

## RCNFPP Draft Minutes 8/13/2013 Meeting

<b>Committee Members</b>	
David Asti	Southern California Edison (SCE)
Melissa Jones	California Energy Commission
Mark Krausse	Pacific Gas and Electric (PG&E)
Rochelle Becker	Alliance for Nuclear Responsibility (A4NR)
David Barker	San Diego Regional Water Quality Control Board
Jim Caldwell	Center for Energy Efficiency and Renewable Technologies
Peter Von Langen	Central Coast Regional Water Quality Control Board
Tom Luster	California Coastal Commission
<b>Staff in Attendance</b>	
Jonathon Bishop	State Water Resources Control Board (SWRCB)
Laurel Warddrip	SWRCB
Marleigh Wood	SWRCB
Rik Rasmussen	SWRCB
Mariela Carpio-Obeso	SWRCB
<b>Public in Attendance</b>	
Dan Williams	Bechtel Power Corp.
Doug Dismukes	Bechtel Power Corp.
Bryan Cunningham	PG&E
Brian Metz	SCE
Robert Budwitz	Diablo Canyon Independent Safety Committee
John Steinbeck	Tenera
John Geesman	A4NR
Kathy Jones	PG&E
Eric Wilkins	California Dept. of Fish & Wildlife
Sean Bothwell	California Coastkeeper Alliance

## **Minutes – approved**

### **Outstanding issues on addressing previous actions:**

IPRP Outreach was not completed. Mark will send preliminary Diablo Canyon drawings to the independent peer review panel (IPRP) and invite them to the next meeting.

There was a question about whether the letter from SCE to State Board was resolved and a letter from the State Water Board drafted as agreed in the last meeting? This needs to be finalized.

There was a question regarding Water Board policy/rules for desalination plants on the coast. Water Board staff indicated that a desalination amendment is a separate process, that the Expert Review Panel is looking at this, and there is a due date. The Committee asked if the Expert Review Panel could review the Tenera report to provide an independent assessment of the findings. The Water Board staff indicated that they are very busy, so State Board will have to ask if they can provide the review and what it would cost. Completing the expert panel review by October 17<sup>th</sup> would be the ideal deadline for this. The Committee needs to know if their findings agree with the Tenera report.

Regarding the issue of redacted information from the interim report, the Committee agreed on the process to handle redactions. The previous redaction was not revisited.

A representative from the CPUC not at this meeting. They were contacted and did not send anyone. State Board will reach out again, as well as CEC again.

### **Discuss final report extension:**

#### **Timeline**

Thursday - Bechtel will get documents to Diablo Canyon Independent Safety Committee (DCISC)/State Board for review. Previous comments have not yet been incorporated, other than the responses in a “change” sheet prepared by Bechtel.

September 5<sup>th</sup> - Bechtel needs comments from DCISC

Sept 18<sup>th</sup> - Draft report from Bechtel

October 17<sup>th</sup> - Comments to Bechtel from Committee

October 28<sup>th</sup> - State Board will strip source and distribute them to the Committee members

November 4<sup>th</sup> - Meeting Date

December 16<sup>th</sup> - Issue final report with Committee recommendations attached.

The committee discussed comments from Rochelle Becker forwarded by Shuka regarding the schedule for completion of the report and the committee’s comments. The end of the year is the absolute deadline. Piece meal approach has made it hard for Committee members to complete a comprehensive review, but that should be resolved by an extension giving committee members time to review the complete report comments back to Bechtel in middle of October. The next meeting will be held before the middle of November. The Final report will be due in December.

The Committee discussed the idea that a comment and/or a recommendation were needed from Committee on the final report. It was anticipated that the Committee would add comments and recommendations to the report, not a separate report. Jonathan indicated that the Board is not looking for recommendations, just comments. The Committee noted that is important that the Committee is satisfied with their final input. The Committee felt that comments/recommendations from the Committee to the Board and a synopsis of the report and process were needed.

Any comments beyond the final report from Committee members would be included in their synopsis of the report and will be discussed further at the November meeting. Committee members clarified that their review of the reports did not include the concerns, just the edits. It may be valuable to understand the issues behind the edits.

Bechtel ideally needs a couple more weeks to complete their work, so Sept 18<sup>th</sup> was selected as the date for getting the draft final report to the Committee. Bechtel needs to have the overriding concerns and additional comments back from Committee members in a month, or by October 17<sup>th</sup>. At the next meeting, November 5<sup>th</sup>, they will discuss concerns/comments and discuss assigning a sub-committee to meet and develop final Committee comments/recommendations. The Water Board will issue the final report December 16<sup>th</sup> with Committee comments/recommendations attached.

The concerns regarding the deliberative process were discussed. Members can provide comments, but are not allowed to discuss them outside a noticed meeting. Items posted on the internet are considered available to the public and can be discussed in a noticed meeting. Committee members cannot discuss these issues without transparency to public.

It was agreed that Committee members would submit comments to Shuka. State Board will strip the source of the comments and distribute them to the Committee members two weeks before the meeting. (**not** post to public).

The Committee concluded that a sub-committee will be appointed to compile a Committee report (an attachment to the final report). If the sub-committee is made up of fewer members than a quorum, it is not subject to Bagley Keene.

Committee – There was a question about whether to have the IRP wait to weigh in after deliberation or before. The Committee felt it was more appropriate to review now, not after Committee deliberation. It was agreed that draft report would be made available to them. Expert review panel on the marine studies also interested in this review phase.

Bechtel needs comments from IRP by August 30th. Biological comments can wait.

### **San Onofre Nuclear Generating Station (SONGS) Update:**

A decision was made in early June to permanently retire SONGS. On June 7th Edison CEO announced to investors that SONGS would be retired. On June 12<sup>th</sup>, SCE filed a cessation of power operations letter with the NRC. Dialogue with Water Board and Coastal Commission staff took place as well as with PG&E. The fish return system still is still operating. In mid- July, the Unit 3 circulation water pumps were secured and no longer circulating water. Analysis on SONGS from Bechtel has ceased. Intakes long and short term? Fuel is out of both reactors and in spent fuel pools for cooling. Long term plan is to eliminate the use of ocean water. Pumps just on flow to maintain the functions of some of the heat removal etc. two circulation water pumps being run for all of SONGS. Right now SONGS is operating at approximately 24% of full operational flow; the goal is for SONGS to be on the order of 95% reduction (75,000-35,000 gpm for both units—only using salt water cooling pumps for the spent fuel pool cooling) of normal operating withdrawal flows. Plan is to be there by end of year. Modifications will be needed for alternative cooling. Per SWRCB letter, a November 30<sup>th</sup> written report from SONGS is due to the SWRCB. If reduced intake of ocean water does not continue, another discussion will be needed with SWRCB. Track 1 compliance exceeded (93%) where SONGS reduction should be 95-96%. Once 93% reduction in flows is reached, Track 1 OTC Policy compliance will be met.

Details are being worked out, but the SWRCB has no technical issues with SONGS closing; however,

SCE and PG&E are currently working out the cost breakdown of the Bechtel report. The report will move forward with the SONGS portion terminated, but this will have no negative impact on the delivery schedule for the report.

Spent fuel pool load will have to be addressed in a report to the NRC; there will be a cost estimate and decommissioning timeline.

### **Marine Biological Assessment Report Update:**

Based on comments from the last meeting, modifications were made to the wedge wire screen report Table 4, 7, 8, 9. These were characterized as conservative estimates. The estimates are based on head capsule dimensions.

Entrainables – organisms that are pulled into the pipeline and into the facility.

Converts – organisms previously entrained but now impinged.

Less than 10mm would pass though, this adjusted numbers from report in 2000.

It was noted that earlier estimates showed that 1mm was appropriate. The question was raised about why it changed so much in the new revised report. The technology assessment now a more complete analysis based on the screens and other equipment specifics. There has been a lot more experience with the screens since 2000. The 10 mm cutoff used in the study is an arbitrary decision, but is considered reasonable. Impingement losses were not considered. The latest results show that you get approximately half of the protection using wedge wire screen than the earlier estimates. The fine mesh report, table 1 has a breakdown on the species data. The wedge wire offers higher survival.

The report findings are significant, and an expert review should be conducted. It should be a biological review that is independent and funded by power companies/Water Board. State Water Board will ask expert review panel to look at the report. The Committee thought that this review was very important because the report results affect the recommendations that might be made by Committee.

There was a question of whether Bechtel need to review this report. Bechtel said if needed they would, but they did not plan on doing a comprehensive review of the report. The Committee suggested giving screen vendors and opportunity to review and respond to the report. Bechtel will send out reports so the vendors have an opportunity to look at.

Intake depth and specifics on the species definitely account for a lot of the survivability and the numbers of impingement and entrainment.

There was a concern about how engineering will be performed in light of these impingement and entrainment technologies. It was suggested that re-engineering was not needed from Bechtel based on these revisions.

The question was raised about the need to go forward with a pilot demonstration. The two reports will be reviewed by the expert panel. Hearing back from the Expert Review Panel would maybe shed light on the use of this possible next step.

### **PG&E Mitigation Cost Guidance:**

The question of what alternatives have associated mitigation requirements and how to factor these in to get a better cost was discussed. A methodology needs to be identified from a cost perspective. For land based impacts, sometimes you can use an acreage approach, for example, a 4:1 mitigation ratio

for wetlands and 1:1 for streams. For other things like environmentally sensitive habitat areas (ESHA), there is not a formula. The project would need to be coastal-dependent, which allows, if necessary an override that requires mitigation to the Maximum Extent Feasible, a finding that there are no other sites available, and that the project is in the public interest. Restoration, protection/prevention can also be used for some of the mitigation required.

Some mitigation takes into consideration historical impacts (e.g. buildings and access roads). Mitigation usually a smaller portion of a large project budget (e.g if budget is billions, mitigation is millions).

For the costs of marine vs. terrestrial mitigation, it sounds like they are in the ball park of one another. Another long term driver is choosing the correct mitigation site to meet performance goals.

Some of the projects at Diablo Canyon may have large effects, maybe even seismic issues. Assessment may need to be done on this in the future. If new structures being cited, and on different rock, this would have to be characterized independently from the current power plant structures. There is a concern also with undermining if it is in close proximity to the plant. But, this does not sound like it is the case. The Committee was comfortable with having Tom describe some of the past mitigation done for other large coastal mitigation to get some ballpark figures. The Committee does not want to be in the position where mitigation was not considered. Actual costs cannot be computed, but ball park figures could be extrapolated.

Bechtel has nothing in the report on mitigation at this point. It was suggested that they take out references and line items on mitigation measures. Bechtel can make a statement that mitigation is not included. This mitigation discussion may be addressed in the Committee comments/recommendations and not the Bechtel final report.

Tom agreed to send a write-up to Mariela, after discussion it was agreed that the discussion of mitigation will be in the Committee attachment to the final report.

### **Lunch 11:20 - 12:30**

#### **Discuss Phase II Update from Bechtel and the Committee:**

The primary purpose of the phase II contract is to provide the Committee with information estimated by Bechtel and to develop cost and schedule for each technology. Engineering is at 15%, with details being worked out if a technology is selected and bid. Work done by Bechtel is enough information for bidding purposes and they are confident in decision making on these issues going forward. This statement will be in the executive summary.

PG&E was asked to contact the CPUC to determine a method for estimating replacement power costs. CPUC said they would request it of the utilities. PG&E's internal procurement experts provided links to a third-party (E3) model on replacement power, which was sent to SWRCB staff and then forwarded to the committee. In that transmittal, a cut & paste from the original spreadsheet found at the linked page did not come through for committee members. This was resent to the Committee members during the meeting. Bechtel estimate for construction costs is in today's dollars. The schedules they developed are Bechtel's best judgment. Bechtel changed the report in some areas so the estimate now includes the NRC review. Other than the environmental impact report, Bechtel believes that work in this report meets criterion 10.5059 review (NRC evaluates changes to a nuclear plant to see if changes warrant license changes). Bechtel does not believe that changes related to OTC would warrant a licensing change. The Committee is comfortable with the schedule and how it is moving the project forward.

If formal comments are sent in, these can be shared with Committee members.

The Committee requested a table of ocean flows/reductions for the different alternatives to show the amount that could be displaced by recycled water. Even if water is expensive, it needs to be supported by a table even if it is ultimately determined that it is not a good use of the water. The question was asked whether a Table for de-rate, parasitic power and their associated costs also included? Bechtel agreed to provide the table.

### **Public Comments:**

A question was about whether the costs and electricity needs for building a desalination plant had been considered. Bechtel indicated that yes these will be in the final report. Another question was posed about whether the plan (if desalination occurs) would meet the desalination policy. That is unknown at this time, but the Committee is aware of the issue and this may be a big caveat in the final report when desalination is considered.

A member of the public and one or more committee members questioned Tetra Tech's use of MPR for replacement power estimates. Mark Krausse pointed out the board would need an "apples to apples" basis for making the "cost-cost" comparison provided for in the policy. Committee members and the public commented that it would be a simple matter to adjust the replacement power cost estimate on a \$/MWh basis in order to ensure, and the committee agreed to recommend such an adjustment to the board.

The question was asked: If you run the desalination plant additional off-site power will be needed, it is a substantial amount of power and would it require excavation and construction of the new power source? There is a discussion in the final report and Bechtel concluded that this new load would not raise a safety or reliability concern.

Another question asked was: When you are evaluating costs for desalination was brine discharge considered? Would it go out the current discharge site, and would make up water be needed to dilute this? Bechtel does not see this as an issue. Bechtel did receive comments on this issue and Bechtel will respond. Bechtel would like comments and suggestions on how to address the upcoming desalination policy. Desalination policy may include a salinity objective or new regulations on brine water. Marleigh and Rik (Water Board staff) crafted a statement to Bechtel that speaks to the desalination policy. This statement was read to Committee and accepted by Bechtel and they will insert this in the report. The desalination policy is looking at diffusers for dealing with high concentration brine discharges.

The Water Board received a letter from DCISC with comments, which Mariela is providing information on.

The final question: Is Fine mesh screen report going online? Bechtel responded yes.

### **Next Meeting**

**November 4, 2013 CAL EPA Building 9:00 am -4:00pm. Room: 450**