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Monday, August 20, 2012

Via email: commentletters@waterboards.ca.gov

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
1001 I Street, Sacramento, CA 95814

Subject: Draft Policy for Toxicity Assessment and Control

Dear Ms. Townsend:

The City of Burlingame Wastewater Treatment Facility appreciates the opportunity to comment on the State Water Resource Control Board's (State Water Board) Draft Policy for Toxicity Assessment and Control (Policy). The Burlingame Wastewater Treatment Facility (WWTF) is owned by the City of Burlingame and is located at 1103 Airport Boulevard, Burlingame, San Mateo County, California. The WWTF currently operates under NPDES permit number CA0037788 issued April 1, 2008. The facility is operated by Veolia West Operating Services, Inc., and is the longest public/private partnership contract for such services in the United States. The WWTF provides secondary level treatment of wastewater from domestic, commercial and industrial sources within the City of Burlingame, and a portion of the City of Hillsborough. The WWTF service area has a present population of about 37,000. The WWTF has an average dry weather flow design capacity of 5.5 mgd and a peak wet weather secondary treatment capacity of 12 mgd. The WWTF has a primary treatment capacity of 25 mgd and disinfection capacity of 20 mgd. During wet weather operations, the aeration basins and secondary clarifiers may be bypassed with the final effluent being a blend of disinfected primary-treated effluent and disinfected secondary-treated effluent. Blending is initiated to avoid hydraulic overload of the activated sludge process and associated solids inventory washout. The WWTF presently discharges an average dry weather flow of 3.4 mgd, and annual average flow of 4.1 mgd, and a maximum wet weather flow rate of 14 mgd. Treated, disinfected wastewater is discharged to the North Bayside System Unit (NBSU) force main. The members of the NBSU are the Cities of Millbrae, South San Francisco, San Bruno, and the San Francisco International Airport. Treated, disinfected effluent collected by NBSU is de-chlorinated at the NBSU de-chlorination plant located at the South San Francisco Water Pollution Control Plant, and the combined effluent is discharged to Lower San Francisco Bay via a

submerged deepwater outfall. The engineered maximum instantaneous outfall flow rate allowed to the NBSU conveyance line by the City of Burlingame WWTF is 16 MGD. Any effluent flows in excess of 16 mgd must be diverted to the WWTF nearshore outfall.

Our agency appreciates the State Water Board's goal of state-wide consistency in toxicity monitoring and enforcement, as well as the efforts that have already gone into this Policy. However, this Policy, if adopted in its current form, will have significant impacts on our agency. We support the letter submitted by the Bay Area Clean Water Agencies, which comments on region-wide impacts of the Policy, and would like to share our concerns about the specific burdens that will fall on our agency pertaining to increased costs and increased violations.

5.1 → **Violations based on a single test result:** Permit violations impose significant costs on public agencies such as ours: financially, legally, and in public trust. The current draft policy contains a Maximum Daily Effluent Limit that would assess a permit violation as a result of a single test result. Even though the MDEL involves a higher effect level, our agency believes that the use of a single toxicity test result to assess a permit violation is inappropriate.

The result of a single bioassay is not a conclusive demonstration that a sample is toxic, since there are numerous sources of uncertainty in toxicity testing. EPA guidance and approved methods note the variability and occasional anomalous results inherent in biological testing, and the TST method itself has a built-in allowance for a 5% false positive rate. Analysis of past EPA inter-laboratory data by the TST method indicates that the false positive rate may be even higher for some test species.

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5.3 → Therefore, our agency strongly recommends that the WET Policy, if it must include numeric effluent limits, include average, median, or other percentile limits that require more than one test result to assess a permit violation.

5.4 → **Increased costs of routine testing:** We understand that the Policy will result in required monthly chronic toxicity testing, which will increase our frequency from 1 chronic toxicity test per year. This alone will cost an additional ~\$220,000 in laboratory costs over our 5-year permit cycle. These costs assume additional monthly monitoring 3 times per 5-year permit cycle due to the minimal false determination of toxicity rate of 5%, which is built into the TST method.

While the Policy only requires testing at a single concentration, performing additional test replications can help us avoid false determinations of toxicity. If our agency determines that additional replicates are needed to avoid falsely determined violations, then the routine monitoring will cost our agency an additional \$80,000 in laboratory costs over a 5-year permit cycle. Costs for a reference toxicant tests to assure data quality are not included in the Staff Report, and are in addition to this amount.

5.5 → Savings resulting from termination of acute toxicity testing requirements are not assured by this proposed policy. The Economic Impacts analysis in Appendix H of the Staff report bases a large part of the estimated cost saving on the assumption that acute toxicity will no longer be required. However, since this is ultimately left to the discretion of the Regional Boards, we have to assume that Region 2 could continue to require acute testing. Furthermore, we have already invested significant resources into developing acute toxicity testing capability in-house, so even if the acute toxicity testing is not required, we will not realize the savings described in the Staff report. Chronic

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6.6 → toxicity testing with our contract laboratory takes a minimum of 45 days to schedule. As this is a highly specialized test, we are unable to perform chronic toxicity in-house as we do with acute toxicity. We have a major concern that if increased frequency as proposed, would overwhelm Aqua Science and we would have to “wait in line” for a scheduled vacancy to conduct the 7-day chronic toxicity testing that could put the agency at risk of late reporting. The impact on the environment with regards to small agencies that use courier service to transport daily samples from the agency to the laboratory performing the test would also have a negative effect. In our case these composite samples gathered over a period of 7 days would add approximately 6.6 tons of CO2 emissions to the atmosphere per year for the City of Burlingame facility alone.

6.7 → **Inconclusive TREs/TIEs:** We are concerned that the Policy fails to differentiate real, persistent toxicity from episodic low-level toxic events and the false determinations of toxicity that are built in to the TST method. Costs associated with conducting Toxicity Reduction Evaluations (TREs) and Toxicity Identification Evaluations (TIEs) can be high and long lasting, as can be the cost associated with unnecessary treatment upgrades in response to false determinations of toxicity.

The City has spent over \$45,000 the past five years on most sensitive species evaluation for chronic toxicity testing, on TIEs and related special toxicity investigations, and on associated consultant support.

6.8 → **Increased costs due to violations:** The costs of increased violations were not considered in the Economic Impacts Analysis in the Staff Report. A major difference between this Policy and how toxicity is currently managed is that exceedences of acute and chronic toxicity limits are Clean Water Act violations subject to State penalties of up to \$10,000 per day or \$10.00 per gallon, and federal penalties of up to \$37,500 per day per violation. The Policy does not dictate over what time period these penalties are assessed. For example, in a worst-case scenario, the penalty could be assessed over the time period of accelerated monitoring and TRE/TIE investigations, which is 6 months under the Policy. In addition, our agency would still be subject to third party lawsuit and attorney fee liability, particularly if regulators decide to take no enforcement actions.

6.9 → Even though we have had excellent compliance with acute and chronic toxicity testing over the last 12 years, we are concerned that the rate of false determination of toxicity that is built in will lead to a possible violation within the 5-year NPDES permit cycle that is not related to actual toxicity.

The City of Burlingame hopes that the State Water Resources Control Board will take these comments under serious consideration. The additional costs due to the Policy will be burdensome for our agency. Even in the absence of these cost increases, we are concerned about the increase of violations that are corollary to this Policy. Thank you for your consideration of our comments.

Sincerely,



William E. Foci

Plant Manager

City of Burlingame Wastewater Treatment Facility