

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400
TDD (415) 597-5885



July 3, 2015

Mr. Ian Crooks, P.E.
Engineering Manager
California American Water Company
511 Forest Lodge Rd, Suite 100
Pacific Grove, CA 93950

VIA EMAIL: ian.crooks@amwater.com

RE: Condition Compliance – Special Condition #11 of Coastal Development Permits (“CDPs”) A-3-MRA-14-0050 and 9-14-1735 for California American Water’s (“Cal-Am’s”) slant test well project in Marina, Monterey County.

Dear Mr. Crooks:

Thank you for your submittal of the Hydrological Working Group’s (“HWG’s”) June 10, 2015 letter pursuant to the above-referenced Special Condition #11.¹ That condition requires that the pump test for Cal-Am’s test well be temporarily halted if water levels decrease or if total dissolved solid concentrations (“TDS”) increase in the project’s Monitoring Well 4. The condition also requires Cal-Am to submit an application for a permit amendment if the Executive Director determines that the identified decrease in water level was caused at least in part by the pump test. As noted in the letter, Cal-Am on June 5, 2015 stopped its pump test because water levels were approaching the maximum allowable water level decrease.

As you know, part of the intent of that requirement was to provide for a temporary halt to the pump test to determine whether any identified decrease in water levels could be potentially due to a drawdown from the test that might propagate to more distant agricultural wells. Monitoring

¹ Special Condition #11 states: “**Protection of Nearby Wells. PRIOR TO STARTING PROJECT-RELATED PUMP TESTS, the Permittee shall install monitoring devices a minimum of four wells on the CEMEX site, within 2000 feet of the test well, and one or more offsite wells to record water and salinity levels within the wells and shall provide to the Executive Director the baseline water and Total Dissolved Solids (“TDS”) levels in those wells prior to commencement of pumping from the test well. The Hydrogeology Working Group shall establish the baseline water and TDS levels for the monitoring wells. During the project pump tests, the Permittee shall, at least once per day, monitor water and TDS levels within those wells in person and/or with electronic logging devices. The Permittee shall post data collected from all monitoring wells on a publicly-available internet site at least once per week and shall provide all monitoring data to the Executive Director upon request. If water levels drop more than one-and-one-half foot, or if TDS levels increase more than two thousand parts per million from pre-pump test conditions, the Permittee shall immediately stop the pump test and inform the Executive Director. The Hydrogeology Working Group shall examine the data from Monitoring Well 4 if the test well is shut down due to either of these causes. The Hydrogeology Working Group shall determine whether the drop in water level or increase in TDS is from a cause or causes other than the test well, and it will submit its determination to the Executive Director. If the Executive Director agrees with the Hydrogeology Working Group that the cause of the drop in water level or increase in TDS was a source or sources other than the test well, then the Executive Director may allow testing to resume. If, however, the Executive Director determines that the drop in water level was caused at least in part by the test well, then the Permittee shall not re-start the pump test until receiving an amendment to this permit.**”

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Well 4 is about 2000 feet from the test well, and the nearest active agricultural well is another several thousand feet further from the test well. This requirement was meant to provide an additional factor of safety to ensure the pump test would not adversely affect coastal agriculture.

Executive Director's Determination

Special Condition 11 requires, in part, that Cal-Am stop its pump test if monitoring shows more than a 1.5-foot decrease in water levels at Monitoring Well 4. It also requires the HWG to examine the monitoring data to determine the causes of the water level decrease and to submit its determination to the Executive Director. We reviewed the above-referenced letter, along with the HWG's follow-up June 22, 2015 letter, weekly monitoring reports, and a June 25, 2015 submittal by Remy Moose Manley, all of which address various aspects of the pump test, monitoring results, aquifer characteristics, and regional and seasonal pumping regimes. The June 22nd HWG letter notes that there are likely several influences other than Cal-Am's pump test, but that the test could be responsible for about 0.2 to 0.5 feet of the decrease.² Based on our review, we have determined that the water level decrease appears to be caused in part by the pump test. Pursuant to Special Condition #11, Cal-Am must therefore submit an application for a permit amendment to allow restart of the test and is not to conduct further pump testing until receiving an amended permit. However, we understand that minimal maintenance pumping, of no more than 6 hours once per week, is required to maintain the well and its related equipment. This maintenance pumping is allowed prior to the Commission's action on an amendment to Cal-Am's permit. We understand you will notify us of the start and stop times for each of these maintenance cycles.

With the benefit of several months of monitoring data obtained before, during, and after the pump test, including data Cal-Am is continuing to collect, we believe the current permit and its conditions can be modified to better reflect aquifer conditions identified through these data, to better characterize other factors affecting the aquifers, and to better identify the potential effects of the pump test as they relate to those factors. We therefore recommend Cal-Am work with the HWG to develop a proposed amendment that incorporates the analyses and information referenced above and that addresses the following:

- **Characterization of local/regional effects:** The available data suggest the monitoring results are affected by several elements other than the pump test – e.g., regional pumping regimes, daily changes in agricultural pumping, etc. We recommend the application for the proposed amendment identify and incorporate the likely effects of those elements on the data. For example, the HWG surmises that a regular pattern observed in the data is due to seasonal increases in agricultural pumping, of pumping being reduced on Sundays, etc. We recommend the application include available data to support those assumptions.
- **Effects on different aquifers:** The available monitoring data show that the three aquifers underlying the area have different characteristics – e.g., confined, semi-confined, and unconfined – and are affected differently by the pump test and the other factors. We recommend that Cal-Am consider whether the application should include separate, specific thresholds that can be used to measure the potential effects of the test well on each of the aquifers.

² See June 22, 2015 letter, page 6, last bullet, which states, in part: "...it seems clear from the data collected so far that if there is any drawdown at MW-4S and/or MW-4M – it is less than 0.5 feet and probably closer to 0.2 to 0.3 feet."

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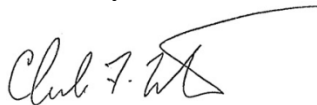
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- **Water and TDS levels:** The available monitoring data suggests the changes in water and TDS levels may be better described not as single values but as a range or trend in the data. We recommend that Cal-Am consider whether the application should include proposed thresholds that better reflect the identified trends in the monitoring data.

In addition, and as noted in the above-referenced June 25th letter, we request that you clarify Cal-Am's compliance with the requirement of Special Condition #11 that monitoring devices be installed at a minimum of four wells on the CEMEX site within 2000 feet of the test well.

Thank you again for your submittal. As always, we are happy to answer any questions and to work with you in developing an appropriate amendment to the CDPs. Please contact Tom Luster of my staff at 415-904-5248 or tom.luster@coastal.ca.gov if you have any questions.

Sincerely,



CHARLES F. LESTER
Executive Director