

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF October 27, 2000

Supplemental Sheet

Prepared on Oct 18, 2000

ITEM NUMBER: 23

SUBJECT: Diablo Canyon Nuclear Power Plant, Resolution of Thermal Discharge and Entrainment/Impingement Impacts

Summary

Pacific Gas & Electric Company and the Regional Board have been discussing, for over two years, resolution of issues regarding receiving water impacts from the PG&E Diablo Canyon Power Plant cooling water system. Although the two parties disagree on the significance of marine resource effects from cooling water system operation, they have agreed on a proposed solution to resolve the issues. The Regional Board asked for public review and written comments on the proposed settlement, and held a workshop on July 13, 2000, for additional discussion of the proposed settlement. The Regional Board and PG&E continued negotiations with comments in mind. These parties have now reached agreement on the terms of the settlement. This settlement, as described below, provides a fair resolution of the issues, and provides permanent preservation of marine resources along a significant portion of the Central Coast.

Resolution

It's important to note that without a negotiated solution, the options for enhanced environmental protection become extremely limited, and all parties would be assured of a very protracted and costly legal battle, the outcome of which is not certain. The Regional Board's preference is to put our staff resources to work towards real, tangible water quality improvement and protection rather than

toward legal battles. Accordingly, PG&E and the Regional Board have worked extensively toward a long-term resource protection solution. This tentative agreement will resolve Diablo Canyon's ocean cooling water discharge permit issues. Such a solution is a positive outcome in terms of resource protection and enhancement.

The Regional Board and PG&E continued to negotiate since receiving comments on the tentative settlement and have now agreed to terms, which include several changes from the elements of the previously proposed settlement. Responses to comments are attached. The parties' attorneys are now working on final settlement language to reflect the agreement of the two parties, but this report provides a summary of the elements of the agreement:

1. Land consisting of watersheds draining to the coastline from Fields Cove north of the Diablo plant to Montana de Oro State Park will be preserved forever for ecological purposes. The primary goal is protection of marine resources from Fields Cove to Coon Creek through watershed and habitat protection of all the lands draining to that coastline. A conservation easement will be the vehicle to ensure that preservation will be achieved in perpetuity. Existing uses of the property will be defined and allowed to continue (in general, a few existing structures and

their current uses plus cattle grazing controlled by best management practices). In addition, other lands inland from these coastal watersheds (that are owned by PG&E and drain to Coon Creek) will be protected through Best Management Practices by PG&E for as long as PG&E operates the plant or holds the property, whichever is longer. Attachment 1 is a map showing the area of preservation. The depicted boundaries are approximate, but survey information indicates the conservation easement area is 2013 acres, and the BMP area is 547 acres for a total of 2560 acres in the settlement. The linear distance of preserved coastline (following the contour of the coastline) is approximately 5.7 miles.

2. PG&E will provide \$200,000 for an endowment to reimburse easement monitoring costs (this is new information). On-going monitoring will determine if land use practices (e.g., grazing and maintenance activities) within the easement area need to be modified. PG&E, as the fee holder, will remain responsible for land maintenance and restoration costs (e.g., fencing off sensitive areas). At the end of the current rancher's tenure, an evaluation will determine whether additional restrictions on the use of the land are necessary to achieve the purposes of the easement. Easement holder criteria will be included in the settlement document.
3. PG&E will provide \$4.05 million (this is a new amount – see Coon Creek discussion in item 6 below) for projects to protect marine resources in the vicinity. Specific criteria to ensure project proposals target marine resource enhancement and protection will be included in the settlement agreement. The Regional Board will select the projects after soliciting proposals from agencies and the public. The Regional Board will only consider approval of proposals after reviewing any comments on the proposals

from agencies and the public, including PG&E.

4. PG&E will make its BioLab facilities available for ten years for marine research to educational organizations, providing \$100,000 in initial operating money, as well as up to \$5,000 annually, for water and electricity during this period. Some changes from the previously proposed settlement are that uses may be expanded to include fisheries related activities, and a committee led by County Office of Education, with representation from other users, will oversee BioLab operations.
5. PG&E will contribute \$350,000 for abalone restoration (not limited to black abalone), that may consist of artificial culture and out-planting of black abalone in the area by Department of Fish and Game. This project aims to strengthen the ability of the stock to withstand the combined effects of disease and marine pollutants. This project concept has been reviewed by many of the foremost abalone experts in the State, and involves artificial culture Withering Syndrome-resistant black abalone from the area in a hatchery situation. In order to maximize abalone survival in the field, survivors of Withering Syndrome that are more resistant to this disease will be used as brood stock. Offspring will be out-planted in suitable rocky intertidal habitat (outside the influence of the thermal plume). To improve survival after out-planting, the abalone will be out-planted at five years of age. After out-planting, monitoring will be conducted for five years to document success in the establishment and recruitment of black abalone. The expected survival rate is 75%.
6. The fish passage blockage on lower Coon Creek, in the northern portion of the conservation easement, will be eliminated by other parties, outside of this settlement. The \$50,000 originally ear-marked for this project is added to the Water Quality fund

(in item 3 above), bringing it to \$4.05 million.

7. The settlement will resolve issues regarding entrainment/impingement and the thermal discharge for the Diablo Canyon Power Plant over its operating life subject to compliance with thermal effluent limitations. Effluent limitations, as exist in the current permit, or as updated, will continue to limit the discharge. Effluent monitoring will also continue. Any effluent limit violations will be enforceable as before this settlement.

8. In light of resolution of these issues, PG&E's receiving water monitoring program will be changed to consist of participating in the Central Coast Ambient Monitoring Program (\$150,000 per year for the next ten years). This is a 50% increase from the previously proposed settlement. If the plant is still operating after ten years, PG&E will continue to participate in the program in an amount proportional to other dischargers and in consideration of this settlement. Effluent monitoring for determining compliance with effluent limitations will continue.

9. The agreement will include a reopener provision that provides that PG&E will have the option of reopening the settlement if future law, regulatory changes, other agency approvals, or permit conditions affect the basis for this settlement. If PG&E chooses to reopen the agreement based on these changes, all claims that could be raised by the Regional Board, including past civil penalties, also will

be reopened, with a credit for the total already paid to satisfy the settlement.

CONCLUSION

The foundation of this resolution is permanent habitat preservation. While staff contends the thermal discharge is affecting approximately 1.8 miles of linear coastline habitat (and some of that habitat was predicted to be affected when the plant was permitted), the length of coastline habitat preserved by this settlement is approximately 5.7 miles. The larger length of coastal preservation provides an appropriate buffer of environmental protection considering both entrainment and thermal effects. The additional specified projects also provide additional offset for the cooling water system impacts. Finally, the water quality fund provides a significant opportunity for anyone to propose additional projects that will enhance or protect marine resources.

Technologies exist for modifying the intake and outfall structures. However, the costs, both monetary and environmental, for such modifications are extremely high. The proposed resolution is the best overall alternative from an environmental perspective because it provides permanent habitat preservation, as well as other marine resource enhancements.

Attachments

1. Map showing the proposed area of preservation
2. Responses to comments

Attachment 2. Response to comments on the Pacific Gas & Electric Company Diablo Canyon Nuclear Power Plant Proposed Settlement for Cooling Water System Effects

This document responds to the many comments we received regarding the proposed Diablo Canyon settlement agreement. While the concepts and final language of this settlement could not possibly reflect all the suggestions of every agency and person that submitted suggestions, the Regional Board appreciates the constructive and thoughtful contributions offered in response to the Regional Board's specific request for comments. The matters involved with this proposed settlement are very complex. Understandably, many comments dealt with one or a few individual issues as opposed to the overall picture of resolution. Hopefully the following responses to comments will increase understanding of the overall picture, and appreciation of the value and fairness of this settlement. Equally important, the Regional Board and PG&E responded to many of the comments by continuing to negotiate changes to the settlement with comments in mind, resulting in an improved settlement.

In reviewing the settlement and these responses to comments, one must remember the fundamental purpose of this settlement is to secure ocean beneficial use protection, as required by PG&E's NPDES permit; in particular, regarding compliance with the thermal discharge and entrainment/impingement requirements of a renewed permit. In order to comply with thermal discharge requirements, PG&E must comply with the water quality objective in the Thermal Plan that applies to existing plants that discharge to the ocean. The applicable portion of the objective states,

“Elevated temperature wastes shall comply with limitations necessary to assure protection of the beneficial uses”

Regional Board staff concluded the numeric effluent limitations imposed on the plant's thermal discharge are not sufficient to protect beneficial uses. However, the permanent protection of marine habitat via this settlement in addition to \$4.05 million in projects and the additional projects funded by the settlement will add the needed beneficial use protection to support a finding in a renewed NPDES permit that beneficial uses in the area are being protected. Although the hearing on the Cease and Desist Order commenced, the Regional Board did not complete that hearing and has not decided that the existing NPDES permit has been violated. It is PG&E's position that the existing effluent limitations are sufficient to protect beneficial uses and that it is in compliance with its existing NPDES permit, but PG&E has agreed to this settlement to resolve its dispute with Regional Board staff.

In order to find compliance with NPDES requirements regarding entrainment/impingement, the Regional Board must make a finding that Best Technology Available has been implemented to minimize the environmental effects of the cooling water intake system. This is required by Clean Water Act section 316(b). PG&E, in cooperation with the technical working group, conducted an entrainment/impingement study. Case law interpreting 316(b) provides that if the cost of best technology is wholly disproportionate to the benefits to be derived from its implementation, then alternatives may be considered. In this case, the cost of technological remedies, such as the use of cooling towers may so high as to be wholly disproportionate to the benefits. Thus, the permanent land conservation easement and funding for various projects to protect marine habitat that are part of the settlement will minimize the adverse environmental effects of entrainment/impingement by the cooling water intake system.

The settlement is not intended to compensate for any natural resource damages nor does it include any penalties. It is intended only to establish long term compliance with future NPDES permits, beginning with the one that will be issued sometime in 2001. However, because it resolves compliance issues, the Board will not seek any penalties for alleged past violations unless the settlement is reopened for the reasons specified in the agreement. The environmental benefit of the permanent protection of over five miles of coastline plus additional environmental projects to achieve permit compliance, far outweighs any potential benefit to be gained by pursuing costly, time consuming litigation for alleged past violations and future compliance issues. As Aldo Leopold, the famous conservationist said, "The first rule of intelligent tinkering is to save all the pieces." (*Round River* 1953). This agreement will save and conserve a very significant piece of the California coast.

Many of the comments received were similar. Therefore we grouped the comments into general categories rather than responding repeatedly to similar individual comments. The comments/questions and our responses follow:

1. Several parties were supportive of the resolution, but expressed concern that the details of the settlement have not been worked out. One commentator cited the San Onofre case as an example of an agreement reached years ago that project has not been completed.

Response: Staff agrees that settlement details are critical to ensure the various elements of the agreement are effective and actually implemented. However, the Regional Board wanted to receive suggestions from the public and agencies before getting to the point of a final agreement. Consequently, we provided the terms of a tentative agreement for early comment before terms were finalized and well before agreeing on final detailed language. After consideration of public comments, we now have agreement on all the points of the settlement (see October 27, 2000 supplement to the Regional Board staff report). Each element of the agreement will require comprehensive legal review and drafting. The process of drafting the legal agreement will take some additional time, and will include Regional Board counsel and the Attorney General's Office. The agreement will be legally binding and enforceable. The

final settlement will be incorporated in a consent judgment to be entered by the San Luis Obispo County Superior Court.

2. How many acres are included in the settlement and conservation agreement?

Response: PG&E has had the two areas surveyed. The Best Management Practices area is 547 acres and the permanent conservation easement area is 2013 acres for a total of 2560 acres included in the settlement, with approximately 5.7 miles of coastline habitat (measured by following the contours of the coastline, not line-of-sight). Our goal is to protect marine resources. The proposed agreement protects a lengthy portion of our coast. The agreement includes all the acreage that drains to the nearly six miles of intertidal and subtidal habitat. The number of acres comprising those watersheds is not the primary issue. However, the conservation easement will protect the landward plant and wildlife habitat in an area of over 2000 acres, in addition to marine resource protection in perpetuity.

3. What agencies must approve the conservation agreement?

Response: The two parties to the agreement are the Regional Board and PG&E. There will also be coordination with some other agencies, including the non-profit entity that will own the conservation easement. At this point, we do not know how many agencies will be involved. Once an agreement is reached between the Regional Board and PG&E, it will be incorporated into a consent judgment to be entered by the Superior Court. There will be an additional public comment period before judgment is entered.

4. How will the land be held in perpetuity, and who is liable for potential cleanup of contamination on the land?

Response: The conservation easement will be held by a reputable non-profit entity that is in the business of conservation easements, according to the legal criteria we develop as part of the agreement. The settlement includes \$200,000 to be placed in an account that will earn interest to reimburse easement holder's stewardship costs. The agreement will ensure that the land is maintained forever under a conservation easement regardless of ownership. The agreement will specifically define how the property will be used. An initial survey of the land and its condition will inventory resources, existing uses and potential restoration or resource protection needs. PG&E will remain the fee holder, and PG&E will remain liable for remediating problems associated with PG&E's use of the land.

5. Where will the \$4 million project fund be spent, on what projects, and who will manage the fund? Will the projects address power plant impacts?

Response: The fund is now going to be \$4.05 million, as the \$50,000 previously targeted for the Coon Creek barrier removal has been shifted from that project to the fund (other sources will fund the Coon Creek Project). The settlement agreement will include criteria for how the funds are to be spent, similar to the criteria we developed for other settlement

funds, such as the Unocal, Guadalupe mitigation fund. We will request proposals and promote local projects that result in a direct benefit to the near-shore marine environment, including permanent preservation of coastal habitat. The Regional Board will manage the fund. The Board will solicit public and agency views on proposed projects prior to selecting projects. The projects may not directly remediate impacts caused by the power plant, but will enhance or protect coastal resources in the coastal area near the plant.

6. Who will use the biolab facilities?

Response: The Regional Board and PG&E are interested in continuing use of the lab basically as it is being used now (education and research based) with possible marine resource enhancement options.

7. What is the Central Coast Ambient Monitoring Program?

Response: The Central Coast Ambient Monitoring Program is a relatively new Regional Board program currently being designed and implemented throughout our Region. The purpose is to monitor a wide range of parameters (chemical, physical, and biological) over a large geographic area for a long period of time to establish a baseline or reference database. We will use this database to help set priorities and direction for other water quality programs. The data will be available for public use as well. Cooling water impacts from the Diablo plant have been intensively studied for many years. After extensive evaluation of those studies, and resolution of those impacts through this proposed settlement, PG&E will continue effluent monitoring for permit compliance assurance, as well as participate in CCAMP (increased from \$100,000 per year in the proposed settlement to \$150,000 per year in the final agreement). This monitoring combination will put the Diablo Canyon Power Plant on the same monitoring course as other power plants in the region (e.g., Duke's Moss Landing Power Plant is participating in the Monterey Bay area component of CCAMP, in addition to continued effluent monitoring).

8. Does the Regional Board have the authority to allow cessation of biological monitoring? The cessation of biological monitoring would keep us ignorant as the degradation of the water worsens over time. Acceptance of the tentative agreement signifies the Board's abandonment of its responsibility to safeguard the marine environment for the remainder of the operating life.

Response: Yes, the Regional Board has the authority to require whatever level of monitoring is deemed necessary to ensure permit compliance and protection of beneficial uses, through the NPDES permitting process. In this case, PG&E will be required to continue effluent monitoring similar to other ocean dischargers (effluent monitoring is generally chemical and physical monitoring of the waste stream) and will participate in CCAMP, which will likely include biological monitoring. Historic receiving water monitoring, or biological monitoring, focused on cooling water effects, will cease because the impacts caused by the cooling water system will be resolved with adoption of a

settlement agreement. The purpose of the biological monitoring was to determine the magnitude and extent of any degradation. This objective has been achieved to a large degree (although not completely, as an almost infinite amount of monitoring would be required to document every change in the receiving water). The many years of monitoring have shown long term trends associated with the discharge, as well as fluctuations in the receiving water due to natural phenomena. Additional monitoring would show continued fluctuations in some species and communities in the vicinity of the discharge. The settlement takes this into account by requiring preservation of many times more miles of coastal habitat than is affected by the thermal plume. The Board is not abandoning its responsibility because permanent conservation will safeguard the marine environment beyond the life of the plant (forever).

9. Why does the settlement include the entrainment/impingement issue?

Response: Entrainment/impingement are permit issues just as thermal effects are permit issues. Our goal and responsibility is to resolve permit issues, so it makes sense to consider all effects in this settlement. We consider the entrainment impacts to be most significant on near shore species, and therefore believe that preservation of coastal habitat is the best alternative available to resolve the impacts (as with thermal effects). Additionally, other elements of the settlement may be more suited as mitigation for entrainment effects (e.g., continued use of the biolab with the potential for fisheries enhancement uses, and future projects that result from the \$4.05 Million dollar fund).

10. How can the agreement legally bind future Regional Boards? The Regional Board does not have the legal authority to resolve all biological impacts for all time, or to contract away its right to exercise police power in the future (legal cases cited by Mothers for Peace). The Board must maintain its authority in this case, or be preempted by the U.S. Environmental Protection Agency.

Response: The Regional Board is not contracting away its enforcement capabilities or responsibilities. On the contrary, the Regional Board is acting on data that had previously been collected for years with no actions based on the results. The Board will continue to enforce the permit and will maintain that authority. However, this comment raised valid questions regarding the Board's continuing authority to re-visit the issues of thermal effects and entrainment/impingement effects of the plant's cooling water system after expiration of the NPDES permit (every five years). These issues will be addressed after additional legal analysis in the drafting of the final settlement agreement and the renewed NPDES permit.

11. An adopted Cease and Desist Order is necessary to ensure compliance with any agreement.

Response: A Cease and Desist Order would be one means of Regional Board follow-up to findings of permit non-compliance. However, the Regional Board heard evidence during a Cease and Desist Order hearing and reached tentative agreement on a settlement with PG&E

prior to making any findings one way or the other. Consequently, there is no finding of permit non-compliance. The terms of the settlement agreement will be incorporated as appropriate in the revised permit. The permit will be enforceable by the Regional Board. Further, the settlement itself will be sanctioned by the court and will be enforceable in that venue as well. Any effluent limit violations will also be regulated by the Board with separate and appropriate enforcement actions.

12. Mitigation must have a direct nexus to the affected resource. Preservation is not mitigation. Based on similar circumstances, the State settled with the San Onofre Nuclear Power Plant for a mitigation package in excess of \$100M.

Response: Permanent ecological preservation of entire watersheds draining to intertidal zones has a direct nexus to the affected habitat in this case. Remember the fundamental purpose of the settlement is to establish beneficial use protection in compliance with the NPDES permit requirements for thermal discharge and entrainment/impingement effects. As discussed in the introduction to these responses, the conservation will protect beneficial uses in the area of the plant and will minimize environmental effects of the cooling water system. Conservation is an ecological approach that takes into account a bigger picture, and provides more protection than other available alternatives.

We note that the Coastal Commission required mitigation, referenced in the comment, at the San Onofre Nuclear Generating station about ten years ago, and that the required mitigation does not prevent or reverse the impacts occurring there. The impacts at San Onofre will continue as long as the power plant operates, as with Diablo Canyon. Also, the mitigation work (about 300 acres of wetlands and offshore reef habitat creation) has yet to be done, and the habitat, if actually constructed, may not function as desired. In the Diablo Canyon case, we are providing permanent protection for about 5.7 miles of pristine intertidal and subtidal habitat. We are also providing protection through a conservation easement of over 2000 acres. Compare those figures with San Onofre areas of mitigation (although the circumstances of that situation were different) and this settlement is not only best for the environment, but it is far superior. It will provide overall beneficial use protection over a greater area and longer period of time than other alternatives to thermal effects options, as well as providing sufficient and appropriate mitigation for entrainment.

13. Mitigation must replace a lost or damaged resource, not compensate an agency.

Response: The proposed settlement does not compensate an agency. In spite of the fact that the Regional Board and the Attorney General's Office have spent a large amount of uncompensated time working to resolve permit issues, and has obtained an agreement that is very beneficial to the environment and therefore the public, the settlement agreement does not include compensation for our extra costs. Also, a settlement agreement does not necessarily replace lost or damaged resources. In fact, replacement is rarely done. The Regional Board must provide "reasonable" protection of beneficial uses. This agreement's goal is marine habitat protection, enhancement, and monitoring and that is the direction of each component, not agency compensation.

14. The settlement fails to protect the affected marine species and communities. Prevention is required rather than mitigation where alternatives exist.

Response: The Thermal Plan requires reasonable protection of beneficial uses and Clean Water Act section 316(b) requires minimizing environmental effects as long as the cost is not wholly disproportionate to the benefit. The effects from the cooling water system will continue to occur for the life of the power plant. However, the effects of the settlement will last forever. The settlement takes a broader view of the region, and acknowledges that the power plant is temporary. Over time, beneficial uses are protected over a larger geographic area. The amount of protection provided by the settlement is greater than the amount of protection provided by implementing a technological fix. Also, the Board must consider the costs associated with technological fixes. The costs of retrofitting cooling towers are high, though perhaps not as high as PG&E estimated in their entrainment report. Technological fixes would not be perfect in terms of protection, and would have their own set of environmental problems. For example, an offshore intake or offshore outfall would not eliminate cooling water system impacts, they would simply move effects to a new location, affecting a different set of organisms. Construction of these facilities would also destroy significant quantities of intertidal and subtidal species. Technological fixes would also be temporary, while the proposed settlement provides permanent protection. The Regional Board sees permanent protection as far superior to temporary partial fixes.

15. The amount of acreage and the amount of money proposed in the settlement are too little. What is the potential for a substantial management endowment?

Response: The amount of acreage is not the issue. The issue is the amount of intertidal rocky habitat being protected, which is 5.7 miles. A concurrent amount of subtidal habitat will also be protected. This is a substantially longer section of intertidal and subtidal habitat than has been affected by the cooling water system. An added benefit is the conservation of over 2000 acres of coastal watershed and habitat in perpetuity, plus and additional 547 acres with best management practice protections for the life of the plant. In addition, the settlement does provide an easement endowment as shown below with other elements:

Settlement Element	Amount	Total in \$M¹
WQ Fund	\$4,050,000	4.05
CCAMP	150,000/yr for 10 yrs	1.5
Easement Costs endowment	\$200,000	0.2
Biolab	\$100,000 + \$5,000/yr, 10 yrs	0.15
Abalone	\$350,000	0.35
Total		6.25

¹. Ignores the time value of money for simplicity, and for illustration purposes only

Our goal is resource protection, and we focused on habitat protection. The \$4.05 Million Water Quality fund is additional money that provides for project proposals in the future that would add to the resource protection provided by the other specifically defined aspects of the settlement. Interested community and agencies will have an opportunity to make their own proposals in the future by establishing such a fund (in addition to the opportunity currently being provided for public comment on all aspects of the proposed settlement). Additionally, any proposed projects will also be available for review and comment by others before Regional Board approval.

It is difficult to state what the dollar value of the conservation portion of this settlement is. Some very recent nearby conservation examples are shown below:

Conservation Easements					
Area	Acres	Purchase \$1,000	Easement \$1,000	\$/acre	\$per acre x 2013 acres
East West Ranch	418	11,000		26,316	52,974,108
East West Ranch	139	3,000		21,583	43,446,579
Maino/Cerro San Luis	75	950		12,667	25,498,671
Guidetti Ranch	1,500		1,000	667	1,342,671
Half Moon Bay	1,600	6,500		4,063	8,178,819
Foothill/Los Osos Valley*	165	1,000		6,061	12,200,793
Laguna Hillside	154	1,150		7,468	15,033,084
Filiponi/Denbow	74	575		7,770	15,641,010
Coast Dairies	7,500	43,000		5,733	11,540,529
Ormond Beach	660	17,000		25,758	51,850,854
*in negotiations				median	15,033,084
Source: SLO Tribune				average	23,770,800

The shaded column takes the examples of conserved property cost per acre and multiplies it by the number of acres in the portion of this PG&E settlement that is going into conservation in perpetuity (i.e., this does not include the 547 acres slated for BMP implementation). The range of values is very large, and it is difficult to make an apples and apples comparison since each situation is unique. The lowest value, for the Guidetti Ranch, is also the only one that is not a purchase (our settlement calls for PG&E to maintain fee title), and this may be closer to an appropriate value for bookkeeping or accounting purposes.

However, for the objectives of our agreement, this arrangement (easement rather than acquiring title) is actually more of a benefit and value to us, the public, and the resource, as PG&E will remain responsible for property taxes, property maintenance costs, etc. As far as end result, our agreement may more closely resemble the Ormond Beach example from Ventura County, in that there are several similarities. Both areas are on the coast, involve a few large parcels to make up the conservation area, are between a power plant and a state park (for the Ormond Beach area in Ventura County, it's the Mandalay Bay Power Plant and McGrath State Park), include some agricultural activities that will continue as part of the conservation scheme, and have portions of the total area that have limited development potential. However, the Ormond Beach conservation area is closer to developed areas and therefore public services (infrastructure), and the power plant there is fossil fueled, which would probably lead to a higher value per acre than the Diablo Canyon area. Conservation easements are typically discounted from fee values by 50 to 10% (that is, easements may be 50-90% of fee value). These discounts, plus considering the greater development potential of the conservation areas listed above that are on the higher end of the monetary scale, lead to a possible value for this Pecho Ranch or Diablo Canyon area easement in the range of \$10M to \$20M. Combined with the other components of the agreement as shown in the first table, above, this indicates a total agreement value in the range of \$16M to \$26M. The Regional Board emphasizes, however, that the negotiations focused on habitat protection and enhancement, and not dollar value.

16. The settlement conceivably allows development of the bluffs within the conservation easement.

Response: No development will occur in the conservation easement. The purpose of the easement is ecological preservation. The agreement will specifically prohibit any development or activity that may cause ecological impacts that are detrimental to the goals of the easement. It will limit uses within the easement to those that already exist. The Regional Board and legal staff will ensure that the easement terms provide strict ecological protection of the preservation area. As part of the agreement, PG&E will establish a stewardship fund of \$200,000 to provide for easement stewardship in perpetuity.

17. Protracted litigation is favored over the proposed settlement agreement.

Response: We disagree. Litigation could continue for many years, with no environmentally beneficial resolution. The Board and its staff have a responsibility to pursue reasonable settlements in enforcement cases. The Board's direction to the Executive Officer is to pursue projects that provide water quality benefit whenever possible.

18. Biological monitoring at Diablo Canyon is scientifically valuable and should continue.

Response: The intense, local biological monitoring at Diablo Canyon will change to PG&E's participation in the Regional Board's Central Coast Ambient Monitoring Program

mentioned in #6 above. This program will include intertidal biological monitoring similar to the work done at Diablo Canyon, but over a larger geographical area. This change will put PG&E on the same track as other dischargers that are participating in CCAMP.

19. The settlement is inadequate because we count on you to safeguard the marine environment. The public has the right to know what changes occur. Only then can we make intelligent decisions about where to boat, kayak, bathe, picnic and fish.

Response: As discussed, this settlement will provide safeguards for the marine environment over a larger area and for an infinitely longer period of time. As far as changes that have occurred from the cooling water system, those reports continue to be available in the Regional Board office and from PG&E. However, the data collected over the last two decades address biological impacts of the thermal discharge and entrainment/impingement of marine biota by the cooling water intake system. They do not address any issues regarding boating, kayaking, bathing, picnicking, or where to fish.

20. The proposed settlement should be augmented with an agreement in principal for PG&E to sell conservation easements on its remaining coastal property in the Irish Hills area at fair market value. This would provide great benefit to the environment and the community while allowing PG&E to be fairly compensated.

Response: Although the settlement does not include such an agreement in principal, PG&E is alerted to this proposal.

21. The settlement should attempt to address past impacts on public marine and coastal resources only. Present and future impacts and violations of existing permits should be addressed separately in the future. Another comment: The first duty is to repair the damage.

Response: The settlement seeks to resolve issues for compliance with the renewed NPDES permit for the plant. However, because these future compliance issues will be resolved, the Board will agree not to pursue penalties for alleged past violations unless the settlement is reopened for the reasons specified in the agreement. With other proposed projects (looking at other facility examples), impacts must be projected and mitigation determined prior to when the effects actually happen (e.g., Duke's Moss Landing Power Plant projected changes are being resolved through mitigation determined now). With Diablo Canyon, the effects have been determined from existing, essentially steady-state plant operations. The "mitigation" (not the correct term for thermal component) will also be on-going into the future, far beyond the term of the impacts. The plant will continue to be regulated through its permit and effluent limitations. Any violations of the permit will be addressed separately in the future.

22. There appears to have been no scientific method of analysis used to determine the settlement amount of \$4M. The Coastal Commission says that money alone is not adequate for mitigation.

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Response: Although the settlement does not include such an agreement in principal, PG&E is alerted to this proposal.

21. The settlement should attempt to address past impacts on public marine and coastal resources only. Present and future impacts and violations of existing permits should be addressed separately in the future. Another comment: The first duty is to repair the damage.

Response: The settlement seeks to resolve issues for compliance with the renewed NPDES permit for the plant. However, because these future compliance issues will be resolved, the Board will agree not to pursue penalties for alleged past violations unless the settlement is reopened for the reasons specified in the agreement. With other proposed projects (looking at other facility examples), impacts must be projected and mitigation determined prior to when the effects actually happen (e.g., Duke's Moss Landing Power Plant projected changes are being resolved through mitigation determined now). With Diablo Canyon, the effects have been determined from existing, essentially steady-state plant operations. The "mitigation" (not the correct term for thermal component) will also be on-going into the future, far beyond the term of the impacts. The plant will continue to be regulated through its permit and effluent limitations. Any violations of the permit will be addressed separately in the future.

22. There appears to have been no scientific method of analysis used to determine the settlement amount of \$4M. The Coastal Commission says that money alone is not adequate for mitigation.

Response: See the response to comment 15 above, “Our goal is resource protection, and we focused on habitat protection.” The \$4.05 M Water Quality fund is additional money that provides for project proposals in the future that would add to the resource protection provided by the other specifically defined aspects of the settlement. In this case, money alone is not the basis for the settlement. Instead, the easement and projects will achieve reasonable protection of beneficial uses as well as compliance with 316(b) of the Clean Water Act. The benefits of future, to-be-determined projects, will add to marine resource beneficial use protection.

23. If the settlement is limited to the payment of funds, it should include several elements (listed).

Response: It is not limited to funds.

24. Any settlement amount for mitigation should be used for mitigation or restoration activities to enhance marine resources in the immediate vicinity of the impacted areas near the plant.

Response: If the comment refers to the area of the thermal plume, then the comment does not reflect a basic concept of this settlement (that is, the settlement involves a longer length of coastline for an infinitely longer period of time than the impacts from the plant). As another example, consider the settlement element of abalone outplanting. Withering Foot Syndrome is exacerbated by elevated water temperature. Many of the areas of the conservation easement, perhaps miles from the plant and its impacted area, would probably be ideal for outplanting. However, outplanting of juvenile abalone in the “immediate vicinity of the areas near the plant” would be unwise as they could be in the area of the thermal plume.

25. The settlement should not preclude public access in the conservation easement.

Response: The goal of the easement is to establish a conservation area for a currently undeveloped section of California’s coast which has a current use of very controlled grazing, using best management practices. Public access is very limited (a few scientific surveys, and some educational opportunities). Existing uses will continue, which means public access will be very limited, for the protection of the area. Remember the goal of the easement is marine habitat protection, not recreation. The more recreational use, the greater the risk of harm to the marine resource.

26. Funds should be set aside to implement a rapid restoration program for Diablo Cove when plant operations are discontinued.

Response: The impacts from the plant may not be very conducive to restoration significantly faster than nature will provide. Land conservation in perpetuity should create an offsetting

benefit that addresses the harm in Diablo Cove, even if it takes some time to recover after the plant ceases operations. Nevertheless, the Regional Board will obtain biologists' opinions on feasibility of "artificial restoration."

27. Each of the elements of the settlement is constructive in its intent to mitigate or compensate for the impacts of operations, with the direction of real benefit for the effected marine environment, as we (Port San Luis Harbor District) expected from this process.

Response: We agree.

28. Perhaps PG&E should design, fund, and implement a comprehensive and integrated program with specific goals and objectives that address the thermal effect and biomass loss (seems to refer to using the \$4M for this purpose).

Response: The principle purpose of the fund, conservation, and projects is to address these impacts and to support activities to protect and enhance marine environment. Regarding the \$4.05M fund, the Regional Board would rather be in the position of advertising for and receiving proposals from anyone, with a public process to determine worthy projects. Specific criteria to be included in the agreement will assure projects are targeted toward "specific goals and objectives."

29. The Work Group should be reconvened to refine the settlement.

The Regional Board greatly appreciates the efforts over the years of the Work Group. The Regional Board considered this suggestion but felt it was better to proceed with refinement in light of all the comments we received, rather than turning that responsibility over to another group, which would then have to come back to the Board for decisions on the Board's acceptance of refinements anyway.

30. It is disturbing that this settlement was presented as a done deal, with your additional hearing on the settlement only a perfunctory step in the process, where the State is not really interested in hearing from the public or making any significant changes to the settlement.

Response: The Board announced a proposed settlement but the Board wanted to receive public comments before proceeding. The Board also scheduled a special workshop and tour of the site to facilitate public comments. Had the commentator been on the tour or at the workshop, it would have been clear from the Board's follow up questions to those commenting that the Regional Board was keenly interested in everyone's constructive suggestions. The Board considered those comments as it continued to negotiate terms with PG&E. As a result, changes included increasing the Water Quality Fund by deleting the Coon Creek project (the Coon Creek project validity was questioned and others are pursuing that project), providing an endowment for easement monitoring, expanding uses of the

Biolab, including other types of abalone besides black abs, and increasing the CCAMP monitoring commitment by 50%.

31. Mitigation must have a direct nexus to the resource lost. Projects such as an intertidal wetland, a kelp restoration project, a fish hatchery, and mariculture of abalone would be better than an “inland watershed,” or for State Park expansion.

The first three project suggestions were considered but believed to be inferior for a variety of reasons. An abalone project is included in the settlement. Also, the proposed conservation easement is for a watershed that drains directly to 5.7 miles of coastline; it’s not an “inland watershed,” and it will not be used for State Park expansion. Public access will be limited to maximize protection of natural resources and to protect power plant security.

32. There should be a hearing on entrainment, impingement, and other cooling system effects similar to the hearing on thermal effects.

Staff’s intention over the last several years was to provide information from the Work Group process on the cooling water system (not just thermal effects) and to provide a proposed resolution to the Regional Board for purposes of ensuring beneficial use protection in compliance with the permit. The thermal effects component was completed prior to other cooling water system aspect evaluations. The Board scheduled a hearing on thermal before other system aspects were evaluated. Later, at the time the proposed settlement deferred any action on the thermal effects hearing, the public was also provided information from the Work Group process on the other aspects of the cooling water system (e.g., entrainment and impingement).

34. Ensure steelhead protection on Coon Creek.

We have received assurances that the Coon Creek barrier removal project will proceed through a separate project, for purposes of steelhead run restoration. The Department of Fish and Game is proceeding with this goal.

35. The Pecho Ranch has had tremendous stewardship, and serves as a shining example of the benefits and importance of grazing animals to a diverse proper functioning ecosystem. You have displayed foresight in reaching this agreement.

Response: Grazing will continue on the easement, subject to review of practices by the easement holder, and adjustments as needed to be consistent with the goals of the easement.

36. There has been no long-term estimate for the effects of recruits in this region even though two fishing communities are within a short distance either side of the plant. Historical data may support how the distribution of wealth has shifted from communities to power plants then to biological consultants. With respect to estimated losses using the FH, AEL, ETM methodologies, it is important to look carefully at the variability of the results.

Response: Consultants are retained as needed to provide information and expertise that enables dischargers and the Board to understand and resolve the issues before them. Social wealth transfer issues are not among those issues. That being said, it might help the commentator to understand the long-term picture as follows:

The Regional Board sought to resolve the issues brought to light by the thermal effects monitoring program and the entrainment special studies rather than proceeding without reaction. The status quo would have provided lots of resources for biologists to continue to monitor changes, with no effort toward resolution.

Also, in response to the second part of the above comment, an important consideration in evaluating entrainment values was the degree of variability in the results. For example, in our Table 1 in the July 13, 2000 staff report for the workshop, we pointed out that ETM (Empirical Transport Model) calculations were not appropriate for two species due to large variation in sampling abundance. Fecundity hindcasting and Adult Equivalent Loss Model results were used for these two species, and even for these calculations, we indicated ranges of values.

37. There should be better estimates of monetary values lost (e.g., for non-commercial species).

Response: This permit compliance evaluation procedure was not in the form of a Natural Resources Damage Assessment, which is typically based more on translations to monetary comparisons. We were evaluating beneficial use protection and what was needed to accomplish protection on a larger scale and over a longer period of time.

38. If the public uses the easement area, it will transform from its current state to yet another example of a degraded coastal habitat so commonly seen in areas open to the public.

Response: See answer 25, above.

39. The settlement should designate more money for abalone outplanting, and not just for black abs.

Response: The project envisioned is experimental, and it makes sense to see if the first phase is successful before expanding. The settlement has been expanded to include other species of Abs and does provide for funds for future projects, at the discretion of the Board. An additional Ab effort might be warranted, if the initial results are good.

40. The plant should be shut down, since everyone has admitted there is a problem.

Response: Not everyone has admitted there is a problem. If that were the case, our hearing would not have taken over 13 hours. The Regional Board does not have the authority to shut

down the plant, just limit or prohibit discharge. Also, as discussed at length, as far as the Regional Board's purview, there are many alternatives to prohibiting discharge.

Some comments received after October 23, 2000, were in part similar to some of the above comments. The following points were not covered entirely in the above answers, however, so additional responses follow:

41. PG&E's website praises Diablo Canyon's excellent environmental record, and with their deep pockets, I'm sure that they will manage to go on convincing the public that they are, if anything, a boon to the ecology of our beautiful county-just like they have used their deep pockets and the courts to intimidate the Board into the current agreement.

Response: Staff are very much unintimidated, as was borne out by our presentation to our Board at the cease and desist hearing. Neither is the Board intimidated. They are just doing their jobs based on the facts. It is always preferable to attempt to reach a satisfactory agreement rather than assuming we must go to court. Otherwise, we would go to court for all of our about 500 dischargers rather than taking up permitting issues in Regional Board meetings.

42. You and I know the truth, and it is your responsibility as our government representatives and decision-makers to see that they do not get away with this, the damage they are causing to the life that teems in our pristine coastal waters, either now or in the coming decades. I urge you to work out some alternate agreement with PG&E that will not release them from the responsibility they bear towards the citizenry of the Central Coast and our environment. This decision will have repercussions well beyond your terms and possibly all of our lives. I urge you to make the right one.

Response: We considered alternatives, including those suggested by comments. Conservation in perpetuity is definitely on target when you're talking about the duration of the cooling system effects. The plant's cooling water effects are temporary. This agreement will be a benefit to the central coast not only past our terms, but forever.

43. Any settlement must specify that it resolves only permit violations and damages to the date of the settlement, that it does not include mitigation for any radioactive contamination of the environment, and that it does not reduce PG&E's liability for continuing/future violations nor for continuing/future adverse impacts to the environment.

Response: See above responses re: resolution of cooling water issues, and providing for not only near-term beneficial use protection, but protection for a larger area beyond the operating life of the plant. This settlement does not pertain to rad waste. That is the Nuclear Regulatory Commission's responsibility.

44. DCNPP must be decommissioned within 25 years.

Response: See response 40.

45. As part of any settlement, PG&E agrees to place a restrictive conservation easement over the all of 14,000 + acres of land it holds in Diablo Canyon. Upon decommissioning of DCNPP, all 14,000 acres of Diablo Canyon land held by PG&E will be turned over to the public for preservation as wild lands/conservation area with public use to be determined as the least impacting upon the environment, with special emphasis on protecting and enhancing wetlands, watershed, endangered and threatened species, and complete protection for all Chumash cultural sites.

Response: See responses above regarding guiding principles for this settlement. The Board focused on near-shore marine habitat protection through a conservation easement, plus ancillary projects specified, and future projects to be proposed by others. This agreement achieves 5.7 miles of intertidal and subtidal protection, which is part of a fair resolution of the issues. Human access will be very limited to ensure the least impact on the area.

46. \$50 million for “protection” of marine resources and mitigation projects, including the attempt to restore the black abalone, and other species impacted. We suggest that RWQCB, and Dept. Fish & Game administer these funds. (It should be noted that the same “scientific method and analysis” used to determine the settlement amount of \$4 million by this Board was used when determining the recommendation for the sum to be increased to \$50 million.)

Response: The comment about the “scientific method and analysis” appears to be sarcastic. See response 22 for an explanation of the \$4M amount. We did consult with abalone project managers before arriving at a settlement amount for the abalone element.

Comments Received on PG&E Diablo Settlement
September 27, 2000

State Agencies:

California Department of Fish and Game, dated June 30, 2000

California Coastal Commission, dated August 7, 2000

Other Governmental Agencies:

Port of San Luis Harbor District, dated June 9, 2000

San Luis Obispo County Board of Supervisors, dated June 30, 2000

Environmental Advocacy Groups:

Diablo Resources Advisory Measure (Dream), dated June 9, 2000
Western Aquaculture, dated received July 29, 2000
California Earth Corps, dated June 29, 2000
League for Coastal Protection, dated June 30, 2000
San Luis Obispo Mothers for Peace, dated June 30, 2000
Nuclear Information and Resource Service, dated June 30, 2000
Morro Estuary Greenbelt Alliance, dated July 24, 2000

Educational Institutions:

Moss Landing Marine Laboratories, dated June 22, 2000
Occidental College, dated June 28, 2000

Miscellaneous Groups:

California Cattlemen's Association, dated June 28, 2000
San Luis Obispo County Cattlemen's Association, dated June 29, 2000
Bob Blanchard Jr., Leasee for the Pecho Ranch, received July 14, 2000

Citizen Comment Letters:

Charmaine Marie Gallagher, Citizen, received June 29, 2000
Bob Johnson, Citizen, dated June 30, 2000
Sam Blakeslee, Citizen, dated June 30, 2000
Krisit Hardin, Citizen, received July 13, 2000
Henriette Groot, Citizen, dated July 13, 2000
Bill Sievers, Citizen, dated July 13, 2000
Valerie Parham, Citizen, dated September 12, 2000
Reya Lee, Citizen, dated September 14, 2000

Postcards with Same Statement from Various Citizens in Opposition to Settlement:

_ Local – 203 Received
_ Out of Town – 30 Received

emails, received after October 23, 2000:

Darren L. Cole
Dave Banta
Cameron Clark
Sierra Club

Rwb/H/winword/PG&E response to comments