

CALIFORNIA ENERGY COMMISSION

Staff Response to Public Comments Regarding High Desert Power Project Water Banking Schedule Amendment Petition July 11, 2006

Topic Responses to Public Comment

Topic responses address issues that were raised in multiple comments on the petition to amend **SOIL&WATER-4**, the water banking schedule for the High Desert Power Project (HDPP). These topic responses are referenced in the second section of this document, which provides staff's response to each specific public comment.

Topic 1 - Post-Certification Project Modifications

Most projects certified by the Energy Commission request amendments to their original conditions of certification at some point because changes in circumstances, new information, new technology, or other factors potentially warrant a change in the conditions of certification. Accordingly, the Energy Commission provides an amendment process to ensure that projects are not locked into conditions of certification or other requirements that fail to reflect changing circumstances or are otherwise no longer appropriate. The California Code of Regulations specifies the review process for post-certification project modification (Title 20 Division 2 Chapter 5 Article 3 Section 1769: Post-Certification Amendments and Changes).

Title 20 regulations specify the information necessary to evaluate proposed modifications to conditions. Evaluation of the petition includes consideration of

- the potential for significant impacts to the environment,
- compliance with laws, ordinances, regulations and standards (LORS),
- the necessity of the proposed amendment, and
- the informational basis of the proposed changes.

The staff analysis has concluded that High Desert Power Project's (HDPP) petition provides the information required by Title 20. The basis of HDPP's petition is that the project has encountered unanticipated conditions and has identified new information regarding the average concentrations of total dissolved solids (TDS) and of trihalomethane (THM) precursors in the water supply for the water bank. As required in the Title 20 regulations, HDPP's petition provides an explanation why these unanticipated water quality conditions undermine the assumptions that were used to determine the water banking schedule adopted in the final decision. HDPP's petition asserts that the original schedule is not feasible, given actual water quality conditions, and has proposed a modification to the water banking schedule that will enable the project to operate in compliance with the original intent of **SOIL&WATER-4** to protect the local water supply.

HDPP's petition is being processed as a formal amendment to the final decision. To ensure feasibility and compliance with the proposed revision to the water banking schedule, staff has made additional recommendations regarding the modification of the

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Condition S&W-4 to the Commission. HDPP's petition will be reviewed and approved or denied, based on the merits of its proposal, by the full Commission at the noticed business meeting on July 19, 2006.

Topic 2 – Impact on Existing Water Supply and Dissipation of Injected Water

The purpose of the HDPP water bank is to provide the project with a backup water supply without impacting the local water supply, including contribution to regional overdraft of groundwater or adverse impacts to the riparian habitat of the Mojave River.

HDPP's water bank is being developed by injecting surface water into the local aquifer system. This injection creates an increase in the amount of groundwater stored in the aquifer. To ensure that the project's use of groundwater does not cause adverse impacts, accurate accounting of the amount of banked water available to the project is critical. The amount of banked water available to the project is equal to the amount injected, minus the amount of groundwater "dissipation" caused by water banking, minus a 1,000 acre-foot environmental reserve, minus the amount of groundwater that is withdrawn by the project.

Dissipation is the amount of water that leaks from the aquifer to the Mojave River, as a result of water banking operations. The bank leaks because the groundwater aquifer in the vicinity of the project is hydraulically connected to the Mojave River. When additional water is injected into the aquifer, the discharge of groundwater to the Mojave River increases. Groundwater discharged to the river rapidly flows downstream and is no longer available to the project. This induced groundwater discharge is termed dissipation in HDPP's conditions of certification.

In addition, one thousand (1,000) acre-feet of the water that HDPP injects will be retained in the aquifer to mitigate for any possible underestimation of dissipation caused by water banking. This 1,000 acre-foot retention is not available for project use once it is injected by HDPP. (HDPP has already met this requirement.)

As specified in **SOIL&WATER-5**, the CEC staff calculates HDPP's water bank balance on a regular basis using the HDPP groundwater model, which accounts for dissipation. Table 1 provides the most recent cumulative totals for the HDPP water bank. The development of the 13,000 acre-foot water bank reserve includes additional injection to compensate for water losses caused by dissipation. If the schedule to establish the water bank is extended from 5 years to 15 years, the amount of groundwater dissipation that HDPP will have to replace will increase. Based on staff's groundwater modeling estimates, HDPP will have to replace about 900 acre-feet of groundwater dissipation if HDPP requires a full 15 years to attain the 13,000 acre-foot reserve. Once the 13,000 acre-foot balance is attained, HDPP is no longer required to replace groundwater dissipation. Therefore, HDPP's water banking operations will provide an increased benefit to the environment if the water banking schedule is extended.

Table 1. Cumulative Totals for High Desert Power Project Groundwater Bank (acre-feet)

	Injected State Water Project Water	Pumped Groundwater	Groundwater Dissipation to Mojave River	Total in Aquifer	1000 acre-foot Retained Balance	Amount of Banked Water Available to HDPP
End of 2004 Year Totals	2,045	112	9	1924	1,000	924
End of First Quarter 2005 Totals	2,045	114	12	1919	1,000	919
End of Second Quarter 2005 Totals	2,045	114	15	1916	1,000	916
End of Third Quarter 2005 Totals	2,539	115	19	2,405	1,000	1,405
End of Fourth Quarter 2005 Totals	2818	124	24	2,670	1,000	1,670
End of First Quarter 2006 Totals	2,818	124	29	2,665	1,000	1,665

Explanation: Amount of Banked Water Available to HDPP equals (1) Injected water minus (2) Pumped Groundwater minus (3) Dissipated Water minus (4) 1000 acre-foot Retained Balance.

HDPP is required to replace any groundwater it withdraws from the bank, once the 13,000 acre-foot water bank balance is attained, as specified in **SOIL&WATER-4**, until the last three years preceding project closure. Staff will continue to calculate the water bank balance, including reductions owing to dissipation, on a regular basis throughout the life of the project. As long as the project's groundwater consumption does not exceed the amount of banked water available to the project, based on the definition provided in the conditions of certification, there will be no adverse impact to the local water supply. As specified in HDPP condition **SOIL&WATER-1**, the project is prohibited from operating if there is neither banked water available to the project nor water available to be purchased from the Mojave Water Agency.

Topic 3 – Water Quality

Questions were asked regarding water quality, including the source of salinity in the injection water supply and the project's potential impact on groundwater quality and the environment.

Source of Salinity

Most of the salinity in the injection water for the HDPP is derived from the source water supply. As explained in the staff analysis, the source of injection water for HDPP's water banking is the State Water Project (SWP). (Salinity is referred to in the staff analysis as TDS.) The California Department of Water Resources (DWR), which operates the SWP, currently reports that TDS concentrations in SWP water at the

nearest upstream measuring station to HDPP have historically ranged from less than 100 mg/L to over 700 mg/L (DWR 2006).

Salinity in SWP water is primarily derived during the transport process. SWP water originates in Northern California and is routed south through the Sacramento-San Joaquin Delta. DWR reports that SWP water picks up most of the TDS when it flows through the delta. The salinity of water in the delta is determined by the amount of water flowing out from the delta through the San Francisco Bay. During low-flow periods, salt water from the bay encroaches into the delta. During high-flow periods, outflow reduces the flow of salt water into the delta. High-flow periods occur during periods of heavy rainfall and snow melt and/or large releases of water from the Northern California reservoirs. In addition, the amount of water being routed through the delta also affects the salinity of SWP water routed to Southern California. If the flows of SWP water are large, the impact of the TDS in the delta water, regardless of concentration, will be more diluted. Therefore, the salinity of injection source water for the HDPP is primarily determined by weather conditions and the operations of reservoirs in Northern California.

HDPP's water treatment process also causes a small increase in the TDS concentration of the water supply used for water banking. HDPP reports that its pretreatment of injection water increases the TDS by an additional 22.5 mg/L.

Lahontan Regional Water Quality Board specifies in HDPP's Waste Discharge Requirement Conditional Waiver the average and maximum limits for TDS concentrations that can be contained water injected into the aquifer for the HDPP's water bank. Accordingly, HDPP monitors and limits the salinity of water injected into the project groundwater bank by avoiding injection during periods when the TDS of the source water is elevated.

Water Quality Impact

HDPP's petition to amend **SOIL&WATER-4** does not propose to modify any water quality requirements. In fact, **SOIL&WATER-4** does not include any provisions that address water quality. HDPP's petition requests an extension in the water banking schedule only. Extending the water banking schedule will have no effect on the quality or composition of the water injected into the aquifer for water banking purposes.

HDPP's petition does propose to install an ultraviolet pre-injection treatment system. This treatment system will reduce the presence of THM precursors in the raw SWP water supply, which, in turn, will lower THM concentrations in the injection water. However, this new treatment process will primarily serve to increase the frequency that HDPP will be able to bank water by improving the quality of water that previously could not be used for injection. In other words, ultraviolet treatment will primarily increase the quantity of the usable water for banking.

Furthermore, staff's recommended contingency plan to install a reverse osmosis system to pre-treat injection water will also primarily increase the frequency that injection will occur. Because reverse osmosis treatment will reduce the concentration of TDS in the

raw SWP water supply, HDPP will be able to inject treated water that would otherwise have unacceptably high concentrations of TDS.

Overall, HDPP's petition amend **SOIL&WATER-4**, as well as staff's additional recommendations to amend, would have neutral or a small positive effect on the quality of water used for water banking, owing to the use of ultraviolet and possibly reverse osmosis treatment.

Topic 4 – Reverse Osmosis

Questions were asked regarding reverse osmosis. Simply described, reverse osmosis is a water treatment method that removes dissolved salts and contaminants from water.

During the application process, HDPP proposed to use reverse osmosis to pre-treat raw SWP water for water bank injection. However, reverse osmosis was not required in the conditions of certification. The conditions of certification specified the criteria and mitigations required for environmental protection but did not dictate the methods for meeting these requirements.

HDPP subsequently decided to install an ultrafiltration system to pre-treat raw SWP water for water bank injection, rather than reverse osmosis. At the time this decision was made, HDPP's analysis of TDS conditions, based on historical SWP data available at the time, indicated that ultrafiltration would allow the project to meet both water quality and injection volume requirements. However, as explained in the staff analysis, data now available shows that TDS concentrations in the SWP supply can vary widely from year to year and can maintain higher average concentrations for more extended periods than originally estimated.

In accordance with HDPP's updated analysis of TDS conditions, HDPP has proposed an extension in the water bank injection schedule. HDPP has not proposed to install reverse osmosis. However, staff has recommended that the amendment include a contingency plan, which would require the installation of reverse osmosis if the water banking does not meet end of year milestones, which begin in year eight. The milestones were developed by calculating the minimum water storage needed to meet the 15-year completion requirement without reverse osmosis.

Topic 5 – Significant Interruption of SWP Water Supply

The purpose of the HDPP water bank is to provide the project with a backup water supply. The primary water supply for HDPP, surface water purchased from the SWP, is an interruptible supply. Because the primary water supply is interruptible, both the Energy Commission and the Mojave Water Agency (MWA), the project's SWP supplier, require HDPP to maintain a backup water supply. SWP deliveries are routinely interrupted every five years for a short period of scheduled maintenance. Deliveries may also be interrupted for extended periods because of planned and unplanned events, including, but not limited to relining projects, construction, earthquake damage and supply shortages caused by drought. To provide the project with a reserve of operation water for these potential extended interruptions in the primary water supply, the Energy Commission condition of certification **SOIL&WATER-4** requires HDPP to

develop a 13,000 acre-foot water bank. (Twelve thousand (12,000) acre-feet would be available for project use (see Topic 2).)

The HDPP project reports that it currently consumes about 3,000 acre-feet of water annually, with a maximum estimated demand of 4,000 acre-feet. Therefore, when filled to the maximum, the backup supply would provide HDPP with at least a 3-year reserve of water for project operations. As required in condition of certification **SOIL&WATER-5**, the balance of water in the water bank available for project use is calculated on a regular basis by the Energy Commission staff (see Topic 2). These calculations will be performed for the life of the project.

The primary disadvantage to extending HDPP's water banking schedule is that it exposes the project to a longer period of risk of a shortfall in its backup water supply. As specified in **SOIL&WATER-1**, the project cannot operate if it consumes all of its backup water supply and there is no water available to be purchased from the Mojave Water Agency. HDPP currently has about a 6-month water supply available in the water bank for project use.

In reviewing HDPP's petition to amend the water banking schedule, staff was particularly concerned with the feasibility of the extension. As described in its analysis, staff has concluded that TDS concentrations in the SWP supply cannot be forecast with certainty. Therefore, to ensure that the project can complete the water bank on schedule, staff has recommended 15-year extended schedule in case of an extended interruption in SWP deliveries and a contingency plan to install reverse osmosis if the project is unable to meet specified interim water banking goals (milestones). The most likely reason that HDPP would be unable to meet an interim water banking goal would be an extended period of adverse TDS conditions in the SWP supply. However, an extended interruption in the SWP would also likely cause HDPP to fall short of the interim goals.

The timing of the interim water banking goals recommended by staff is designed to trigger the installation of reverse osmosis in time to ensure that HDPP can meet the 15-year deadline. The timing of the triggers includes the assumption that a 1-year interruption of the SWP supply will occur after reverse osmosis is installed. The first milestone is scheduled for year eight because, under worst-case conditions, the eighth year is the earliest point in time that reverse osmosis would need to be installed to meet staff's recommended 15-year goal.

Topic 6 - Issues Outside of the Scope of the Amendment Request

The HDPP petition requests an extension to the water banking schedule specified in **SOIL&WATER-4** and proposes to implement ultraviolet pre-treatment of the injection water supply. Issues that are not explicitly concerned with or affected by these revisions are not part of the review or subject to reinterpretation. This applies equally to soil and water conditions not part of the amendment request or other unaffected topics such as new power projects proposed for the Victorville area. Such unaffected issues, commented on during the staff workshop or in subsequent written comments include:

- dry cooling,

- static groundwater level,
- groundwater quality conditions,
- growth inducing impacts of addition power plants proposed for Victorville,
- cumulative impacts of additional power plants proposed for Victorville, and

Public Comments

Please note that many of the staff's responses to the individual comments refer to topic responses provided previously, while specific responses are provided for some comments directly after the comment.

Written Comments submitted to the CEC

Comments from Mr. Gary A. Ledford (Intervenor in HDPP AFC proceedings)

Mr. Ledford submitted two documents that offered comments on HDPP's petition to amend **SOIL&WATER-4**. The first document is a letter submitted by email to Energy Commission Compliance Manager Steve Munro entitled "Opposition for Petition for Revisions/Administrative Changes to Soil & Water -4 Commission Decision (97-AFC-1c) High Desert Power Project," dated June 11, 2006. In comments 1 through 13, Staff provides responses to the issues raised in Mr. Ledford's letter. The second document submitted by Mr. Ledford is an "objection" submitted to the Energy Commission entitled "Objection to HDPP's Petition for Revisions/Administrative Changes to Soil and Conditions No. 4," dated and docketed June 26, 2006. This second document raises many of the same issues addressed in Mr. Ledford's letter. Staff provides responses to the "points and authorities" (listed below as comments 14 through 18) contained in Mr. Ledford's second submittal.

Comment 1.

1. *I raised the water quality issue in 2002 when I filed a complaint that HDPP was not proceeding under the conditions of approval, i.e. failing to install the R/O process. The current proposal by HDPP and your staff suggests that the CEC will not enforce the condition of a water bank by year five, when HDPP said they could do it in three years and that R/O will only be required if the bank is not in place by year 15.*

Response

Reverse osmosis was not required in the conditions of certification. However, staff is recommending that amendment to **SOIL&WATER-4** require the installation of reverse osmosis, as early as year 8, if the rate of injection falls behind the extended schedule. Please see Topic 4.

Comment 2.

2. *The HDPP Petition amplifies that they are not complying with the Energy Commission's conditions of approval; they are attempting to get permission to*

amend the conditions for “reasons” that do not conform to the findings of the Commission.

Response

Please see Topic 1.

Comment 3.

3. There is no discussion as why no water at all was banked in year two.

Response

No water was banked in year two of project operation because, throughout that year, the average concentration of either THM or TDS exceeded the limits established for injection water in HDPP’s Waste Discharge Requirement Conditional Waiver issued by the Lahontan Regional Water Quality Board.

Comment 4.

4. During hearings on the HDPP’s Application for Certification a key environmental question/dilemma was how to prevent a negative impact to our area’s water quality. The water treatment plant proposed by HDPP/ Bookman/Edmonson and submitted into evidence as the plant that would be necessary to provide treated water to background levels was an R/O plant. The plant initially approved by the CEC staff was an R/O plant. Eventually the HDPP stated that they wanted to use an UV (sic) plant, as it could treat more water less expensively. We disagreed, but the Commission, nonetheless approved the UV (sic) method. Clearly that method does not work. I am informed and believe there are many others in field problems with the injection water such as acidity and fouling of impellers in the injection wells. Many of these issues were discussed in testimony at the hearings and dismissed as speculative on our part.

Response

Please see Topics 3 and 4. (Staff assumes that this comment’s use of the abbreviation “UV” is intended to refer to the project’s ultrafiltration system.)

Comment 5.

5. The reason HDPP wants to change water treatment methods is clearly MONEY. It costs more money to treat water with the R/O process [and perhaps other additional processes to meet the total standards] than with other methods. (Dry cooling would have been cheaper for HDPP, but the applicant chose instead to use water) In order to use water from the state water project and NOT have a negative environmental impact, HDPP agreed to licensing conditions and the R/O method to treat and store water.

Response

Please see Topic 3 for a discussion of water quality issues and Topic 4 for a discussion of reverse osmosis issues.

Comment 6.

6. *So, not only did HDPP agree to use R/O as a condition of certification, the applicants own counsel used the words “Res Adjudicata”, in the hearing on my contentions that the applicant was not complying with the conditions of approval by not building the R/O plant.*

Response

Please see Topic 4.

Comment 7.

7. *Many other water quality/environmental impact questions need to be answered, such as “dissipation”. HDPP says .5% last year, since they had a -2.3 AF injection for the year – that seems an interesting assumption. What if a full 13,000 AF was in the “Mound”, would that not mean that the dissipation rate would be a full 5% or 650 AF of make-up water per year to maintain the “Bank”? Would that not be a positive benefit to the Basin?*

Response

Please see Topic 2, which addresses the issue of dissipation. The percent of dissipation does not increase proportionally to the amount of water contained in the water bank. Dissipation is unlikely to exceed one or two percent, based on water banking scenarios simulated to date by staff.

Once the 13,000 acre-foot balance is attained, HDPP is no longer required to replace groundwater dissipation. Water will continue to dissipate, however, and the amount of water available for project use will be reduced by each year’s dissipation. Therefore, extending the water banking schedule, rather than maintaining the 5-year schedule, would be a positive benefit to the Basin.

Comment 8.

8. *Another question: what is actually happening to the well field? What was the static level and water quality at the start and what are they now?*

Response

The status of the water bank is not evaluated on the basis of groundwater levels. As discussed under Topic 3, HDPP’s petition does not propose to modify conditions that address water quality, and the impacts of the petition requests will not affect water quality.

Comment 9.

9. *In addition to negative environmental impacts to soil and water, during the HDPP hearings I raised the environmental problem that HDPP would create negative “Growth Inducing Impacts.” We told the commission that another Power Plant had been planned on the same site. Although my evidence was denied, that Plant is now shown on the Commission’s web site as “City of Victorville Hybrid (500 MW gas, 50 MW Solar), 12 month AFC – scheduled for formal application June of 2006.”*

Response

New power project proposals are outside the scope of this amendment petition. Please see Topic 6. The cumulative impact of additional power projects for the Victorville area would be considered during the assessment process for any new applications of certification. Cumulative impacts assessments are not applied retroactively to existing projects. As a point of information, the proposed City of Victorville hybrid project is proposed for a site near the HDPP site but not the same site.

Comment 10.

10. *Prior to any decision on the HDPP’s Petition to Revise Soil and Water Conditions, that the case be re-opened for a full environmental review. The only way that the Commission can even look at modifying [if at all] these important Soil and Water Conditions, is if the case is fully re-opened, and the cumulative impacts of both projects are fully explored with all facts properly before the Commission.*

Response

New power project proposals are outside the scope of this amendment petition. See response to comment 9 and Topic 6.

Comment 11.

11. *If not fully re-opened, then based on the sworn testimony of the HDPP staff and the Exhibits presented by Bookman, the Commission must hold that R/O is most reliable process; that R/O should be installed immediately, and HDPP is mandated to meet their licensing requirements of 13,000 acre feet by the end of the 5th year of commercial operation or the plant should be shut down. HDPP concurred with all the Energy Commission conditions and agreed to abide by them. The Commission owes the Public the obligation to enforce the conditions approved and agreed to by the parties.*

Response

Many different alternatives are typically discussed during the AFC process for a project. However, it is the conditions of certification that are controlling as to requirements. Reverse osmosis is not a requirement of the conditions of certification

for the HDPP project and, therefore, is not a criterion for determining the compliance status of the project.

Both the project operator and the Energy Commission do recognize that HDPP has not achieved the necessary rate of injection to establish the 5-year water banking goal specified in the conditions. However, it is only reasonable to seek a feasible solution to the problem that will comply with LORS and maintain protection of the environment rather than shutting down the plant.

The amendment process is the vehicle for evaluation of changes in project circumstances and consideration of modifications to conditions of certification. Please see Topic 1 for a discussion of the process of amendment of conditions of certification.

Comment 12.

12. Shortly after certification I requested to be on the list of parties to get compliance reports and was assured that I would get them. To date I have not received any compliance reports. Please forward copies to me

Response

Staff is unaware of a request or an agreement to provide compliance reports to Mr. Ledford. However, staff has sent a copy of the latest annual water injection monitoring report in response to his request.

Comment 13.

13. To conclude, I believe the Commission cannot brush away its own licensing conditions. The Energy Commission's mandate is to protect the environment. It was my view, as well the view of many other members of the Public, that the "dry cooling" technology was the best environmental protection for our area, and would produce the most reliable energy for the future of this community. When the Commission adopted "wet cooling" the Public was assured that the Commission would vigorously protect the environment and seek compliance and enforcement of all licensing conditions. The HDPP petition is another diminution of the Commission's conditions that were intended to protect the environment and the public's interests. It seems to me that the CEC's failure to enforce the conditions it imposed and the conditions that HDPP agreed to will create public distrust and demonstrate none of the Commission's conditions have any teeth.

Response

Dry cooling is outside the scope of this amendment petition. Please see Topic 6.

Comment 14

14. The Commission cannot grant an "Administrative" change to a Condition of Certification when a member of the public objects without processing as a formal amendment to the decision.

Response

HDPP's petition to amend **SOIL&WATER-4** is being processed as a formal amendment to the final decision. It is not being processed as an administrative change. Please see Topic 1.

Comment 15.

15. The proposed amendment will violate LORS (Public Resources Code Section 25525) because the Regional Water Control Board (nor other local water jurisdictions) have not and cannot approve lower water quality than required by the Commission's license without formal amendment by the Commission to the license.

Response

HDPP's petition to amend **SOIL&WATER-4** does not propose to modify any conditions that address water quality. The proposed amendment will have either no effect or a small positive effect on the quality of water injected to the HDPP water bank. Please see Topic 3.

Comment 16.

16. The proposed amendment will not be beneficial to the public or interveners and only helps the applicant save money by abandoning their agreement to bank water at the same quality level as in the native ground water.

Response

The proposed amendment is relatively benefit-neutral. Based on its analysis, staff has concluded that the proposed amendment to **SOIL&WATER-4** would not result in any unmitigated project-specific or cumulative significant impacts to soil or water resources and would comply with all LORS with the adoption of staff's additional recommendations. The amendment will provide a benefit to the applicant because it will allow the project sufficient time to establish its backup water supply, although the extended schedule will also increase the project's risk of a shortfall in its backup water supply. In addition, the amendment will provide a small positive benefit to the regional water supply by increasing the amount of groundwater dissipated to the Mojave River during the extended water banking schedule.

Comment 17.

17. There is no a substantial change in circumstances since Commission certification. All the information was known and fully disclosed in the three years of consideration. The final recommended conditions were made under oath as sworn testimony. Applicant either exercised reasonable diligence to discover the quality of the SWP Water or they misrepresented that they did so.

Response

As discussed in the Staff Analysis, concentrations of TDS and THM precursors in the raw SWP supply for the water bank have exceeded the concentration levels used to establish the TDS and THM limits specified in the HDPP's Waste Discharge

Requirement Conditional Waiver. The method for determining these concentrations was specified in **SOIL&WATER-12**. Staff has confirmed that this original analysis was based on insufficient data. Staff has concluded that additional information now available on TDS in the SWP supply constitutes new information that should be considered in evaluating HDPP's request to extend the water banking schedule. Please see Topic 1.

Comment 18.

18. Review of the Commission Docket Log reveals the all-too familiar pattern by applicants. Generally, they agree to any condition to obtain a license and gain construction approval. Once licensed, applicants routinely use the administrative amendment process to change (dilute) environmental requirements.

Response

HDPP's petition to amend **SOIL&WATER-4** is being processed as a formal amendment to the final decision. It is not being processed as an administrative change. Please see Topic 1.

Comments Submitted During Staff Workshop (6/12/2006)

The following comments were asked during the staff workshop on 6/12/2006 to discuss the petition to extend the water banking schedule for High Desert Power Project. Because the meeting was not recorded, these comments are not verbatim and are based on staff's notes.

Comments from Mr. Frank Trainor, Colton, CA

Comment 19.

19. What causes salinity (TDS) in the water supply (State Water Project water)?

Response

Please see Topic 3.

Comment 20.

20. The project was very concerned about the project's impact on water quality when the project was first proposed. Won't extending the water banking deadline pose a threat to the environment?

Response

Extension of the water banking schedule will provide a positive benefit to the environment because the extended schedule will cause an increase in the amount of groundwater dissipation to the Mojave River (see Topic 2). HDPP's petition does not propose to modify any conditions that address water quality. The installation of the proposed ultraviolet pretreatment and possibly reverse osmosis would have a

neutral or a small positive effect on the quality of water used for water banking (see Topic 3).

Comment 21.

21. If you pile the water up, won't some of it leak out? Shouldn't you consider how much water is leaking away when you extend the schedule?

Response

Please see Topic 2.

Comments from Mr. Gary A. Ledford (Intervenor in the HDPP AFC proceedings), Victorville, CA

Comment 22.

22. Didn't HDPP propose an RO treatment system at the time of certification? Why didn't the CEC require HDPP to install RO?

Response

Please see Topic 4.

Comment 23.

23. If High Desert Power Project installed reverse osmosis (RO) immediately, wouldn't the project meet its water banking goal sooner than 13 years?

Response

Yes. The use of a reverse osmosis pre-treatment system would eliminate the problem of high TDS concentrations, which has been a major factor preventing the scheduled water bank injection operations. However, HDPP's petition does not propose to install reverse osmosis. Since there is no evidence that an extended water banking schedule would cause adverse impacts or cause failure to comply with laws, ordinances, regulations or standards, there is no basis for requiring immediate installation of reverse osmosis. Please see Topic 4.

Comment 24.

24. Even if HDPP installs RO immediately, isn't it correct that the project still couldn't meet the 5 year goal specified in S&W-4?

Response

Yes, if HDPP began installation of reverse osmosis immediately, the project still couldn't meet the 5-year goal specified in S&W-4. HDPP has currently accumulated 2,665 acre-feet of water in the water bank. Installation of reverse osmosis would enable the project to inject approximately 3,000 acre-feet/year, if the proposed ultraviolet system was also installed and there were no unscheduled interruptions in the delivery of SWP water. However, with less than 2 years left in the 5-year schedule, there is insufficient time to meet the 13,000 acre-foot goal.

Comment 25.

25. Isn't it correct that HDPP wouldn't have had TDS problem if they had installed the RO, as proposed? HDPP would have been able to meet the 5-year deadline?

Response

Yes, use of reverse osmosis pre-treatment should eliminate the problem of unacceptably high concentrations of TDS in the water banking injection water. However, installation of reverse osmosis alone may not have enabled HDPP to meet the 5-year deadline because unacceptable concentrations of THM precursors in the injection water supply have also been a major problem that has prevented scheduled injection operations. HDPP has indicated that the THM problem is independent of the TDS problem. HDPP has proposed the installation of an ultraviolet pre-treatment system to eliminate the THM problem.

Comment 26.

26. Has HDPP started to install UV? When will they start? How long would it take to install RO?

Response

The petition proposes to install UV. HDPP will begin the installation process as soon as the proposed amendment to **SOIL&WATER-4** is approved. Completion of ultraviolet installation would be required by the end of four years and two months from the start of commercial operation (approximately July 1, 2007). Staff assumes the reverse osmosis could be installed with one year, based on HDPP's preliminary estimate.

Comment 27.

27. Why isn't the commission requiring HDPP to install RO immediately?

Response

Please see Topic 4.

Comment 28.

28. How much would RO cost?

Response

Staff does not have an estimate of this cost.

Comment 29.

29. Why isn't the CEC requiring earlier trigger points?

Response

Staff is recommending the installation of reverse osmosis as a contingency plan to the proposed extension in case injection falls behind schedule. The eighth year is the earliest point in time that reverse osmosis would need to be installed in order to meet staff's recommended 15-year goal. Please see Topic 4.

Comment 30

30. Extending the water banking schedule increase the possibility that an extended interruption in SWP deliveries will occur. Why aren't there any milestones or contingency plans before year 8?

Response

The first milestone is scheduled for year eight because, under worst-case conditions, the eighth year is the earliest point in time that reverse osmosis would need to be installed to meet staff's recommended 15-year goal. Please see Topic 5.

Comment 31.

31. What would happen if there was a drought this year?

Response

If there were a drought this year and SWP deliveries were suspended, HDPP would use water from its backup water supply. HDPP currently has about a 6-month water supply available in the water bank for project use. Please see Topic 5.

Comment 32.

32. There are reasons other than drought that could cause an interruption in the SWP water supply. In the past, earthquake damage, relining projects and additions to the canal system have required the SWP to shut down for up to a year. Why isn't the CEC considering these problems?

Response

Staff's analysis and recommendations does consider the potential for an extended unscheduled interruption in SWP deliveries to the project. Staff has recommended that the water banking schedule be extended to 15 years and that contingency plans to install reverse osmosis be included in the amendment of **SOIL&WATER-4**. These recommendations incorporate sufficient time and additional water treatment necessary to accommodate at least a 1-year interruption in SWP deliveries and meet the 15-year deadline. Please see Topic 5.

Comment 33.

33. Extending the water banking schedule will decrease the benefit to the environment because it will reduce the number of years HDPP has to replace dissipation. Why isn't the CEC considering this loss the environment?

Response

Extending the water banking schedule will increase the benefit to the environment.
Please see Topic 2.

References:

DWR 2006 California Department of Water Resources. Internet Website for the State Water Project, Operations and Maintenance, Current Automated Station Data: <http://www.womwq.water.ca.gov/AutoStationPage/index.cfm> and Historic Automated Station Data: <http://www.womwq.water.ca.gov/AutoStationPage/HistoricASPage/index.cfm> Accessed on March 31, 2006.