5. Poseidon submitted additional information on the complete list of "other chemicals in the bearing cooling water" which are stated as "not toxic to humans", along with the chemicals being adequately diluted in the intake water to the reverse osmosis treatment unit.

6. Poseidon will need to submit a plant operations plan which must adequately address the notification process that is to be used to assure all "heat treatment and non-routine operations or discharges to the cooling water" will result in a plant shut down to prevent these waters from being processed

through the desalination plant. You indicated that the operations plan will adequately address this issue.

7. Poseidon's project team will conduct a study to assure that the disinfection byproducts (DBPs) that will be formed as a result of the water supply from this plant do not interact with DBPs of the water systems receiving the water and result in a shift in the make-up of the regulated DBP constituents causing compliance problems for the systems receiving the water. The study protocol was submitted and is acceptable.

8. The facility will need to be permitted as a Wholesale Domestic Water System. The water utilities receiving the water will need to obtain amended domestic water supply permits. Poseidon will need to apply for a domestic water supply permit pursuant to the Regulations Relating to Domestic Water Systems. This includes the submission of:

    - Information necessary to comply with the Technical, Managerial and Financial (TMF) Capacity requirements,
    - A Water Quality Emergency Notification Plan (ENP),
    - An Engineering Report describing how the proposed new facilities will comply with the treatment, design, performance and reliability provisions of the Surface Water Treatment Rule (SWTR),
    - California Environmental Quality Act (CEQA) clearance information.
    - Plant operations plan.

    Permit provisions for similar projects include but are not limited to:

    - Submittal of plans and specifications for Department approval prior to construction,
    - Compliance with the Surface Water Treatment Rule (SWTR) – including the treated water turbidity, disinfection residuals and CT levels,
    - All water must be treated – no bypassing,
    - Complete water quality analyses conducted by an approved laboratory,
    - Adequate corrosion control,
    - Adequate cross-connection control program,
    - Updated watershed sanitary survey every five years,
    - Mandatory use of ANSI/NSF approved chemicals,
    - Raw water bacteriological monitoring,
    - Certified treatment and distribution operators,

- Submission of monthly operation reports and a report after the first year of operation detailing the effectiveness of the plant's performance, a list of any violations and a list of any needed additions or operational changes.

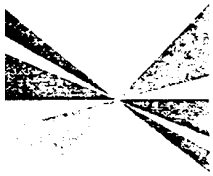
We suggest that you review our website at www.dhs.ca.gov/ps/ddwem which lists the California Drinking Water Program's rules and regulations relating to domestic water systems. If we can be of further assistance, please contact Mr. Frank Hamamura, District Engineer, Santa Ana District at (714) 558-4708.

Sincerely,

John Curphey, P.E., Chief
South Coastal Region
DRINKING WATER FIELD OPERATIONS BRANCH
CALIFORNIA DEPARTMENT OF HEALTH SERVICES

COMMENT 9

OUTHERN CALIFORNIA



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October 30, 2002

Mr. Rickey Ramos
City of Huntington Beach
Planning Department
2000 Main Street
Huntington Beach, CA 92648

RE: **Comments on the Draft Environmental Impact Report for the Poseidon Seawater Desalination Project - SCAG No. I 20020495**

Dear Mr. Ramos:

Thank you for submitting the **Draft Environmental Impact Report for the Poseidon Seawater Desalination Project** to SCAG for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. a

Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies. If you have any questions regarding the attached comments, please contact me at (213) 236-1867. Thank you.

Sincerely,

JEFFREY M. SMITH, AICP
Senior Regional Planner
Intergovernmental Review

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**COMMENTS ON THE
DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE
POSEIDON SEAWATER DESALINATION PROJECT
SCAG NO. I 20020495**

PROJECT DESCRIPTION

The proposed Project considers the development and implementation of a 50 million gallon per day seawater desalination facility within the City of Huntington Beach. The proposed Project is located on a 3.9 acres portion of the 22-acre AES Huntington Beach Generating Facility located at 21730 Newland Street. b

INTRODUCTION TO SCAG REVIEW PROCESS

The document that provides the primary reference for SCAG's project review activity is the Regional Comprehensive Plan and Guide (RCPG). The RCPG chapters fall into three categories: core, ancillary, and bridge. The Growth Management (adopted June 1994), Regional Transportation Plan (adopted April 2001), Air Quality (adopted October 1995), Hazardous Waste Management (adopted November 1994), and Water Quality (adopted January 1995) chapters constitute the core chapters. These core chapters respond directly to federal and state planning requirements. The core chapters constitute the base on which local governments ensure consistency of their plans with applicable regional plans under CEQA. The Air Quality and Growth Management chapters contain both core and ancillary policies, which are differentiated in the comment portion of this letter. The Regional Transportation Plan (RTP) constitutes the region's Transportation Plan. The RTP policies are incorporated into the RCPG. c

Ancillary chapters are those on the Economy, Housing, Human Resources and Services, Finance, Open Space and Conservation, Water Resources, Energy, and Integrated Solid Waste Management. These chapters address important issues facing the region and may reflect other regional plans. Ancillary chapters, however, do not contain actions or policies required of local government. Hence, they are entirely advisory and establish no new mandates or policies for the region.

Bridge chapters include the Strategy and Implementation chapters, functioning as links between the Core and Ancillary chapters of the RCPG. Each of the applicable policies related to the proposed project are identified by number and reproduced below in italics followed by SCAG staff comments regarding the consistency of the Project with those policies.

SUMMARY OF SCAG STAFF COMMENTS

1. The Draft EIR, in Section 4.4 (Air Quality), provides a discussion of the relationship of the proposed Project to **applicable regional plans** as required by Section 15125 [d] of Guidelines for Implementation of the California Environmental Quality Act. However, the Draft EIR does not provide a discussion of the relationship of the proposed Project to SCAG's regional plan and policies as outlined in our June 5, 2001 letter on the Notice of Preparation for this Project. The Final EIR should address the manner in which the Project is supportive of or detracts from the achievement of SCAG's regional plan and policies. d

2. The Final EIR should address the relationships (consistency with core policies and support of ancillary policies) to SCAG's Regional Comprehensive Plan and Guide, utilizing commentary from the following detailed SCAG staff comments. The response should also discuss any inconsistencies between the proposed project and applicable regional plans. We suggest that you identify the specific policies, by policy number, with a discussion of consistency or support with each policy. e

CONSISTENCY WITH REGIONAL COMPREHENSIVE PLAN AND GUIDE POLICIES

The Growth Management Chapter (GMC) of the Regional Comprehensive Plan and Guide contains a number of policies that are particularly applicable to the Poseidon Seawater Desalination Project.

Core Growth Management Policies

3.03 The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies. f

SCAG staff comments: The Draft EIR, on page 3-24, provides a discussion on project phasing. The proposed Project will be developed in multiple phases over a 24-month period. Infrastructure improvements and services will be implemented concurrently with each phase of development. *The Project is consistent with this* core RCPG policy

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL QUALITY OF LIFE

The Growth Management goals to attain mobility and clean air goals and to develop urban forms that enhance quality of life, that accommodate a diversity of life styles, that preserve open space and natural resources, and that are aesthetically pleasing and preserve the character of communities, enhance the regional strategic goal of maintaining the regional quality of life. The evaluation of the proposed project in relation to the following policies would be intended to provide direction for plan implementation, and does not allude to regional mandates.

3.18 *Encourage planned development in locations least likely to cause adverse environmental impact.*

SCAG staff comments. The Executive Summary Section of the Draft EIR includes Table 1.2, Environmental Summary, which lists environmental impacts of the proposed project and summarizes the types of measures to mitigate the impacts outlined in the Draft EIR. The Project is proposed in a manner that will minimize the environmental impacts. The Project is supportive of this ancillary RCPG policy. f

3.20 *Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.*

SCAG staff comments. The Draft EIR in Section 4.9 (Construction Related Impacts) discusses the Projects' impacts on biological resources, including riparian habitat, sensitive species, and wildlife. Mitigation measures have been recommended to address the identified impacts. The Project is supportive of this ancillary RCPG policy.

3.21 *Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.*

SCAG staff comments. The Draft EIR in Section 4.9 (Construction Related Impacts) identifies potential construction related impacts to cultural resources. Mitigation measures recommended include surveying, monitoring and recovery of resources during construction. The Project is supportive of this ancillary RCPG policy.

3.22 Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.

SCAG staff comments. The Draft EIR in Section 4.2 (Geology, Soils and Seismicity) identifies potential impacts related to erosion, topography, soils/geology, faulting and liquefaction. Mitigation measures are recommended to address identified impacts through the implementation of building codes and specific requirements and/or project design. The Project is supportive of this ancillary RCPG policy.

3.23 Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans

SCAG staff comments. See SCAG staff comments on policies 3.18, 3.20 and 3.22. The Draft EIR, in Section 4.5 (Noise) identifies potential short and long-term, and mobile sources impacts related to construction and operations noises. Mitigation measures included in this section and in Section 4.9 (Construction Related Impacts) have been recommended to address the identified impacts. The Project is supportive of this ancillary RCPG policy. f

AIR QUALITY CHAPTER CORE ACTIONS

The **Air Quality Chapter (AQC)** core actions that are generally applicable to the Project are as follows:

5.11 Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.

SCAG staff comments. The Draft PEIR, in Section 4.4 (Air Quality), discusses regional, local and Project air quality relationships and regulatory requirements. Mitigation measures are recommended to address emission impacts related to construction and operations. The Project is consistent with this core RCPG policy.

CONCLUSIONS AND RECOMMENDATIONS:

1. As noted in the staff comments, the Draft Environmental Impact Report for the Poseidon Seawater Desalination Project is consistent with or supports some of the core and ancillary policies in the Regional Comprehensive Plan and Guide. g

2. As noted in the General Staff Comments, the Final Program Environmental Impact Report should address the relationships (consistency with core policies and support of ancillary policies) to SCAG's Regional Comprehensive Plan and Guide and discuss any inconsistencies between the proposed project and applicable regional plans. h

3. All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA. i

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Roles and Authorities

THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS (SCAG) is a ***Joint Powers Agency*** established under California Government Code Section 6502 et seq. Under federal and state law, SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). SCAG's mandated roles and responsibilities include the following:

SCAG is designated by the federal government as the Region's ***Metropolitan Planning Organization*** and mandated to maintain a continuing, cooperative, and comprehensive transportation planning process resulting in a Regional Transportation Plan and a Regional Transportation Improvement Program pursuant to 23 U.S.C. '134, 49 U.S.C. '5301 et seq., 23 C.F.R. '450, and 49 C.F.R. '613. SCAG is also the designated ***Regional Transportation Planning Agency***, and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080 and 65082 respectively.

SCAG is responsible for developing the demographic projections and the integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the ***South Coast Air Quality Management Plan***, pursuant to California Health and Safety Code Section 40460(b)-(c). SCAG is also designated under 42 U.S.C. '7504(a) as a ***Co-Lead Agency*** for air quality planning for the Central Coast and Southeast Desert Air Basin District.

SCAG is responsible under the Federal Clean Air Act for determining ***Conformity*** of Projects, Plans and Programs to the State Implementation Plan, pursuant to 42 U.S.C. '7506.

Pursuant to California Government Code Section 65089.2, SCAG is responsible for ***reviewing all Congestion Management Plans (CMPs) for consistency with regional transportation plans*** required by Section 65080 of the Government Code. SCAG must also evaluate the consistency and compatibility of such programs within the region.

SCAG is the authorized regional agency for ***Inter-Governmental Review*** of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12,372 (replacing A-95 Review).

SCAG reviews, pursuant to Public Resources Code Sections 21083 and 21087, Environmental Impacts Reports of projects of regional significance for consistency with regional plans [California Environmental Quality Act Guidelines Sections 15206 and 15125(b)].

Pursuant to 33 U.S.C. '1288(a)(2) (Section 208 of the Federal Water Pollution Control Act), SCAG is the authorized ***Areawide Waste Treatment Management Planning Agency***.

SCAG is responsible for preparation of the ***Regional Housing Needs Assessment***, pursuant to California Government Code Section 65584(a).

SCAG is responsible (with the Association of Bay Area Governments, the Sacramento Area Council of Governments, and the Association of Monterey Bay Area Governments) for preparing the ***Southern California Hazardous Waste Management Plan*** pursuant to California Health and Safety Code Section 25135.3.

Revised July 2001

Response No. 9

Southern California Association of Governments
Intergovernmental Review
Jeffrey M. Smith, AICP, Senior Regional Planner

9a. This text provides a description of SCAG's duties and responsibilities, and does not warrant a response.

9b. This paragraph provides a summary of the project description, and does not require a response.

9c. A summary of the SCAG review process is provided. No response is necessary.

9d. The proposed project's relationship to SCAG's Regional Comprehensive Plan and Guide (RCPG) is shown below in Response 9f.

9e. Refer to Response 9f, below.

9f. The recommended policies and corresponding discussion of the proposed project's relationship to the RCPG have been incorporated into the Draft EIR as shown in Section 3.0, *ERRATA.*

9g. Comment noted. No response is necessary.

9h. The proposed project's relationship to SCAG's RCPG has been analyzed and added to the Draft EIR, as shown in Section 3.0, *ERRATA.*

9i. Comment noted. All such mitigation measures have been incorporated into the Draft EIR.

9j. This text provides information regarding SCAG's roles and authorities, and does not warrant a response.