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Ms. Dena McCann  
State Water Resources Control Board  
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*Via e-mail:* [dmccann@waterboards.ca.gov](mailto:dmccann@waterboards.ca.gov)

Subject: Comments on the December 2005 “Total Residual Chlorine and Chlorine-Produced Oxidants Policy”

Dear Ms. McCann:

Tri- TAC, would like to thank the State Water Resources Control Board members and staff for the open stakeholder process you have developed regarding the challenging effort to develop a statewide Policy for chlorine residual. This collaborative model recognizes the potentially significant impacts to stakeholders, particularly Publicly Owned Treatment Works (POTWs), who use chlorine and its derivatives to disinfect our effluent in order to meet our public health and water quality mandates. Tri-TAC is a technical advisory group that represents over 95% of the sewered population in the State through our sponsoring associations, the League of California Cities, the California Association of Sanitation Agencies and the California Water Environment Association. Tri-TAC appreciates this opportunity to provide comments on the December 2005 “Total Residual Chlorine and Chlorine-Produces Oxidants Policy” (Draft Policy) during this informal comment period.

We appreciate the revisions reflected in the Draft Policy that address many of the concerns we have expressed during this process. These changes include revisions to the following areas, which we support:

1. *Compliance Period Schedule.* The compliance period schedule may not exceed five years from the date the permit is issued, reissued, or modified to include new more stringent effluent limits or other policy requirements. We strongly support the change from a 3-year compliance schedule maximum to a 5-year maximum. However, we would suggest that this provision be slightly modified to clarify that a compliance schedule may be granted whenever a discharger has a permit renewal and can demonstrate the need for one by satisfying the conditions of the Policy. Although it would probably be an uncommon occurrence, it is conceivable that a discharger may

need a compliance schedule at a time other than the first permit renewal following the adoption of this new Policy, even though the new permit limits might have been contained in a previous permit. Reasons that this could occur include achievement of a lower QRL (leading to compliance issues) or treatment plant process changes, including changes in the method of disinfection that might trigger non-compliance.

2. *Non-Detect Readings.* All non-detect readings within the time frame for measuring the one-hour and four-day time limits shall be converted to zero. We agree that this is an appropriate way to treat non-detects for the purpose of determining compliance.
3. *Mixing Zones.* The Draft Policy states that “a Regional Water Quality Control Board may grant a mixing zone for a discharge of TRC or CPO.” We appreciate that the staff have modified the Policy to allow consideration of mixing zones, where appropriate.

Several major areas remain for which additional clarification language would be helpful and/or changes are requested. Additional detailed comments on these and other aspects of the Policy will be provided during the formal public comment period. A discussion of these major areas follows below.

### 1. Monitoring Requirements

The monitoring requirements section of the Draft Policy states that “Continuous monitoring of chlorine residual or dechlorination residual concentrations shall be required in all facilities.” The monitoring frequency is specified as “one or more data points, every minute.” The equipment sensitivity level specified under the Quantification/Reporting Requirements is 1 µg/L.

As discussed extensively at the workshops held in September 2005, the sensitivity and monitoring frequency requirements, as specified above, do not reflect the actual limitations of the instruments currently available on the market or the realities of layers of variables (errors) in a continuous on-line field environment. We are not aware of any current on-line analytical technology that is capable of accurately or reliably measuring chlorine at 1 µg/L or with sufficient response time to take discrete measurements on one-minute intervals under continuous monitoring conditions in the field. Therefore, we continue to have significant concerns about the proposed approach because of these problems.

### 2. Quantification and Reporting Requirements

#### Standard Method 4500-Cl E

The Draft Policy specifies that the “discharger shall limit the calibration solution to no more than 0.500 ppm and verify the solution concentration by Method 4500-Cl E (Standard Methods).” Standard Method 4500-Cl E is not listed as an approved test method for the determination of total residual chlorine by USEPA in 40 CFR 136.

We request clarification as to whether Method 4500-Cl E was correctly referenced in the Draft Policy and, if so, if any approved methods (as per 40CFR136) are also acceptable to the SWRCB for use under this Draft Policy. In addition, we request information regarding the process that was used by the SWRCB to validate the use of this method under the conditions specified in the Draft Policy.

## QRL

The QRL language appears to be a step in the right direction in that it recognizes the inherent limitations and variability in continuous monitoring analyzers. However, the language in the Draft Policy regarding the QRL is somewhat ambiguous and does not include any information on the accepted methodology for the determination of the QRL, how the feasibility of the QRL is assessed, or what method should be used by the Regional Water Quality Control Boards to establish alternative QRLs. We would like to see a clearer process to establish QRLs and would welcome the opportunity to work with SWRCB staff in developing that process, including defining the elements of QRL studies that may be submitted by dischargers.

### Compliance with One-Hour and Four-Day Limits

While the language provided on the Draft Policy is somewhat unclear, it appears that these limits are intended to be calculated as discrete averages. We request clarification that these averages are intended to be calculated as discrete averages and that explicit language be added to the text of the Draft Policy to clarify this point. A suggested modification to the language is:

*“From the readings, the discharger shall compute the arithmetic mean as a discrete average. This mean shall be the value that is compared with the permit effluent limit.”*

### 3. Compliance Determination

The language in the Draft Policy is unclear on compliance determination, however, based on communications with SWRCB staff, it is our understanding that compliance can be determined by measuring plant effluent chlorine or dechlorinating agent residual with a continuous monitoring analyzer or by otherwise demonstrating the presence of dechlorinating agent in the plant effluent (stoichiometric). We offer the following suggested clarification language:

*“Compliance can be demonstrated using any of the following three methods:*

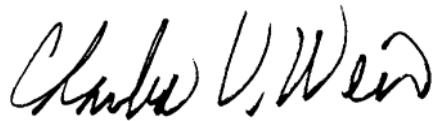
- a. Show an absence of residual chlorine in the plant effluent through continuous measurement of chlorine residual using a continuous monitoring analyzer*
- b. Show an absence of residual chlorine by showing a presence of dechlorinating agent in the plant effluent through continuous measurement of dechlorinating agent residual using a continuous monitoring analyzer*
- c. Show an absence of residual chlorine by showing a presence of dechlorinating agent in the plant effluent through continuous measurement of chlorinated effluent chlorine residual, dechlorinating agent feed rate, and plant flow (or other combination of plant parameters that demonstrate compliance stoichiometrically). When using sulfur dioxide (SO<sub>2</sub>) as the dechlorinating agent the stoichiometric relationship requires 0.9 part sulfur dioxide to remove 1.0 part of chlorine residual. Compliance determinations shall be based on the demonstration that every pound of chlorine measured immediately prior to dechlorination is treated with greater than 0.9 pound of sulfur dioxide. When using sodium bisulfite (NaHSO<sub>3</sub>) as the dechlorinating agent the stoichiometric relationship requires 1.46 parts sodium bisulfite to remove 1.0 part of chlorine residual. Compliance determinations shall be*

*based on the demonstration that every pound of chlorine measured immediately prior to dechlorination is treated with greater than 1.46 pounds of sodium bisulfite.”*

In addition, to provide a vehicle for the development and implementation of new monitoring methods, we request the policy be revised to allow the discharger to submit data on proposed alternative continuous monitoring methods to their local regional board and to grant regional boards the authority to review and approve such methods for use in lieu of the methods identified above.

We appreciate the opportunity to provide comments to SWRCB staff during this informal comment period and anticipate participating in the formal public comment period and future workshops and/or hearings on this issue. We would be pleased to meet with you to discuss further revisions to the draft policy prior to formal release. If you have any questions regarding the comments presented in this letter, please do not hesitate to contact the Tri-TAC Water Committee Co-Chair, Ben Horenstein, at (510) 287-1846.

Sincerely,  
Tri-TAC

A handwritten signature in black ink that reads "Chuck V. Weir". The signature is written in a cursive, slightly slanted style.

Chuck Weir  
Chair

Cc:

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