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## Comments Submitted by Latham & Watkins LLP, January 26, 2009 – February 11, 2009 San Diego Regional Board Meeting, Item 6 - Poseidon Resources Corporation, Proposed Carlsbad Desalination Project (Order No. R9-2006-0065, NPDES No. CA0109223)

| Tab No. and Citation | Annotation |
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| **A. If maximum intake velocity <= 0.5 fps, impingement mortality will be minimized to acceptable levels** | |
| A. National Pollutant Discharge Elimination System: Regulations Addressing Cooling Water Intake Structures for New Facilities, 66 Fed. Reg. 65256, 65274 (December 18, 2001) (to be codified at 40 C.F.R. pts. 9, 122, 123, 124, 125) (2009) | Final EPA Rule, which explains that "intake velocity is one of the key factors that can affect the impingement of fish and other aquatic biota" and notes that 0.5 fps is an approach velocity threshold recommended in Federal documents; cites studies supporting the proposition that 0.5 fps is the recommended intake velocity threshold. |
| B. EPA Requirements Applicable to Cooling Water Intake Structures for New Facilities Under Section 316(B) of the Act, 40 C.F.R. §§ 125.84(b)(2), 125.84(c)(1) (2009) | Phase I Rule, which provides that a maximum intake velocity of 0.5 ft/s or less minimizes adverse environmental impacts associated with impingement mortality to acceptable levels. |
| C. EPA Requirements Applicable to Cooling Water Intake Structures for New Facilities Under Section 316(B) of the Act, 40 C.F.R. §§ 125.94(a)(1)(ii) (2009) | Phase II Rule (suspended), which provides that an intake velocity of 0.5 ft/s or less minimizes impingement impacts to such an extent that no further technological or mitigation measures are necessary to protect fish species. |
| D. John Boreman et al., *Impacts of Power Plant Intake Velocities on Fish*, in TOPICAL BRIEFS: FISH AND WILDLIFE RESOURCES AND ELECTRIC POWER GENERATION, NO. 1 (Power Plant Project, Office of Biological Services, Fish and Wildlife Service, U.S. Department of the Interior) (1977) | Topical brief cited by EPA in Final Rule addressing cooling water intake structures for new facilities (66 Fed. Reg. 65256, 65274) in support of the proposition that the EPA has relied on the 0.5 fps approach velocity threshold as guidance to protect fish from impingement. |

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| E. A.G. Christianson et al., *Reviewing Environmental Impact Statements- Power Plant Cooling Systems, Engineering Aspects* (National Thermal Pollution Research Program, Pacific Northwest Environmental Research Laboratory, EPA-660/2-73-016) (1973) | EPA Report cited by EPA in Final Rule addressing cooling water intake structures for new facilities (66 Fed. Reg. 65256, 65274) in support of the proposition that the EPA has relied on the 0.5 fps approach velocity threshold as guidance to protect fish from impingement. |
| F. John C. Sonnichsen, Jr. et al, *A Review of Thermal Power Plant Intake Structure Designs and Related Environmental Considerations* (Hanford Engineering Development Laboratory, HEDL–TME 73–24, UC–12) (1973) | Report containing studies of fish swimming speeds and endurance, which formed the basis for EPA's conclusion that 0.5 fps is the recommended intake velocity threshold to protect |
| G. A.W.H. Turnpenny, *The Behavioral Basis of Fish Exclusion from Coastal Power Station Cooling Water Intakes*, in RESEARCH REPORT- CENTRAL ELECTRICITY (Vol. RD/L/2201/R88) (1988) | Research Report cited by EPA in Final Rule addressing cooling water intake structures for new facilities (66 Fed. Reg. 65256, 65274) in support of the proposition that the EPA has relied on the 0.5 fps approach velocity threshold as guidance to protect fish from impingement. |
| H. King, W. Instructional Memorandum RB-44: *Review of NPDES (National Pollutant Discharge Elimination System) permit applications processed by the EPA (Environmental Protection Agency) or by the State with EPA oversight.*' In: U.S. Fish and Wildlife Service Navigable Waters Handbook. | Instructional Memorandum cited by EPA in Final Rule addressing cooling water intake structures for new facilities (66 Fed. Reg. 65256, 65274) in support of the proposition that the EPA has relied on the 0.5 fps approach velocity threshold as guidance to protect fish from impingement. |
| I. Electric Power Research Institute, Inc., *Catalog of Assessment Methods for Evaluating the Effects of Power Plant Operations on Aquatic Communities* (EPRI, TR-112013) (1999) | Report cited by EPA in Final Rule addressing cooling water intake structures for new facilities (66 Fed. Reg. 65256, 65274) in support of the proposition that the EPA has relied on the 0.5 fps approach velocity threshold as guidance to protect fish from impingement. |

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| J. Electric Power Research Institute, Inc., *Evaluation of Biocriteria as a Concept Approach, and Tool for Assessing Impacts of Impingement and Entrainment Under § 316(b) of the Clean Water Act* (EPRI, TR-114007) (2000) | Report cited by EPA in Final Rule addressing cooling water intake structures for new facilities (66 Fed. Reg. 65256, 65274) in support of the proposition that the EPA has relied on the 0.5 fps approach velocity threshold as guidance to protect fish from impingement. |
| K. Electric Power Research Institute, Inc., *Technical Evaluation of the Utility of Intake Approach Velocity as an Indicator of Potential Adverse Environmental Impact under § 316(b)* (EPRI, TR-1000731) (2000) | Report cited by EPA in Final Rule addressing cooling water intake structures for new facilities (66 Fed. Reg. 65256, 65274) in support of the proposition that the EPA has relied on the 0.5 fps approach velocity threshold as guidance to protect fish from impingement. |
| **B. Scientists Customarily Apply a 50% Confidence Level When Calculating APF and Apply No Mitigation Ratio** | |
| L. John Steinbeck et al, *Assessing Power Plant Cooling Water Intake System Entrainment Impacts* (California Energy Commission, CEC-700-2007-010) (2007) | Report relied upon by Dr. Mayer in support of the proposition that scientists customarily apply a 50% confidence level when calculating APF and apply no mitigation ratio. |
| **C. The 2005 rainy season did not alter the predominately salt water environment of Agua Hedionda Lagoon** | |
| M. Hany Elwany et al, *Agua Hedionda Lagoon Hydrodynamic Studies* (Tenera Environmental Technical Report, CE No. 05-10) (2005) | Supports Jenkins's conclusion that the 2005 rainy season did not alter the predominately salt water environment of Agua Hedionda Lagoon. |
| N. Scott A. Jenkins & Joseph Wasyl, *Coastal Processes Effects of Reduced Flows at Agua Hedionda Lagoon* (Study submitted to Tenera Environmental and Poseidon Resources) (2006) | Supports Jenkins's conclusion that the 2005 rainy season did not alter the predominately salt water environment of Agua Hedionda Lagoon. |

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| O. Tetra Tech, Inc., *Agua Hedionda Watershed Water Quality Analysis and Recommendations Report* (Report submitted to City of Vista) (2007) | Supports Jenkins's conclusion that the 2005 rainy season did not alter the predominately salt water environment of Agua Hedionda Lagoon. |
| P. NWS, 2009, "National Weather Service Daily Climate Reports," http://www.wrh.noaa.gov/sgx/obs/rtp/carlsbad.html | Supports Jenkins's conclusion that the 2005 rainy season did not alter the predominately salt water environment of Agua Hedionda Lagoon. |
| Q. Curriculum Vitae of David L. Mayer, PhD. – President / Principal Scientist – Tenera Environmental Inc. | |