FEDERAL COMMENT LETTERS

COMMENT 1

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

City of Huntington Beach
MAY 17 2005

MAY 16 2005

F/SWR4:MEM

Mr. Ricky Ramos
City of Huntington Beach Planning Department
2000 Main Street
Huntington Beach, California 92648

Dear Mr. Ramos:

Thank you for the opportunity to comment on the recirculated Draft Environmental Impact Report (DEIR) for the proposed seawater desalination facility at the Huntington Beach Generating Station.

The project proponent, Poseidon Resources Corporation, is proposing to construct a 50-million gallon per day (mgd) seawater desalination facility within the City of Huntington Beach. The facility will be collocated with the Huntington Beach Generating Station (HBGS). The power facility currently utilizes a seawater intake for once-through cooling, and discharges warmed seawater to the ocean. The HGBS is currently permitted to withdraw up to 516 mgd of seawater, although the historical maximum has been 507 mgd, and average withdrawals have been much less (265 mgd from 2002 to 2003). The desalination facility will withdraw approximately 100 mgd from the cooling water discharge system as source water. Using a reverse osmosis process, the proposed facility will produce approximately 50 mgd of fresh drinking water, and 50 mgd of concentrated brine waste water. This waste water would be returned to the HBGS cooling water discharge stream, diluted and discharged to the ocean. No modifications to the existing intake or discharge structures are proposed. a

Endangered Species Act

The proposed project may affect species listed under the Endangered Species Act (ESA). Listed sea turtle species under the jurisdiction of NOAA's National Marine Fisheries Service (NMFS) that may be found in the vicinity of the project area include: green turtles (*Chelonia mydas*), loggerhead turtles (*Caretta caretta*), leatherback turtles (*Dermochelys coriacea*), and olive ridley turtles (*Lepidochelys olivacea*). The mechanism by which the project may affect these species is through possible entrainment at the intake structure. No sea turtles have been reported to be entrained at the Huntington Beach Generating Station; however, other coastal power plants in California have reported entrainments of green, loggerhead, and leatherback sea turtles. b

Under the ESA it is illegal to "take" a listed species without a permit. The term "take" is defined as harassing, harming, hunting, pursuing, shooting, wounding, killing, trapping,

capturing, or collecting a listed species. NMFS is currently processing an application submitted by the HGBS for the incidental taking of green, loggerhead, leatherback, and olive ridley turtles pursuant to section 10 of the ESA. The Poseidon Resources Corporation may want to work with HGBS to apply for a combined section 10 permit for the incidental take of listed species entrained in the intake structure. In processing the permit, NMFS will analyze the adverse effects of entrainment on sea turtle populations. Until this permit is processed, NMFS will continue to monitor the entrainment of listed species at the HBGS through the NMFS stranding network.

b

Marine Mammal Protection Act

Many species of marine mammals may be found within the vicinity of the HBGS. However, the only species that are likely to be affected by the proposed action include the California sea lion (*Zalophus californianus californianus*) and the Pacific harbor seal (*Phoca vitulina richardsi*). Small numbers of California sea lions have been entrained in the HBGS intake structure. Although reports indicate that harbor seals have not been entrained at this location, entrainment of harbor seals has been reported at other California coastal power plants and may become entrained at this facility.

Seals and sea lions are protected under the Marine Mammal Protection Act (MMPA). Under the MMPA, it is illegal to "take" a marine mammal without prior authorization from NMFS. "Take" is defined as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill any marine mammal. "Harassment" is defined as any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal in the wild, or has the potential to disturb a marine mammal in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering. The HBGS has submitted an application for an incidental small take permit under section 101(a)(5)(A) of the MMPA for the take of marine mammals during routine operations of the facility. NMFS is currently processing the permit application. The Poseidon Resources Corporation may want to work with HGBS to apply for a combined small take permit for the incidental take of marine mammals entrained in the intake structure. Until the permit is issued, the number of marine mammals entrained at this location will be monitored through the NMFS stranding network. In the event of a stranding or entrainment of a marine mammal or sea turtle on HBGS property, HGBS staff should contact Mr. Joe Cordaro, the NMFS stranding coordinator at (562) 980-4017.

c

Magnuson-Stevens Fishery Conservation and Management Act

The proposed project is located within an area identified as Essential Fish Habitat (EFH) for various life stages of fish species managed under the Coastal Pelagics and the Pacific Groundfish Fishery Management Plans, as defined in Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). NMFS has evaluated the proposed project for potential adverse effects to EFH through impingement and entrainment at seawater intakes, and from discharges associated with power generating facilities and desalination plants. NMFS expects impingement and entrainment of MSFCMA-managed

d

species and EFH prey species with total mortality of entrained eggs and larvae. Discharges of concentrated brine are expected to adversely impact benthic communities in the vicinity of the outfall. d

Specific comments on the DEIR are provided in the attached Enclosure. Your consideration of our comments and recommendations is appreciated. Should you have any questions, or wish to begin coordination on this project to address our concerns in a timely manner, please contact Bob Hoffman at 562-980-4043 or via email at BobHoffman@noaa.gov. e

Sincerely,

Valerie L. Chambers

Valerie L. Chambers
Assistant Regional Administrator
for Habitat Conservation

Enclosure

cc: William Paznokas, California Department of Fish and Game
David Woelfel, Santa Ana Regional Water Quality Control Board
David Vilas, MBC Applied Environmental Sciences

Enclosure

NMFS has reviewed the DEIR and provides the following comments and recommendations.

1. NMFS supports the development of desalination facilities that will reduce impacts to trust resources from water development or ongoing diversions, and strongly recommends alternatives to large volume seawater intakes. Subsurface intakes avoid and reduce the impacts associated with impingement and entrainment. These methods have also been recommended for desalination facilities by the California Coastal Commission (CCC 2004). At least six currently proposed desalination facilities in California are considering using beach wells (CCC 2004). The DEIR states these alternative intake methods would be infeasible due to the volume required to meet the project purpose, and the significant cost and land requirements (Section 7.0). While it is clear that subsurface alternatives capable of delivering 100 mgd would have substantial environmental and economic impacts, NMFS recommends that the project proponent conduct a cost-benefit analysis that would address the potential ecological benefits of other source water supply options, including decommissioning the existing intake, and account for adverse impacts to EFH. f

2. The DEIR does not adequately address the adverse effects of operating the existing intake structure. The proposal to utilize the existing power facility intake maintains the current unacceptable level of impingement and entrainment. The recent AES Huntington Beach L.L.C. Generating Station Entrainment and Impingement Study Draft Final Report indicates that entrainment at this facility is significant, and contributes to adverse cumulative effects in the Southern California Bight (MBC Applied Environmental Sciences and Tenera Environmental 2005).

   The HBGS, like the majority of the California power plants, is in the process of renewing operating permits to meet new Clean Water Act section 316(b) regulations (EPA 2004). Section 316(b) requires these facilities to reduce fish and shellfish impingement mortality by 80 %to 90%, and to reduce their entrainment of fish and shellfish by 60% to 90% from uncontrolled levels. As a collocated facility proposing to depend on the existing HBGS intake, the Poseidon Resources Corporation has taken steps to ensure the transfer of ownership of the intake structure should the power facility cease operations. The DEIR does not present any contingency plan for the decommissioning of the intake structure, or offer any minimization measures or mitigation for impacts associated with its continued use. The project proponent should conduct analysis for scenarios where the utilization of once-through cooling systems is discontinued. The DEIR does not address the contribution that the Poseidon Resources Corporation will make to avoid, minimize, or mitigate for the adverse effects of impingement and entrainment at their intake. NMFS will work with Federal, State, and local g

authorities, and project proponents to develop avoidance, minimization and mitigation measures. g

3. The DEIR (section 3.4) states that the project is expected to provide a new source to offset imported water supplies that are being diverted to environmental water needs in Northern California, the Mono Lake area, and the Colorado River. To the degree that the proposed facility production exceeds local demands, water dedicated to these environmental needs could become partial mitigation for the adverse effects of the project. The DEIR does not describe how project proponents will ensure that these waters will be retained in their native waterbodies. h

4. The DEIR does not adequately address impingement and entrainment at the proposed increased intake levels, or offer any minimization or mitigation measures for adverse impacts expected from increasing the intake volume. According to Appendix S of the DEIR, the 20-year operational history suggests that much lower intake flows of approximately 127 mgd or 254 mgd, each account for about 50% of the power facility's operational time. The average withdrawal from 2002 to 2003 was 265 mgd. If operation of the desalination facility increased the volume of seawater taken in to the maximum permitted level of 516 mgd, impingement and entrainment would also increase. The DEIR (page 5.10-40 and T-7) evaluated entrainment at intake flows of 127 mgd, not at the actual average or proposed intake levels. i

   Furthermore, the DEIR evaluated entrainment using an observed mortality of less than 100%. Based on their review of available studies, the U.S. Environmental Protection Agency assumes that there is zero survival of organisms entrained in cooling water intake structures, though some industry stakeholders dispute their assumption (EPA 2004). Due to the mechanical, pressure, temperature, and chemical conditions likely to be experienced by entrained organisms during operations, NMFS makes the same assumption for other facilities using flow through systems (Thompson 2004). j

5. The DEIR does not adequately address the potential effects of the discharge on benthic communities. The most concentrated discharge of 55.4 ppt (about 60% higher than the local mean salinity of 33.5 ppt) would occur at low intake volumes, as when only one power generation unit was operating. As noted above, these low intake flows account for about 50% of the power facility's operational time. Models suggest that under these conditions, high salinities in the water column would occur near the discharge outfall, and dissipate to within approximately 10% of ambient levels within approximately 150 feet from the outfall. Salinities within 10% of ambient levels are expected to fall within normal variability, and are not expected to have long-term adverse effects. High salinity levels near the outfall are potentially fatal to fish and other species, however, rapid mixing in the water column is expected to minimize effects on the pelagic community. k

Because concentrated brine discharges are more dense than seawater, persistent saline wedges may form along the bottom. Benthic organisms within the area of higher salinity are expected to be adversely affected. Modification or loss of this habitat by saline discharges may reduce diversity and abundance, and shift the benthic community toward more saline tolerant species. Should this result, this is considered an adverse effect to EFH, and the project proponent should develop a mitigation and monitoring plan to compensate for the loss of this habitat. k

Literature Cited

CCC (California Coastal Commission). 2004. Seawater Desalination and the California Coastal Act. California Coastal Commission. 99 pages. Available at: http://www.coastal.ca.gov/energy/14a-3-2004-desalination.pdf

MBC Applied Environmental Sciences and Tenera Environmental. 2005. AES Huntington Beach L.L.C. Generating Station Entrainment and Impingement Study; Draft Final Report. Prepared for AES Huntington Beach L.L.C. February 2005.

EPA (Environmental Protection Agency). 2004. National Pollutant Discharge Elimination System – Final Regulations To Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities; Final Rule. Federal Register Volume 69, Number 131, pages 41576-41693. July 9, 2004.

Thompson, N.B. 2004. Potential impacts of liquid natural gas processing facilities on fishery organisms in the Gulf of Mexico. NOAA/NMFS Southeast Fisheries Science Center Memorandum. Available at: http://sero.nmfs.noaa.gov/dhc/lng/lng_ws_memo.pdf

l

Response No. 1

United States Department of Commerce
National Oceanic and Atmospheric Administration
Valerie L. Chambers, Assistant Regional Administrator for Habitat Conservation

1a. These introductory paragraphs provide a summary of the project description, and do not require a response.

1b. Comment 1j states that the National Marine Fisheries Service (NMFS) assumes 100 percent mortality of entrained organisms at HBGS due to the mechanical, temperature, pressure, and chemical conditions of the HBGS cooling water system. Since the proposed project would not alter the operations of the HBGS (see pages 3-20 and 3-21 of the DREIR) (i.e. no increase in the volume of HBGS cooling water intake would occur due to project implementation), the desalination project would not result in significant entrainment impacts. Thus, the project would not contribute to the incidental take of sensitive turtle species, and no Section 10 permit for the project is required.

1c. Refer to Response 1b, above.

1d. This comment addresses two NMFS concerns - 1) Entrainment (marine life drawn into the intake HBGS's cooling water intake) and impingement (marine life trapped on the HBGS's filter screens) by HBGS; and 2) potentially adverse effect of elevated salinity on benthic communities within the vicinity of the outfall, and the effect of this on Essential Fish Habitat (EFH).

1) Entrainment and impingement - The DREIR points out that entrainment and impingement are currently permitted for the once-through cooling water system of the HBGS, that the proposed desalination facility does not directly take seawater from the ocean, and that withdrawal of feedwater for desalination is from the HBGS cooling-water discharge and not subject to intake regulation under the Federal Clean Water Act (316b). Further, operation of the desalination facility does not in any way alter HBGS cooling water intake operations.

Appendix T (Intake Effects Assessment) provides a comprehensive analysis of entrainment and impingement by the proposed seawater desalination facility. This study was undertaken to ensure that the DREIR would contain a careful, up-to-date analysis of intake impingement and entrainment at the proposed facility. The assumption of the NPDES 316b permit (which is required for operation of the HBGS cooling water intake system) is that 100% of the entrained organisms do not survive through the HBGS cooling system. However, in response to City of Huntington Beach City Council direction that a certain fraction of the entrained organisms may in fact survive the transit and that the desalination facility would in fact kill these survivors required that additional testing be done so that this issue could be clarified for purposes of the DREIR.

Appendix T models the expected rate of larval loss due to entrainment from the source water attributable to HBGS's cooling water intake system. This was done by comparing the estimated density of larvae in the source water and the number taken in by the cooling water intake. In summary, HBGS cooling intake would reduce the number of larvae in the source water by 0.33% and the proposed desalination facility would, at 127 MGD, diminish source water larval density by an additional 0.02%, which is over 10-times less than the HBGS's effect. This is not a significant effect; particularly in view of the 316b permit assumption of 100% mortality of the organisms entrained by the cooling water intake.

Regarding the species that are entrained, Appendix T shows that six fish taxa and a grouping of unidentified larvae of other fish species comprise 97 percent of all the fish larvae present in the cooling water flows. These taxa include gobies, blennies, croakers, northern anchovy, garibaldi, unidentified fish larvae and silversides. Larva of species having high commercial and recreational importance and having relevance therefore to maintenance of EFH (e.g., California halibut and rockfishes) are very uncommon in the HBGS cooling water flow.

In addition, as stated in the DREIR, the desalination facility will not have a direct ocean intake system; thereby it will not cause any impingement losses above the quantity taken in by the HBGS cooling water inflow. Refer to responses 1j and 2u below.

2) Desalination Byproduct Discharge, Benthic Communities, and Essential Fish Habitat - Under the Magnuson-Stevens Act, EFH is defined as the waters and substrate necessary [i.e., to support a sustainable fishery and the managed species contribution to a healthy ecosystem] to fish for spawning, breeding, or growth to maturity. EFH refers to federally managed fish species for which a fishery management plan has been developed. In the EFH definition "waters" refers to aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate, while "substrate" includes sediment, hard bottom, and structures underlying the waters, and associated biological communities. Also, as used in the comment, this response to comment, and with reference to EFH, the term "adverse effect" means any impact which reduces quality and/ or quantity of EFH, including alterations of the waters or substrate and loss of, or injury to benthic organisms, prey species and their habitat, and other ecosystem components.)

The DREIR and both Appendices C (Hydrodynamic Modeling Report) and S (Marine Biological Considerations) detail the results of models for the dispersal and mixing of the combined HBGS and desalination facility discharge. Analyses of the potential biological effects of a region of hypersalinity in the discharge flow plume are contained in both the DREIR and Appendix S.

As it pertains to EFH, this comment expresses the concern that salinity levels within the discharge plume, in particular its benthic zone, will be sufficiently high to exclude all organisms, thereby adversely affecting prey abundances and feeding area within the EFH. Answering this comment requires a brief review of model results.

Appendix C reports that the 20-year history of the HBGS cooling water flow rate is bimodal. One mode, termed low flow mode, is 127 MGD. The other flow mode average is 254 MGD. For the modeling of the discharge salinity and its dispersal, the two HBGS flow modes were coupled with two different combinations of receiving water conditions (i.e., combinations of variables that would either promote or lessen mixing of the combined discharge with the ocean water). The low flow, "worst-case scenario" combined a low plant flow (127 MGD, which would produce a much more saline discharge) with sub-optimal ocean mixing conditions, and assumed these would remain in place for 30 days. As stated in the DREIR and Appendices C and S, plant flow rate and ocean mixing conditions are independent factors and the probability of the simultaneous co-occurrence of both a low flow (low power demand) and low receiving water mixing potential (i.e., very calm water) is very low. Moreover, the probability that both states would persist for 30 days, the time used to run the model, is far less than 1%. Nevertheless, modeling of the "worst case, low flow scenario" and assuming these conditions remained in place for 30 days demonstrates the most extreme conditions for salinity that could possibly occur in the receiving water.

Appendix C contrasts the rare and extreme worst case low flow scenario with the more common occurrences of average flow or low flow and "average" conditions for ocean mixing and these findings are summarized in the DREIR. The following table provides a summary of the modeled salinities, based on different historic flow rates, for midwater (M) and bottom (B) under different conditions:

	HBGS flow Rate (MGD)	% Time Occurrence	Discharge Tower		150m Salinity Area			
			Salinities		Salinities			
			Midwater (ppt)	Bottom (ppt)	Midwater (ppt)	Bottom (ppt)	>+10% (acres) Midwater	>+10% (acres) Bottom
Historic (1980-2000)	127	42-48	55	48	39	37	15	3.7
	≥254	52-58	42	39	35	35	0.13	0.13
Post-Retooling (2000-2002)	127	6-9	55	48	38	37		
	≥254	91-94	43	39	35	35		

ppt = parts per thousand

This shows that low flow and average ocean mixing conditions, which have a 42-48% occurrence, will result in higher midwater and bottom salinities at the discharge than will the higher flow rates. Also,

calculations (based on Jenkins and Wasyl, 2005 Table ES-2, Generalized Salinity Plume) indicate that at low flow (127 MGD) the approximate area of the discharge plume having a salinity greater than 10% above ambient (33.5 ppt) is 15 acres on the bottom and 3.7 acres in midwater. At average flow (254 MGD) the area having salinity greater than 10% of ambient is about 0.1 acres both on the bottom and in midwater. Appendix C also points out that, since the recent retro-fit of its generating system, the HBGS has recorded higher flow rates; low flow now occurs less than 10% of the time (see above table). Assuming this trend continues, the benthic area of the discharge field experiencing elevated salinity will be reduced.

Thus, a multi-part answer is needed to address concerns about EFH expressed by this comment. First, the models show that low flow conditions that will cause the greatest salinity load on the habitat would occur 42-48% of the time based on the historic record of HBGS flow and much less under the recent history of HBGS cooling water flow rates. Second, the hypersaline conditions potentially inimical for benthic organisms (i.e., 38-40 ppt) occur in a small area (15 acres) under low flow conditions and an even smaller area (2 acres) at average flow. The habitat into which this discharge flows has a sandy, soft bottom and an extended and contiguous area of no less than 6,000 acres and has no areas of special biological significance. Third, under average flow and receiving water conditions and for most of the combinations of low flow and ocean mixing conditions that can be expected to occur, benthic salinities beginning within a few meters of the base of the discharge tower will be within a range that will allow some of the organisms living there presently to remain.

Another possibility, as stated in the DREIR, is that organisms currently living in estuaries and bays (and which, for this reason, tolerate a greater range of habitat salinity) could potentially move into the small benthic area of elevated salinity adjacent to the discharge tower. These organisms would be the ecological equivalents of the native benthic infauna, which means that although the species composition might be changed in this area of the discharge, it would not be devoid of life and would remain an effective feeding resource within the EFH. Fishes and other pelagic organisms that contact the elevated salinity area would either swim or "drift" through it in a short enough period of time that they would not be affected.

Accordingly, under all possibilities discussed and analyzed in the DREIR, increased salinity loads of the combined project and HBGS discharge will not result in a significant impact or adverse effect on EFH where there is no potential impairment of EFH functions caused by increased salinity.

1e. This text provides a conclusion to this portion of the comment letter, and does not require a response.

1f. As stated within the DREIR, alternative source water intake options were determined to be infeasible for a 50 MGD facility since the environmental impacts associated with these alternatives would be greater than the proposed project. Increased land use, aesthetic, recreational, and biological impacts would result from implementation of alternative intake technologies such as beach wells, infiltration galleries, and/or seabed filtration systems. A comparison between the proposed project and these alternative intake methods (including the benefits of decommissioning the HBGS intake) would not be applicable in this case, since implementation of an alternative intake does not necessarily mean that HBGS would decommission its intake. Refer to responses 2ai, 2ak, and 2al, below.

1g. In the event that the project applicant were to assume ownership of the existing HBGS intake and outfall for any reason, the ownership transfer would be treated as a separate project. The transfer would be subject to applicable CEQA and regulatory agency permit requirements. Avoidance, minimization, and mitigation measures for such a transfer would occur at that time. In addition, future potential operating scenarios of HBGS are speculative at this point. Refer to Response 2u, below for a discussion regarding the AES Huntington Beach LLC, Generating Station Entrainment and Impingement Study prepared by the California Energy Commission (CEC).

1h. It is not anticipated that proposed desalinated water production would exceed the water supply demands of Orange County. All product water is expected to remain within the County. The DREIR states that increasing regulatory activity and environmental needs in Northern California, Colorado River and in the Mono Lake area have reduced the amount of water available to Southern California. Refer to Response 7r, below. In the event that Orange County water purveyors decide to use water produced by the proposed project to replace reliance on Colorado River or Northern California water supplies, ecosystem and biologic resource benefits may occur in those areas of origin. Moreover, it is important to note that this benefit is not included as a mitigation measure within the DREIR, and specific mechanism for implementation is not required.

1i. The proposed project would not increase the volume of water flowing through the HBGS. The project would divert water from the HBGS cooling water system as part of HBGS' normal operations. Also refer to Response 1b, above.

1j. Comment noted. The Intake Effects Assessment, which analyzed entrainment impacts, was prepared specifically to address concerns from commenters on the originally circulated EIR who disputed the assumption of 100 percent entrainment mortality recommended by the U.S. Environmental Protection Agency (USEPA). Under either assumption (100 percent mortality or assuming that a small percentage of organisms survive the once-through cooling process), impacts in regards to entrainment were found to be less than significant as a result of the proposed project. The California Coastal Commission staff comments on the originally circulated DEIR consistently requested information on the potential for entrainment/impingement impacts as a result of operation of the desalination project, distinct from the HBGS effects. The Huntington Beach City Council decision not to certify the originally circulated DEIR was influenced by these arguments in its request for more data on this issue. The California Coastal

Commission staff letter on the DREIR now agrees with the commenter position that states the HBGS is responsible for 100% of the entrainment/impingement under the Clean Water Act. Refer to response 2w below.

1k. The DREIR reports findings about the dispersal and dilution of the discharge based on computational models (Appendix C, *HYDRODYNAMIC MODELING REPORT*) and a study examining discharge salinity effects on the marine biota (Appendix S, *MARINE BIOLOGICAL CONSIDERATIONS*). The models demonstrate the occurrence of the salt wedge and detail how bottom mid-water plume salinities differ with distance from the discharge tower out to about 500 meters (m) where bottom and mid-depth salinities become nearly the same.

As reported in the DREIR, the models show that low flow conditions, which will cause the greatest salinity changes in the habitat, will occur 42-48% of the time, based on the historic record of plant flow, but much less frequently under the recent history of HBGS cooling water flow rates.

The habitat around the HBGS discharge tower has a sandy, soft bottom and is part of an extended and contiguous coastal area with an area no less than 6,000 acres. Only a very small area of this contiguous habitat will experience a small salinity increase. As reported in Appendix S and in the DREIR, salinity levels of 38 - 40 ppt approach the upper tolerance point of many marine organisms. Under the low flow (127 MGD) scenario, salinities this high or higher occur around the discharge pipe out to nearly 150 m (area about 15 acres). Under the average flow (254 MGD) conditions, salinities this high occur only in the core of the discharge pipe (<2 acres). Thus, under average flow and receiving water mixing conditions and for some combinations of low flow and ocean mixing conditions that can be expected to occur, benthic salinities at all depths beginning very near the base of the discharge tower would be within a range where some of the organisms living there presently could in fact remain. Another possibility, as stated in the DREIR, is that organisms that currently live in estuaries and bays (and which, for this reason, tolerate a greater range of habitat salinity) could potentially move into the small benthic area of elevated salinity adjacent to the discharge tower. These organisms would be the ecological equivalents of the native benthic infauna, which means that although the species composition might be changed in the immediate vicinity of the discharge, it would not be devoid of life and would remain an effective feeding resource within the EFH. Fishes and other pelagic organisms that contact the elevated salinity area would either swim or "drift" through it in a short enough period of time that they would not be affected. Also, refer to response 1d above.

Because increased salinity of the HBGS flow will not cause a potential impairment of EFH functions, the project will not result in a significant impact or adverse effect on EFH.

As the commentator is aware, the federal government regulates ocean fishing from three miles to two hundred miles offshore whereas California has jurisdiction from the shoreline to three miles seaward. The project does not involve a federal action or federal waters and a response to EFH conservation recommendations is not mandated by the Magnuson-Stevens Act. The

comment, however, is noted with the hopes that the summarized response information and detailed information of the DREIR will assist NOAA/NMFS with their continued management of fisheries and EFH.

1I. This text provides citations for literature utilized in preparing the comment letter. No response is necessary.