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July 14, 2006

Tam Doduc, Chair
State Water Resources Control Board
Executive Office
1001 I Street, 24th Floor
Sacramento, CA 95814

C/O Song Her, Clerk to the Board
Via e-mail: commentletters@waterboards.ca.gov

Subject: Comments on State Water Resources Control Board Draft Total
Residual Chlorine and Chlorine Produced Oxidants Policy of
California, June 2006

Dear Chair Doduc:

On behalf of Eastern Municipal Water District (EMWD), I would like to thank you for the opportunity to submit comments on the "Total Residual Chlorine and Chlorine-Produced Oxidants (TRP/CPO) Policy of California" (drafted June 2006). EMWD provides potable, wastewater and recycled water, which serves a population of over 630,000 people; living within a 555 square-mile area in Riverside County.

We have been following the development of this draft policy since 2005, while working with California Association of Sanitation Agencies (CASA), Southern California Alliance of Publicly Owned Treatment Works (SCAP), and Tri-TAC (a technical advisory committee representing three California associations) which we are currently active members of, in providing comments to various policy versions. Most recently, we have supported the comment letter submitted to the Board by the above mentioned associations on June 5, 2006. Also, we sent an EMWD representative to participate in the June 19, 2006 Board Hearing.

While the State Water Resources Control Board (SWRCB) staff has addressed a number of our concerns from the previous policy, EMWD still has major technical concerns with the revised draft policy and we have prepared the following comments:

1. Monitoring Requirements (also in Definition of Terms): Continuous monitoring is defined as monitoring that produces one or more data points every minute.

- All instruments are capable of sending one or more data point every minute electronically. However, all instrument analytical results have a time delay or lag. For example, Hach CI-17 has a 3 to 5 minute reaction time before providing a result. During the 3 to 5 minutes, the same result from the previous time is given. The unit can provide the data point specified by the draft policy but the analytical result lags in time. Delayed sample introduction and slow low-level response (reaction) can also cause delayed analytical response in other on-line instruments. Thus, the instrument can give a delayed or a false lengthened response. Is it the intent of the Draft Policy to monitor compliance based on-time weighted average or analysis based data? Either way, the Draft Policy should leave the wording as "continuous monitoring" and not define continuous, allowing the discharger to decide whether to display the result either as a time weighted average or analysis based data to comply with Draft Policy objectives.

2. Quantification/Reporting Requirements: On-line devices must have a manufacturer-stated sensitivity corresponding to 10 ppb.

- In the Draft Policy, sensitivity is defined as the lowest concentration that can be distinguished from background noise. According to Standard Method (SM), sensitivity equivalent to the instrument detection limit (IDL), or "the constituent concentration that produces a signal greater than...the mean noise level" (SM 18th Ed.). Following the SM, the method detection limit (MDL), or the lowest concentration in samples processed and found to have a statistical significance, is approximately 4 times greater than the IDL. However, "the practical quantitation limit (PQL) is about five times the MDL and represents a practical and routinely achievable detection limit with a relatively good certainty that any reported value is reliable" (SM 18th Ed.). Therefore, based on SM, 10 ppb (or µg/L) sensitivity for on-line device is inadequate for the Draft Policy's objective requirements, TRC of 19 µg/L per 1-hr average or 11 µg/L per 4-day average. In order to obtain these objective requirements, the sensitivity must be almost 10 times lower or 1 µg/L. Therefore, the Draft Policy should state: "On-line devices must have instrument detection limit (IDL) at 1 ppb".

In addition, accuracy should be defined in the Draft Policy to within 1 µg/L to obtain results meeting the objective requirements. That is, to see results (or difference) of 11 µg/L or 19 µg/L, the accuracy needs to be at 1 ppb level. Also, the PQL must at 10 ppb to report the result within the required compliance objectives. Therefore, the Draft Policy should also state, "Also, on-line devices must have the capability of reporting to 10 ppb and have an accuracy within ±1 ppb".

- Currently, there are no known on-line instruments that can meet the 10 ppb sensitivity requirements. Only the laboratory method listed in the draft policy, SM 4500-CL E, has the capability of meeting this requirement. However, this method is not approved for wastewater analyses as per 40 CFR 136. This method is designed for "clean" water with little or no interference. In wastewater, the sample matrix is more complex and has more interference that can cause results to vary more than a potable matrix. In addition, the sample matrix has a role in MDL and, thus, the PQL, both of which are usually higher in wastewater compared to a potable matrix.

3. **Quantification/Reporting Requirements:** All off-line measurements of chlorine residual shall be performed using this analytical method (Method 4500-Cl E found in Standard Methods for the Examination of Water and Wastewater, 20th Edition).
 - Method 4500-Cl E is not listed as an approved test method for wastewater as stated in 40 CFR 136. However, according to the State Water Resources Control Board's (SWRCB) comment (June 30, 2006), the method is acceptable based on the statement in 40 CFR 122.44 (i)(1)(iv). As stated in the Board staff comments, the EPA must also accept the Draft Policy and in doing so, will also accept the test method for wastewater. We are concerned that Method 4500-Cl E will be assumed to be an approved method for wastewater without going through the necessary approval requirements required to be accepted in 40 CFR 136.3 Table 1B. We recommend that reference to this method in the policy be removed.
4. **Compliance Determination:** When continuous monitoring systems are off-line...These systems can include...grab samples (in 40 CFR 126.3 Table 1B, revised as of July 1, 2004) using U.S. Environmental Protection Agency approved methods.
 - This contradicts the statement early under Quantification/Reporting Requirements, "All off-line measurements of chlorine residual shall be performed using this analytical method" (Method 4500-Cl E found in Standard Methods for the Examination of Water And Wastewater, 20th Edition). Method 4500-Cl E is not on the approved CFR list.
 - In addition, policy language should be added allowing the option of grab samples to be monitored for the presence of dechlorination residual as a method of determining compliance when monitoring systems are off-line.
5. **Compliance Determination:** If the system is off-line less than 15 minutes, at least one sample must be obtained.
 - This might not be possible due to the discharge location. EMWD has a discharge location outside the 555 square mile service area. Getting to the discharge point, especially during off-hours may be delayed beyond 15 minutes. Even agencies that have discharges on-site will have difficulties meeting this requirement during off hours. The Draft Policy should state: "If the system is off-line, a grab sample shall be taken as soon as possible and at least one sample every 15 minutes.
6. **Compliance Determination:** If grab samples taken at the end-of-pipe show chlorine residual above the stated effluent limit...
 - The statement should include the lack of presence of dechlorination residual as a triggering mechanism for compliance when having to use grab sample technique. The Draft Policy statement should read "If grab samples taken at the end-of-pipe show chlorine residual above the stated effluent limit and/or no dechlorination residual is present...").

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As shown above, this current draft policy still has technical issues which need to be addressed. Even though the Board staff assumes that some of these issues can be dealt with under a compliance schedule, the EMWD disagrees with that assessment and believes that it should be resolved in the policy, instead by each individual discharger. As with the other agencies and associations, we ask that the Board defer the adoption of this Policy to allow the regulated community, the public and the Board staff the opportunity to develop a technically sound Chlorine Residual Policy. Again, the EMWD would like to thank you for the opportunity to comment on the Draft Policy. If you should have any questions, please feel free to contact Edward Filadelfia at (951) 928-3777 extension 4318.

Sincerely,

A handwritten signature in dark ink, appearing to read 'A. Pack', is positioned above the printed name.

Anthony J. Pack
General Manager

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