BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

FILED
05-10-10
03:44 PM

In the Matter of the Application of California-American Water Company (U 210 W) for a Certificate of Public Convenience and Necessity to Construct and Operate its Coastal Water Project to Resolve the Long-Term Water Supply Deficit in its Monterey District and to Recover All Present and Future Costs in Connection Therewith in Rates	A.04-09-019

MONTEREY COUNTY WATER RESOURCES AGENCY'S MOTION TO STRIKE SECTION V.F OF DRA COMMENTS ON PROPOSED SETTLEMENT AGREEMENT AND REQUEST TO SHORTEN RESPONSE TIME AND FOR EXPEDITED RULING

Dan L. Carroll
Kevin M. O'Brien
Maya R. Ferry
DOWNEY BRAND LLP
621 Capitol Mall, 18th Floor
Sacramento, California 95814
Telephone: (916) 444-1000
Facsimile: (916) 444-2100
Email: dcarroll@downeybrand.com

Attorneys for Monterey County Water Resources Agency

Dated: May 10, 2010

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

In the Matter of the Application of California-American Water Company (U 210 W) for a Certificate of Public Convenience and Necessity to Construct and Operate its Coastal Water Project to Resolve the Long-Term Water Supply Deficit in its Monterey District and to Recover All Present and Future Costs in Connection Therewith in Rates	A.04-09-019

MONTEREY COUNTY WATER RESOURCES AGENCY'S MOTION TO STRIKE SECTION V.F OF DRA COMMENTS ON PROPOSED SETTLEMENT AGREEMENT AND REQUEST TO SHORTEN RESPONSE TIME AND FOR EXPEDITED RULING

I. INTRODUCTION

At one time, the Division of Ratepayer Advocates ("DRA") worked hand-in-hand with local agencies in Monterey County to assist the water users on the Monterey Peninsula in the quest for a new source of water. DRA's position has changed. A cursory review of all the papers DRA submitted on April 30, 2010 (comments, testimony, and a "report" from the United States Bureau of Reclamation) establishes that DRA no longer wants the project it had a hand in creating; instead, DRA wants to prevent that project's fruition. DRA will deny that, and seeks to disguise that purpose in various ways. For example, DRA claims various cost-cutting and -capping measures can be adopted, but does so without addressing the consequence of such measures to the viability of the hard-won coalition that supports the settlement. In doing so, DRA is fully aware of provisions of the Settlement Agreement, establishing the right of settling parties to refuse to participate in the settlement in the face of unacceptable revisions, that could lead to the termination of the settlement should DRA's drastic proposals be adopted.

Another such foray against the project is made in Section V.F of DRA's comments, which is the subject of this motion. In that section, blithely ignoring the March 2010 Joint Scoping Memo, two subsequent rulings striking testimony, and certification of the Final EIR, DRA attacks the groundwater modeling from the certified Final EIR. DRA tries to dress that collateral attack up as stating concerns about project feasibility, but at the base of the entire

section is an attack on the groundwater modeling contained in the certified Final EIR. The time for such an attack on the Final EIR passed long ago. The Commission has made it clear that environmental review and formal processes were to proceed on parallel tracks.

DRA's tardy attack on the groundwater modeling must be stricken from DRA's comments for two reasons. First, the rules applicable to this proceeding make it clear the attack is too late and leveled in the wrong track of Phase 2. Second, DRA's comments rely upon unsponsored testimony to support DRA's arguments. Therefore, pursuant to Rule 11.1 of the Commission's Rule of Practice and Procedure, the Monterey County Water Resources Agency ("MCWRA") moves the Commission to strike Section V.F of the DRA Comments.

MCWRA further requests the Commission to shorten the time for any opposition to May 17, 2010, and rule on this Motion no later than May 21, 2010. MCWRA makes this request so that it has time to prepare any rebuttal testimony it wishes to prepare if this motion is not granted.

II. DISCUSSION

A. The Environmental and Formal Tracks of This Phase Proceed in Parallel.

Administrative Law Judge Minkin issued an Administrative Law Judge's Ruling Setting a Prehearing Conference to Discuss Scope and Schedule for Phase 2, on February 11, 2009 ("Ruling"). That Ruling set forth a series of proposed issues to be addressed in Phase 2 of this proceeding. On pages 7 through 8, the Ruling stated

> the formal proceeding will not address the environmental assessment of the project and alternatives. Parties will, of course, be able to **cite to the DEIR** in developing their costs scenarios and recommendations. The CEQA process and the formal proceeding converge when the DEIR and FEIR are received into evidence as reference exhibits . . . .

(Emphasis added.)

In its Prehearing Conference Statement filed March 2, 2009, MCWRA expressed concern about the apparent intent to draw a bright line between the CEQA process and the formal proceeding. (MCWRA Prehearing Conference Statement, pp. 5-6.) MCWRA further addressed that issue at the March 13, 2009 prehearing conference. (3/13/09 Tr. pp. 57-58.) Strikingly relevant to this motion are the following statements made at the PHC by MCWRA counsel: "Because there is some assumption, for instance, about seawater intrusion and replenishment of the groundwater basin that doesn't discuss the issue of water rights at all. It may be necessary to go into that in the hearing." (3/13/09 Tr. p. 58, ll. 1-5.)

After considering various parties' prehearing conference statements and having heard argument concerning the proposed strong separation between environmental review and the formal proceeding, including specific argument concerning groundwater intrusion and replenishment issues, the Commission issued a Joint Scoping Memo for Phase 2 of this proceeding on March 2, 2009. That Joint Scoping Memo rejected MCWRA's arguments, making it clear that there would be two parallel tracks in Phase 2. One would concern the then-draft EIR. The Joint Scoping Memo stated:

> The environmental review process and the consideration of need, economics, and other issues associated with the CPCN essentially occur on parallel tracks. Issues B, C, D, and G, described above, will be considered in the CEQA review process and will not be considered in the formal proceeding for Phase 2. We understand that parties have some concerns about this, but in order to ensure this proceeding can move forward expeditiously, it is important that the CEQA issues move forward on a parallel track to the formal proceeding.
>
> Thus, testimony, evidentiary hearings, and briefs in Phase 2 of this proceeding will consider the economics and costs of the various alternatives identified in the DEIR in meeting the identified need, as well as community values and other issues required by Pub. Util. Code § 1001 et seq., as described above. While the alternatives described in the DEIR will provide constraints as to the project and alternatives to be considered, **the formal proceeding will not address the environmental assessment of the project and alternatives.** As discussed at the PHC, parties will, of course, be able to **cite to the DEIR** in developing their cost scenarios and recommendations. The CEQA process and the formal proceeding converge when the DEIR and FEIR are received into evidence as reference exhibits.

(Joint Scoping Memo, p. 9 (emphasis added).) Issues B, C, D, and G were:

> b. What are the significant environmental impacts of the proposed project or project alternatives?
>
> c. Are there feasible mitigation measures that will eliminate or lessen the significant environmental impacts to an insignificant level?
>
> d. As between the proposed project and the project alternatives, which is environmentally superior?
>
> g. Was the EIR completed in compliance with CEQA, did the Commission review and consider the EIR prior to approving the project or a project alternative, and does the EIR reflect our independent judgment?

(*Id.* pp. 5-6.)

Thus, in the formal track of the proceeding – the track we are in now – the Joint Scoping Memo allows parties to **cite** to the EIR in two ways: (a) developing cost scenarios, and (2) making recommendations. It does not allow them to **attack** the EIR, least of all a certified final

EIR. MCWRA accepted that result and made no effort to seek revision of the Joint Scoping Memo.

B. The Assigned ALJ Has Stricken Attacks on the EIR Before.

Twice subsequent to the Joint Scoping Ruling the Commission made clear its determination to keep the two tracks of this phase of the proceeding separate. On May 22, 2009, ALJ Minkin struck large portions of the testimony of a witness for California American Water Company ("Cal Am"), Kevin Thomas. Citing to the Joint Scoping Memo, in an Administrative Law Judge's Ruling Striking Testimony, ALJ Minkin stated "Much of Mr. Thomas' testimony addresses comments and concerns with the Draft Environmental Impact Report, and I am striking those portions of his testimony . . .". (Administrative Law Judge's Ruling Striking Testimony at p. 3.) After listing the testimony to be stricken, ALJ Minkin went on to state "Because the testimony that I have stricken goes to **matters that are within the purview of comments on the DEIR, there is no need to duplicate this work in the evidentiary record of this proceeding.** As explained in previous rulings, the environmental review process and the consideration of need, economics, and other issues associated with the issuance of the Certificate of Public Convenience and Necessity (CPCN) occur on parallel tracks." (Administrative Law Judge's Ruling Striking Testimony at p. 4 (emphasis added).)

ALJ Minkin acted similarly again on July 21, 2009 in an Administrative Law Judge's Ruling Revising Schedule and Striking Testimony in Phase 2. This time, testimony of Marina Coast Water District was stricken. ALJ Minkin stated "In this ruling, I also strike certain testimony served by MCWD, since this testimony addresses the environmental review process and issues that are being considered in the Draft Environmental Impact Report (DEIR), comments to the DEIR, and the FEIR." (Administrative Law Judge's Ruling Revising Schedule and Striking Testimony in Phase 2, p. 3.) After listing the testimony to be stricken, ALJ Minkin stated "Again, because the testimony that I have stricken goes to **matters that are within the purview of comments on the DEIR, there is no need to duplicate this work in the evidentiary record of this proceeding.** As explained in previous rulings, the environmental review process and the consideration of need, economics, and other issues associated with the issuance of the CPCN occur on parallel tracks." (Administrative Law Judge's Ruling Revising Schedule and Striking Testimony in Phase 2, p. 4 (emphasis added).)

These two rulings establish that the Commission meant what it said in the Joint Scoping

Memo. Comments (in this instance, attacks) on the Draft EIR were **not** to occur in the formal phase of this phase. The EIR could only be cited to in developing costs scenarios and make recommendations. Thus, not only did the Commission choose not to adopt a procedure in line with MCWRA's stated concerns about the bright line between environmental review and the formal proceeding, it took actions twice to reinforce that bright line. The Commission should not enforce its Scoping Memo against two parties to the proceeding (Cal Am and MCWD) while allowing another party (DRA) to flout it.

C. Section V.F of DRA's Comments is a Collateral Attack on the Certified Final EIR's Groundwater Modeling.

Groundwater modeling was discussed in some detail in the Draft EIR.[1] DRA, like everyone else, had an opportunity to comment on that modeling, to question it, support it, propose alternatives to it, or say whatever they wanted to say about it. DRA did not do so during the EIR process.[2] Further, after a Proposed Decision was issued in November 2010 certifying the Draft EIR, DRA again made no comment on groundwater modeling contained in the Final EIR.[3] The EIR was certified on December 17, 2009 in D.09-12-017. The only attack to be made on the certified Final EIR at this point is a petition for writ under CEQA. This track of Phase 2 is not the place for such an attack.

Yet attack the certified Final EIR is exactly what DRA does in the DRA Comments. The second sentence of Section V.F, on p. 41, unabashedly references the groundwater modeling in the FEIR. Footnotes 82 and 83 on page 41 cite directly to the FEIR. DRA states its concern about various elements of the modeling runs in the first full paragraph on p. 42. At pages 54-55, DRA asserts that the groundwater modeling does not consider density driven effects. In footnote 112 on p. 55, without supporting testimony, DRA expresses doubts about the groundwater modeling's use of the SEAWAT model, sniffing that Cal Am did not support the model's conclusion that density made little difference in the model's results. DRA's pitch seems to be that the alleged failure calls the accuracy of the modeling into question. The comments discussed in this paragraph are the precise sort of comments that can be made as to a Draft EIR,

---

[1] See, e.g., References found on p. 11 of DRA Data Request CWP #51, a true and correct copy of which is attached.

[2] A review of the EIR on the EIR website discloses no comments by DRA on the Draft EIR.

[3] In fact, no party in this proceeding commented on the Proposed Decision.

and under the Commission's clear rulings does not belong in comments in the formal track of this proceeding.

That this entire section of the DRA Comments is an attack on the FEIR is further proven by the very data request the responses to which DRA uses in its broad attack on the groundwater modeling. DRA's Data Request CWP #51 states: "The following questions reference the groundwater modeling done by GeoScience. Four of the GeoScience Reports are **found in the Final Environmental Impact Report (FEIR) in A.04-09-019**, and other descriptions of the groundwater modeling are **found in other sections of the FEIR as listed in the section on References at the end of this data request**." (DRA Data Request CWP #51, p. 2 (emphasis added).) The References in question are found on page 11, and **every single one of those references begins with four letters: FEIR.** (A true and correct copy of DRA Data Request CWP #51 is attached.)

Section V.F of the DRA Comments shamelessly levels a collateral attack on the groundwater modeling in the FEIR in violation of the Joint Scoping Memo and later rulings striking testimony. This section of the DRA Comments must be stricken.

D. Alternatively, Section V.F Must Be Stricken as Relying Upon Unsponsored Testimony.

Comments are supposed to be argument based on facts and law. The facts are supposed to be found in the record. Section V.F strays far from that model. It is replete with unsupported factual assertions with no identification of where they are found in sponsored testimony. A few examples:

p. 42: "DRA understands that groundwater modelers made simplifying assumptions to be able to work with available models in a cost-effective way . . .". Such an understanding is expert testimony, not argument, but it is not sponsored as testimony.

p. 44: "Assuming annual production of 10,500 AFY of desalination water from the Project Facilities, if the average percentage of groundwater in the source water mix were to exceed 16.2%, the amount of water that must remain in the Salinas Valley Groundwater Basin to meet the Agency Act would exceed 1,700 AFY and Cal Am, would not be able to take its full 8,800 AF annual allocation, potentially jeopardizing the success of the project. The following table illustrates this: . . ." There then follows on p. 45 a full-page table. The quotation and the table are again expert testimony without citation or sponsorship.

p. 48: "It is unlikely that during the test wells state that [sic] this variance in source water

TDS concentrations would be confirmed or disproved." Again, this is an expert testimonial opinion without sponsorship.

p. 55: "Because seawater is denser than freshwater, and it is gravity and these density forces that naturally keep pushing the seawater wedge inland, not considering the effects of these factors in the modeling increases the uncertainty as to the impact of the pumping on the Salinas Basin." This could hardly be more clearly expert testimony, and again it is presented without sponsorship.

Further examples abound in Section V.F. DRA seeks to support its argument using unsponsored testimony. None of these examples of testimony cite to any DRA testimony (and they could not, because the DRA testimony contains no such testimony), nor any other testimony. Nor should inclusion of such unsponsored testimony in comments be allowed. First, testimony is sworn; comments are not. Second, MCWRA fears that were it to seek to cross-examine DRA witnesses with respect to these factual assertions, DRA would object that the comments are not part of the witness' sponsored testimony and not subject to cross-examination.

The Commission should not countenance inclusion of unsworn testimony in comments and then use of such testimony to support argument. Section V.F must be stricken.

E. MCWRA Requests that DRA Respond by May 17 and the Commission Rule by May 21.

The Commission should strike Section V.F of DRA's Comments. However, if the Commission does not do so, MCWRA must determine whether to provide rebuttal testimony on the subjects discussed in Section V.F. MCWRA requires a ruling in that regard no later than May 21, 2010. MCWRA therefore requests the Commission to require DRA to file and serve any response to this motion by May 17 and that the Commission rule on the motion no later than May 21.

III. CONCLUSION

DRA should be required to follow the same rules as all other parties. It should not be allowed to collaterally attack the FEIR, nor should it be allowed to disguise testimony as

comments or use such unsworn testimony as support for argument. This motion should be granted.

Dated: May 10, 2010

Respectfully submitted,

DOWNEY BRAND LLP

By: /s/
Dan L. Carroll
Attorneys for Monterey County Water Resources Agency

DRA

Division of Ratepayer Advocates
California Public Utilities Commission
State of California

505 Van Ness Avenue
San Francisco, CA 94102

http://dra.ca.gov

DATA REQUEST CWP #51
CAL AM COASTAL WATER PROJECT
APPLICATION (A.) 04-09-019

Date: January 27, 2010

Response Due Date as Agreed to by Cal Am:
February 2, 2010 for most questions
February 26, 2010 for 6(d, subsection i), 27(a), 27(b), 27(c), 28(a) and 33

To: F. Mark Schubert, P.E.
Vice President - Engineering
California American Water
1033 B Avenue, Suite 200
Coronado, CA 92118
(619)435.7407 office
F.Schubert@amwater.com

Stephen Morrison
California American Water
333 Hayes Street, Suite 202
San Francisco, CA 94102
(415) 561-9650
stephen.morrison@amwater.com

From: Diana Brooks
Supervisor, Water Branch
Division of Ratepayer Advocates
505 Van Ness Avenue, Fourth Floor
San Francisco, CA 94102
(415) 415 703-1445
dsb@cpuc.ca.gov

Please Note: This data request was originally sent to Marina Coast Water District on January 20, 2010, but per agreement of the Parties, is now being redirected to California American Water Company. Per DRA discussions with Mark Schubert, Cal Am has agreed to provide responses to all of the questions with the exception of 6(d, subsection i), 27(a), 27(b), 27(c), 28(a) and 33 by February 2, 2010 and responses those questions by February 26, 2010. Please see additional instructions at end of the data request.

The following questions reference the groundwater modeling done by GeoScience. Four of the GeoScience Reports are found in the Final Environmental Impact Report (FEIR) in A.04-09-019, and other descriptions of the groundwater modeling are found in other sections of the FEIR as listed in the section on References at the end of this data request.

Groundwater Modeling Assumptions

The FEIR, Volume 3, Appendix Q (Technical Memorandum: Changes to DEIR Phase 1 Project, Marina Coast Water District, California American Water, and Monterey County Water Resources Agency, October 15, 2009) provides an overview of the GeoScience North Marina Model (NMA) and its relationship to the Salinas Valley Integrated Groundwater and Surface Water Model (SVIGSM). The appendices attached to FEIR, Volume 3, Appendix Q include several 2009 GeoScience reports that describe the modeling in more detail. These reports also reference a July 25, 2008 GeoScience Report that modeled slant wells and Regional Project Scenario 3a. This report was done for Cal Am and can be found in the FEIR, Volume 3, Appendix E.

Please clarify how the SVIGSM connects to the NMA model for simulations of the Baseline and Regional Project scenarios run by GeoScience.

1. What types of mathematical boundary conditions (and assumptions) are applied to the northern, eastern, and southern boundaries of the NMA model domain?
2. These conditions are apparently given as flux (flow per unit width) derived from the regional model SVIGSM, and vary with location and time. Please explain how these fluxes are derived in the regional model and under what assumptions, e.g., hydrologic data, development levels, and management practices.
3. Are exactly the same boundary conditions used for both the Baseline and Project 4f scenarios?
4. What initial conditions are used (e.g. hydraulic head, total dissolved solids), and are exactly the same conditions used for both the Baseline and Project 4f scenarios?
5. When a simulation calculation starts there is often a transient period of adjustment. How long does this take? Does it need to include several wet and dry years, and perhaps be as long as the 56-year time period of simulation?
6. Why is it appropriate to use updated model parameters in the SVIGSM that use 2030 as a baseline -- a refined version of the Future Baseline Conditions of the Salinas Valley Water Project (SVWP) utilized in the SVWP EIR/EIS -- when the Regional Project could be online producing water by 2015? (See FEIR description of NMA model in Volume 1, Chapter 4, on pages 4.2-43 and 44)
   From the FEIR, pages 4.2-43 and 44:

   "For the purpose of this project analysis, the IGSM was revised by Water Resources and Information Management Engineering, Inc. (WRIME) and model parameters were exported to GEOSCIENCE Support Services, Inc. Geoscience to develop a localized groundwater

model referred to as the North Marina Model. The North Marina Model simulates long-term groundwater flow and seawater intrusion conditions within the SVGB in the vicinity of the North Marina Project."

"The IGSM is a regional groundwater model with relatively large model cells of approximately 0.4 square miles that covers the entire SVGB (Montgomery Watson, 1994). ***The IGSM was updated with baseline conditions intended to represent land use and water use indicative of 2030 conditions and is a refined version of the Future Conditions Baseline utilized in the SVWP EIR/EIS (WRIME, 2008).*** *Refinements of IGSM include 1) extension of the hydrologic period from 1949 to 2004, 2) the addition of the changes identified through development of the Biological Opinion for the SVWP including minimum stream flow requirements for fish passage, and 3) the inclusion of the SVWP itself as envisioned in 2030 by the SVWP EIR/EIS. Additionally, land use and water use were updated to add any development now in place that was not included in the projected 2030 land use and water use estimates (WRIME, 2008)." [Emphasis added.]*

"The North Marina Model was constructed with a smaller model cell size of 200 feet by 200 feet within a focused area south of Elkhorn Slough, west of Salinas, north of the Dunes State Park, and east of Monterey Bay (GEOSCIENCES, 2008). The North Marina Model uses the MODFLOW model computer code to simulate groundwater flow. MODFLOW was developed by the USGS and is a commonly used modeling program for water resources applications. The North Marina Model uses the MT3DMS in conjunction with MODFLOW to simulate solute transport of saline groundwater. MT3DMS is a three-dimensional transport model for simulation of advection, dispersion, and chemical reactions of contaminants in groundwater (GEOSCIENCES,2008)."

"Using the updated model parameters in IGSM, the baseline conditions were modeled for the calibration period between October 1979 to September 1994 and the boundary conditions were used in the North Marina Model. Aquifer parameters from the IGSM to the North Marina Model include the top and bottom elevations for the primary model layers, horizontal and vertical hydraulic conductivity for specific model layers, and specific storativity, and effective porosity. Modeled boundary conditions for recharge and discharge include monthly data for deep percolation from precipitation and applied water (including return flow), stream recharge, and groundwater pumping. These modeled boundary parameters were applied to the North Marina Model area, as were the model simulated groundwater elevations."

a. Are the same SVIGSM updated model parameters that were used for the slant wells used for all the other scenarios? If not, please identify and explain any differences.
b. Does the NMA model assume that the SVWP is fully operational at the beginning of Year 1? If so, please explain why this is a valid assumption. If not, does the operation of the SVWP phase in over the first 15 years of the Regional Project? If not, why not?
c. Please explain the inputs used to model the baseline and Scenario 4f in order to simulate 2030 conditions, and explain how these inputs simulate the SVWP in 2030?
d. What is the impact on the NMA model results of using this 2030 baseline assumption? Is it akin to assuming that the first 15 years are wetter years than they otherwise would be?

i. What is the cumulative effect on model results of assuming the SVWP is in place from the first year of the Regional Project rather than it being phased-in?

ii. What SVWP components not yet operating are included in the updated baseline conditions? What is the contribution of each in acre-ft/yr to groundwater inflows or outflows? What is the status of each?

e. Did WRIME, GeoScience or anyone else run a Scenario 4f without updating the SVIGSM baseline conditions as described above? If so, please provide the baseline assumptions used and the results of that modeling.

7. Was the revised SVIGSM run for the Regional Project Scenario 4f to determine whether there were any short or long term impacts outside the NMA boundaries?

8. Please explain how the boundary conditions were specified and applied to the North Marina Model, and indicate if the same process was applied to the slant wells and all the other scenarios run, and in particular, Scenario 4f.

9. The July 25, 2008 GeoScience Report found in the FEIR, Volume 3, Appendix E discusses baseline and predictive scenarios for slant wells and Regional Project Scenario 3a.
At page E-24 it says "The Baseline and Regional Project scenarios were developed and run using the SVIGSM by WRIME. The recharge and discharge terms and model simulated water level elevations from each of the SVIGSM predictive scenarios for the period from October 1948 through September 2004 were used for North Marina Model predictive scenarios."

   a. Please clarify the meaning of "...were used for North Marina Model predictive scenarios." as noted in the quote above from the 2008 GeoScience report as shown in FEIR, Volume 3, Appendix E, pg. E-24.

      i. Were the initial conditions the same for both the Baseline and Project scenarios, but not the boundary conditions?

      ii. Or were the boundary conditions also the same as stated on page E-18, sec. 2? There appears to be a contradiction.

   b. Do the answers in 9(a) also apply for Scenario 4f as described in the February 26, 2009 GeoScience Report found in the FEIR, Volume 3, Appendix Q?

10. Are the inputs from the SVIGSM provided for both the baseline (no project) and Scenario 4f, or just the baseline?

    a. If the results from the SVIGSM are provided for both the baseline and the project scenario 4f, please explain what the NMA model does that is not done by the SVIGSM model other than filling in a more detailed (smaller-grid) calculation of hydraulic head and the 500 mg/L chloride contours.

11. Does the NMA Model have an accompanying report that documents the model? If so, please provide a copy of it.

Differences between GeoScience 2008 and 2009 modeling

12. Why is the baseline used in the July 2008 GeoScience modeling runs substantially different from the baseline shown in the February 2009 GeoScience modeling?

(Please refer to the "Summary of Water Budget – Baseline and Slant Well Scenario" table and the "Summary of Water Budget – Baseline and Regional Project 3a Scenario" in the July 2008 GeoScience Report (FEIR, Volume 3, Appendix E, at pages E-30 and E-34 respectively. Both of these tables show substantially different baseline conditions than the "Summary of Water Budget – Baseline and Regional Project 4f Well Scenario" in the February 2009 GeoScience Report (FEIR, Volume 3, Appendix Q (Appendix A), page Q-26.)

a. The July 2008 GeoScience Report shows the baseline Ocean Outflow at 15,220 acre-ft/yr whereas the February 2009 GeoScience Report shows the baseline Ocean Outflow at 3,863 acre-ft/yr. Since the baseline reflects the no-project condition, please explain why these two baselines are different.
b. The July 2008 GeoScience Report shows the baseline Ocean inflow at 4,032 acre-ft/yr whereas the February 2009 GeoScience Report shows the baseline Ocean inflow at 6,679 acre-ft/yr. Since the baseline reflects the no-project condition, please explain why these two baselines are different.
c. The July 2008 GeoScience Report shows the baseline Northern, Eastern and Southern Model Boundary (Underflow) at 12,398 acre-ft/yr whereas the February 2009 GeoScience Report shows the baseline Northern, Eastern and Southern Model Boundary (Underflow) at 1,619 acre-ft/yr. Since the baseline reflects the no-project condition, please explain why these two baselines are different.
d. Both the July 2008 GeoScience Report and the February 2009 GeoScience Report shows the baseline non-project groundwater pumping at 35,850 acre-ft/yr. (See FEIR, Volume 3, Appendix E and Appendix Q, pages E-30 and E-34, and page Q-26.)
    i. The 2008 GeoScience report shows no difference in non-project groundwater pumping for the slant well project but a huge reduction (8,207 acre-ft/yr) in non-project groundwater pumping for the regional project Scenario 3a. What is this reduction due to?
    ii. The 2009 GeoScience Report shows that Non-project pumping under the Regional Project Scenario 4f has decreased by 3,823 acre-ft/year. Please explain what this decrease in non-project pumping is due to over the baseline scenario?
e. Please also explain the difference between the baseline groundwater elevations as shown in the corresponding graphs in the July 2008 and February 2009 GeoScience Reports found in the FEIR, Volume 3 on pages E-50 and Q-28 respectively?

Density-driven effects

13. Does the NMA model assume a sharp interface between seawater and fresh water, or a transitional zone, or neither?
14. In the February 2009 GeoScience Report found in the FEIR, Volume 3, Appendix Q at page Q-21 there is a summary of assumptions made for the model Scenario 4f. The fourth assumption says that 180-foot Aquifer is one complete model layer. Does this imply that the model does not consider density-driven effects, because it is assumed

everything is uniform across the depth of the aquifer? If not, please explain how density differences are considered.

15. What are the relative densities of seawater, brackish water (range) and fresh groundwater?
16. What is the typical density stratification (vertical profile) in the 180-foot aquifer?
17. Since seawater is heavier than groundwater, and seawater intrusion is a density-driven underflow or wedge under overlying ground water, couldn't seawater and fresh water be going in different directions and velocities at different elevations in the aquifer? Is this taken into account in the NMA model? If not, what are the implications of not considering this possibility?

Seawater intrusion

18. The GeoScience NMA modeling runs as shown in the figures on FEIR page Q-30 in Volume 3, Appendix Q, predict that seawater intrusion will be pushed back by the Baseline Scenario alone yet the GeoScience Report indicates the project pumping will halt or reverse the effects of seawater intrusion into the 180-foot aquifer.

    In FEIR, Volume 5, page 13.6-5, it states "The findings of the groundwater modeling of the North Marina Project and Regional Project indicate that, in all cases, the proposed groundwater pumping from the extraction wells proposed under both projects would halt the advancement and, in most areas, reverse the effects of intrusion of seawater into the 180-foot aquifer. When compared to the baseline extent of intruded seawater, the project scenarios show an accelerated seaward retreat of intruded seawater, as indicated by the extent of the 500 mg/L chloride limit line."

    Then, GeoScience states (FEIR, Volume 3, Appendix Q, page q-23) that "Figure 3 shows the 500 mg/L chloride limit of the seawater intrusion in the 180-Foot Aquifer at selected times over the 56-year model period. In general, the rate of seawater intrusion when the Regional Project is operating under Scenario 4f conditions is equal to Baseline conditions. Only the area in the vicinity of the Project wells and the area just south of the Salinas River mouth remains intruded longer under Scenario 4f conditions than if there was no Project. This is due to the trough that is designed to extract mostly seawater from the desalination wells of the Regional Project Scenario 4f."

    a. How does the proposed groundwater pumping halt the advancement of seawater intrusion when the modeling run results show seawater intrusion to be worse than the baseline in many locations several decades into the project?
       See February 2009 GeoScience Report figures of the results at various model years as shown in Fig. 1 (head) and Fig. 3 (chloride limit boundaries)which show pumping scenario 4f results in greater seawater intrusion than the baseline (no project) for miles both north and south of the Salinas River from year 35 on. (See FEIR, Volume 3, Appendix Q, pages Q-28 and Q-30)
    b. Please explain the apparent inconsistency between the GeoScience report text and the figures referenced above.
    c. How is the trough "designed to extract mostly seawater from desalination wells"? (See quote above from FEIR, Volume 3, Appendix Q, page q-23.)

d. Please explain the conclusion in the Feb. 26, 2009 GeoScience report, (FEIR, Volume 3, Appendix Q, at page Q-78) that states, "After 21 years of pumping Scenario 4f, sea-water intrusion in the 180-Foot Aquifer will be moved back to approximately one mile from the coast (i.e. a seaward migration of approximately five miles)"
e. Isn't it also true that the same statement (above) could also be made for the baseline scenario? Doesn't this imply that the cause of the retreat of seawater intrusion is not due to project pumping but rather to baseline conditions?

19. Please explain how the extraction in the well field in Regional Project Scenario 4f would prevent additional seawater from coming in around the ends of the well field ("trough") and intruding into the aquifer to combine with the brackish water pumped out from the inland side. Please explain how the line of wells could make a barrier to seawater intrusion when the length of the row of wells is short in comparison to the coastline as shown in the February 2009 GeoScience Report, Figure 2 (found in the FEIR, Volume 3, Appendix Q on page Q-29).

Ocean Inflows

20. The various GeoScience Reports show NMA model box extending several miles into the ocean past the outcrops of the 180-ft and 400-ft aquifers.
    a. How far out in the ocean are the openings in the outcroppings to the 180-ft and 400-ft aquifer from the coastline?
    b. For the part of the NMA model in the ocean, has the modeling calculated piezometric head contours? If not, why not? If so, why aren't they shown in the maps for Scenario 4f in the February 2009 GeoScience report, as well as the other scenarios?
    c. What are the piezometric head contour lines for the part of the NMA model in the ocean?
21. In its July 2008 report, GeoScience indicates that MODFLOW and MT3DMS were the computer codes used for the North Marina Model. (FEIR, Volume 3, Appendix E, page E-16)

    GeoScience states, "MODFLOW and MT3DMS are the model computer codes used for the North Marina Model. MODFLOW is a block-centered, three-dimensional, finite difference groundwater flow model developed by the USGS for the purpose of modeling groundwater flow. MT3DMS is a modular three-dimensional multispecies transport model for simulation of advection, dispersion, and chemical reactions of contaminants in groundwater systems (Zheng and Wang, 1998). The SEAWAT program was also used to compare the results from the MODFLOW and MT3DMS. In general, MODFLOW and MT3DMS yield a very similar result compared to the SEAWAT with slight differences in water level elevation (approximately one foot). [Footnote: The SEAWAT program was developed by the United States Geologic Survey (Guo and Langevin, 2002) to simulate three-dimensional, variable density, groundwater flow and solute transport in porous media. The source code for SEAWAT was developed by combining MODFLOW and MT3DMS into a single program that solves the coupled flow and solute transport equations."

    a. Is the solute transport module MT3DMS, as used in the NMA, a three dimensional model where the salinity is acting dynamically to affect the flow

patterns? If so, please explain how the assumption of a uniform or homogenous model layer affects the results of solute transport module?

b. Is the solute transport module MT3DMS, as used in the NMA model, a passive model that calculates the salinity based on calculated flow pattern results without density feedback to the MODFLOW model?

c. What were the solute boundary conditions for simulations with MT3DMS and how were they obtained?

d. Have these models been used before to model a huge disturbance (imposition of a 22.2 mgd well field) in a coastal aquifer with seawater intrusion?

22. Why do the graphs show groundwater piezometric head contours pinched up near the coast when in fact the wells in the 180-Foot aquifer are not directly connected to the coast and the aquifer continues out into the ocean for several miles?
See FEIR, Volume 3, Appendix Q, pages Q-28, Q-51, Q-59, Q-61 and Q-87.

23. As described in the FEIR, Volume 3, Appendix E, pages E-18 and E-19, the NMA model has six layers. As described there, Model Layer 1 is "only active beneath the ocean and is assumed to be 1 ft thick." The footnote indicates that "the sole purpose of Model Layer 1 is to allow vertical leakage from the ocean into the underlying aquifers.

a. Were these same layers used for all scenarios modeled by GeoScience with the NMA model? If not, please explain any differences.

b. Please explain the rationale for a 1 foot model layer when the geohydrology shows the top of the lower 180-foot aquifer at approximately 200 feet below sea level. How is Model Layer 1 as shown in the 2008 GeoScience report in the FEIR, Volume 3, Appendix E, at page E-19 consistent with the Geohydrologic cross section shown in the 2009 GeoScience Report, as shown in Figure 2 on page Q-83 of the FEIR, Volume 3, Appendix Q?

c. What is the relative leakage of seawater through Model Layer 1 as compared to the total amount of seawater entering the aquifer (Model Layer 2) at the outcropping in the ocean? (i.e. what percentage of the seawater inflow passing the shoreline entered the aquifer via leakage in Model Layer 1 and what percentage is drawn in from the 180-foot outcropping?)

d. At the coast, has a boundary condition of piezometric head equal to the sea level elevation been effectively imposed by the artifact of Layer 1 even though the 180-ft aquifer is confined at depth? (see Fig. 2, on FEIR, Volume 3, Appendix Q, pageQ-83) Please explain.

e. Does the model account for differences between freshwater head and seawater head in the aquifers (due to the density difference)? If yes, please explain how this is done. If not, please explain why not.

f. Does the model use only freshwater head?

Baseline and Regional Project Water Budget

24. With reference to the "Summary of Water Budget -- Baseline and Regional Project 4f Well Scenario" from the February 26, 2009 GeoScience Report as shown in the FEIR, Volume 3, Appendix Q at Page Q-26.
    a. The aquifer storage must be a composite of freshwater, brackish groundwater and ocean water, please provide the breakdown of each of these three types of water and their changes during the simulation. (The total storage is not expected to show much change, as indicated on at page Q-26.)
    b. Please provide similar tables for an average of the five consecutive wettest years, the five consecutive driest years, and five consecutive "normal" years.

Regional Project Wellfield and Pumping

25. How far apart are the wells located from each other in Scenario 4f?
26. Has there been any evaluation of the sensitivity of the drawdown to the spacing of the wells?
27. In its February 2009 report, GeoScience concludes that, "The Regional Project Scenario 4f shows that the six extraction wells pumping continuously in the 180-Foot Aquifer would create an extraction barrier or trough parallel to the coast. … Operating the wells continuously in this manner will maintain a barrier that would prevent future seawater intrusion of the 180-Foot Aquifer." (FEIR, Volume 3, Appendix Q, page Q-22) What would happen if the wells were not operated continuously?
    a. Was any modeling done to simulate a situation where all the wells were out-of-service for any period of time? If so, please provide the results.
    b. What would happen if all the wells stopped? Please explain how the impacts vary with time.
    c. What would happen if the two middle wells stopped? Please explain how the impacts vary with time.
28. How does the 22.2 mgd well field for the regional project affect the existing VOC plume in the vicinity of the proposed production wells?
    On page Q-93 of Vol 3, FEIR there is a July 6, 2009 letter to Jim Heitzman from Jan Sweigert at the California Department of Public Health. On page 2, she indicates, "The Department is concerned that a 13 MGD well field could impact the direction and rate of flow of the existing volatile organic chemical (VOC) plume in the vicinity of the proposed production wells. An evaluation of the impacts of the project should be completed. The evaluation should evaluate the effects of maximum pumping under both extended drought and high precipitation (recharge) conditions to ensure that the operation of the proposed project will not result in the VOCs appearing in the raw water of the proposed project well field or of any other active well in the area."
    a. Was the evaluation mentioned above done? If so, please provide the results. If not, when will it be done?
    b. Has the CDPH been informed that the Regional Project envisions a 22.2 mgd well field? If so, please provide copies of any correspondence on this matter.

Ratio of seawater to groundwater in pumped water

29. What is the definition of groundwater from the Salinas Valley Groundwater Basin (SVGB) used by GeoScience in the modeling runs of various scenarios? Does it include brackish water? Or is brackish water considered to be a composite of seawater and fresh groundwater, so that only the freshwater component is considered SVGB groundwater?
    Please refer to the table in the February 26, 2009 GeoScience Report (see FEIR, Volume 3, Appendix Q on page Q-26) which shows 24,923 AFY of Regional Project groundwater pumping.
30. What are the predicted 56-year average TDS concentrations for the Regional Water Supply Wells Scenario 4f?
    The Feb. 26, 2009 GeoScience report (FEIR, Vol 3, Appendix Q, page Q-23) states, "The predicted TDS concentration from the six extraction wells is shown on Figure 4. As can be seen, the wells all produce water with fluctuating TDS concentrations (ranging from approximately 21,300 mg/L to 34,500 mg/L) throughout the 56-year period. However, the TDS concentration is closer to the assumed seawater concentration of 35,000 mg/L during both normal and dry years than during wet years. The northernmost extraction well (Well 1) and the southernmost extraction well (Well 6) have more fluctuating TDS concentrations, but at times still produce close to the 35,000 mg/L concentration. During wet years, the TDS concentration in the extraction wells indicates that the wells are producing a mixture of seawater and onshore groundwater. This is due to the increase of groundwater flowing from inland towards the ocean.

    "The following chart shows the average TDS concentration of the desalination feedwater extracted by the six Regional Project wells will average approximately 29,300 mg/L during the first 10 years of the model simulation. The predicted TDS concentration of 29,300 mg/L for the feedwater extracted by the six Project wells is approximately 84 to 86 percent of the TDS concentration of seawater (34,000 to 35,000 mg/L). This relationship, a TDS of 84 to 86 percent of seawater, represents a conservative estimate of the approximate relationship of seawater intruded groundwater versus ocean water contribution to the extracted well water."
    a. Please prepare a time graph of six pump average TDS for all 56 years showing intra-year variations as in the 10-year graph in the February 2009 GeoScience Report found in the FEIR, Volume 3, Appendix Q on page Q-25 and the 6 graphs in Fig 4, Page Q-31. Expand the vertical scale by covering only the range 20,000 to 35,000 mg/L.
    b. Please provide a table of annual average values and a histogram to show the frequency distribution of these values.
31. As shown in Figure 9 of the 2009 GeoScience Report (see FEIR, Volume 3, Appendix Q, page q-31), in dry years, the model results show the ratio of seawater to groundwater increases. Please explain if the SVGB will be in balance in dry years, and if so, whether it is additional seawater flowing into the basin that creates that balance?
32. Please explain differences in the predicted TDS concentrations from Regional Project Scenario 3a simulated in July 2008 as shown in July 2008 GeoScience Report (FEIR, Volume 3, Appendix E, page E-33) from those predicted in the 2009 GeoScience Scenario 4f?

33. What are the uncertainties, possible errors, and range of accuracy of the seawater / groundwater ratio, or the sensitivity of this ratio to model input assumptions?

References

- FEIR, Volume 3, Appendix Q: Technical Memorandum: Changes in the DEIR Phase 1 Project, Marina Coast Water District, California American Water, and Monterey County Water Resources Agency, October 15, 2009 (PDF, 10.5MB)
  This includes the following GeoScience documents:
  ** GeoScience February 26, 2009 North Marina Groundwater Model Scenario 4f*
  ** GeoScience Figures from Modeling Runs (September 2009)*
  ** GeoScience Geohydrologic Conditions Technical Memorandum (June 5, 2009)*
  Reference: http://www.cwp-eir.com/downloads/Vol3_FEIR/appendix-q_calam_feir.pdf
- FEIR, Volume 3, Appendix E: E. Geoscience, North Marina Ground Water Model Evaluation of Potential Projects, July 25, 2008 (PDF, 5.9MB)
  Reference: http://www.cwp-eir.com/downloads/Vol3_FEIR/appendix-e_calam_feir.pdf
- FEIR, Volume 5, Section 13: Master Responses.
  This includes Section 13.6: Master Response - Project Effects on the Salinas Valley Groundwater Basin.
  Reference: http://www.cwp-eir.com/downloads/Vol5_FEIR/13_master-responses.pdf
- FEIR, Volume 1, Sections 4.1-4.6 Environmental Setting, Impacts and Mitigation Measures: Moss Landing and North Marina Project (PDF, 18.5MB)
  Reference: http://www.cwp-eir.com/downloads/Vol1_FEIR/4-1_to_4-6_settings_impacts.pdf
- FEIR, Volume 2, Section 6 Environmental Setting, Impacts and Mitigation Measures: Regional Project (PDF, 2.6MB)
  Reference: http://www.cwp-eir.com/downloads/Vol2_FEIR/6_regional_setting_impacts.pdf
- FEIR, Volume 3, Appendix P: Groundwater Modeling Simulation of Impacts for Monterey Regional Water Supply Project, 20,000 AFY Desalination Pumping Scenario (Scenario 4d) Technical Memorandum (PDF, 5.3MB)
  Reference: http://www.cwp-eir.com/downloads/Vol3_FEIR/appendix-p_calam_feir.pdf

Additional instructions: Provide copies of your response to Diana Brooks (dsb@cpuc.ca.gov), Max Gomberg (mzx@cpuc.ca.gov), and to Monica McCrary (mlm@cpuc.ca.gov), by the dates agreed as shown above. Please identify the person who provides the response and his (her) phone number. Provide electronic responses if possible and a set of hard copy responses with your submittal. If a document is available in Word format, please send it as a Word file instead of a PDF file. All data responses should have each page numbered, referenced, and indexed so worksheets can be followed. If any number is calculated, please include a copy of all electronic files so the formula and their sources can be reviewed.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the attached:

MOTION TO STRIKE SECTION V.F OF DRA COMMENTS ON PROPOSED SETTLEMENT AGREEMENT AND REQUEST TO SHORTEN RESPONSE TIME AND FOR EXPEDITED RULING

on all known parties to R. 04-09-019 by transmitting an e-mail message with the document attached to each party named in the official service list. I served a copy of the document on those without e-mail addresses by mailing the document by first-class mail addressed as follows:

See attached service list

This service list was compiled from the service list appearing on the docket page for this proceeding on this date on the website of the California Public Utilities Commission.

Executed this 10th day of May, 2010, at Sacramento, California.

/s/

Shawn Prentiss

Service List R. 04-09-019, as of May 10, 2010

venskus@lawsv.com; georgeriley@hotmail.com; dave@laredolaw.net; mlm@cpuc.ca.gov; mfogelman@friedumspring.com; sleeper@manatt.com; nelsonp34@hotmail.com; Carroll, Dan; steller@rtmmlaw.com; jgeever@surfrider.org; connere@west.net; carrie.gleeson@amwater.com; robert.maclean@amwater.com; tim.miller@amwater.com; tmontgomery@rbf.com; Gregory.Wilkinson@bbklaw.com; jason.Ackerman@bbklaw.com; llowrey@nheh.com; ffarina@cox.net; weeksc@co.monterey.ca.us; stecllns@aol.com; nisakson@mbay.net; Glen.Stransky@LosLaurelesHOA.com; bobmac@qwest.net; dlopez@montereyherald.com; jim@mcwd.org; manuelfierro02@yahoo.com; erickson@stamplaw.us; bobh@mrwpca.com; catherine.bowie@amwater.com; john.klein@amwater.com; andy@mpwmd.dst.ca.us; darby@mpwmd.dst.ca.us; heidi@laredolaw.net; tgulesserian@adamsbroadwell.com; James.M.Reilly@amwater.com; ezigas@esassoc.com; dhansen@friedumspring.com; selkins@friedumspring.com; lweiss@manatt.com; ldolqueist@manatt.com; michael@rri.org; Audra.Hartmann@Dynegy.com; lmelton@rmcwater.com; scorbin@surfrider.org; swilliams@poseidon1.com; joyce.ambrosius@noaa.gov; O'Brien, Kevin; abl@bkslawfirm.com; dstephen@amwater.com; bca@cpuc.ca.gov; ang@cpuc.ca.gov; cjt@cpuc.ca.gov; dsb@cpuc.ca.gov; jzr@cpuc.ca.gov; llk@cpuc.ca.gov; mzx@cpuc.ca.gov; mml@cpuc.ca.gov; pva@cpuc.ca.gov; rkk@cpuc.ca.gov; rra@cpuc.ca.gov; steve@seacompany.org

BY U.S. MAIL

JERRY GALLEGO
MONTEREY COUNTY CIVIL GRAND JURY
15790 HORIZON WAY
PRUNEDALE, CA 93907