

28 April 2008

**Final Comments on SWRCB OTC Scoping Document**

**by: Dr. Pete Raimondi, UC Santa Cruz**

*1. How will baseline be defined for:*

*a. Track II ?*

*b. Interim restoration?*

Neither of these is addressed in the document. These may end up being the essential questions for both Track II and Interim. If phase II rules are not used there needs to be a clear rationale as to why. Moreover there should be some language as to how current restoration and mitigation projects will be used to establish baseline. For example is there any credit that is due to SONGS for its wetland restoration project?

*2. Have current, statewide and individual power plant impingement and entrainment impacts been correctly estimated?*

My sense is that this is two questions. First – are the entrainment and impingement numbers correct. This probably reflects questions concerning flow rates and annual variation and I can't comment on this.

The second question is one of impacts. Here I think that what is presented is the worst case scenario. This may be appropriate given a conservation precautionary principle, however I also think it should be stated that in general the predicted impacts are in line with the precautionary principle.

*3. Are the proposed interim controls effective and feasible to prevent mortality and reduce takes of wildlife?*

*a. Tetrapod exclusion screens?* My sense is that except for SONGS, this is not a big issue except politically

*b. Flow reduction?* Didn't see any

*c. Restoration?* This is not a method to prevent mortality or reduce take. It is a method to compensate for such losses. The methodology is laid out (HPF) but there needs to be much more thinking about how this would be done in practice – the use in estuarine habitats is relatively easy. The same is not true for take of reef associated species and very much uncertain for sandy bottom or pelagic species. Here HPF could be used to estimate loss but restoration options with a clear nexus to impacts are complex

*4. For Track I, are adverse impacts associated with conversion to closed-cycle cooling adequately considered?*

Never saw this discussion

*5. For Track II, should the proposed policies require monitoring appropriate to determine actual percent reductions in mortality?*

There should but these are not laid out. There are two options. First, actually run a study that compares mortality pre-and post implementation of technology. This would be expensive – but could be done, assuming that the technology is not already in place (eg getting credit for an existing technology). Second, you could measure the engineering predictions as a proxy for change in entrainment (for example). Here you would see if the predicted change in operation (for example velocity of intake decreased by X %), and interpret that change as a change in mortality.

6. Should restoration projects be monitored to determine compliance?

YES, but no language was presented as to how this would be done

7. Should there be remediation if restoration does not comply?

YES, but again language was missing