



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 13, 2013

Gayleen Perreira
Senior WRCE
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Re: Tentative Order/Draft NPDES Permit for the City of Yuba City Wastewater Treatment Facility (NPDES Permit No. CA0079260)

Dear Ms. Perreira,

Thank you for the opportunity to review and comment on the tentative order/draft permit (NPDES Permit No. CA0079260) for the discharge from the City of Yuba City WWTF to the Feather River, which was public noticed on May 20, 2013. As indicated in previous conversations with Regional Board staff, we continue to have concerns about the censorship of data considered to be outliers by the Regional Board. In the Yuba City WWTF draft permit, the Regional Board has censored two mercury effluent data points as outliers based solely on statistical evaluation practices and without suggesting a plausible reason why the data points should be discarded. We remain concerned this practice violates accepted statistical analysis practice and federal regulatory requirements.

Alone, statistics are not adequate to establish that a data point is not representative of a discharge and should not be used in the reasonable potential analysis. Effluent data for many pollutants, including toxic pollutants such as mercury, do not demonstrate a normal distribution. What may appear to be an outlier may actually be characteristic of the lognormal distribution of the environmental data and should not be discarded for the purposes of a reasonable potential analysis. EPA's Technical Support Document for Water Quality-Based Toxics Control (TSD) states, "From the vast amount of data that EPA has examined, it is reasonable to assume that treated effluent data follow a lognormal distribution. This is because effluent values are non-negative and treatment efficiency at the low end of the concentration scale is limited, while effluent concentrations may vary widely at the high end of the scale, reflecting various degrees of treatment system performance and loadings. These factors combine to produce the

characteristically positively skewed appearance of the lognormal curve...” (Section 5.2.2 of the TSD).

Additionally, EPA’s TSD states that when characterizing an effluent for the need for an individual toxicant limit, the regulatory authority should use any available effluent monitoring data as the basis for the decision. The NPDES Central Tenets state, “data may not be arbitrarily discarded or ignored,” and Section 4.4.1 of EPA’s Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S (EPA/240/B-06-003) states, “discarding an outlier from a data set should be done with extreme caution, particularly for environmental data sets, which often contain legitimate extreme values.” As stated clearly in Data Quality Assessment: Statistical Methods for Practitioners, “the (statistical) tests alone cannot determine whether a statistical outlier should be discarded or corrected within a data set.”

Most importantly, 40 CFR 122.41(j)(1) requires that samples and measurements for the purpose of monitoring be representative of the monitored activity. It is the permittee’s responsibility to provide evidence to the Regional Board when data is not representative of the discharge. Pursuant to 40 CFR 122.22(d), permittees are required to certify that, “I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (emphasis added) As the discharger in this case is not asserting that these data are suspect or otherwise unrepresentative, federal regulations presume they must be used for the permit analysis.

In the case of the Yuba City WWTF, the Regional Board asserts that two effluent concentrations of mercury (sampled in January and November of 2009) are outliers based on a statistical analysis. The Regional Board provides as justification a description of the permittee’s local limits study that demonstrated the treatment system was capable of removing 98% of mercury. However, as influent mercury concentrations at the time of the two higher effluent mercury concentrations are not available, reference to treatment system capability provides no meaningful basis for asserting the two high values are somehow flawed. No other explanation was provided to support a decision to censor these data points. Thus, insufficient information has been provided to warrant discarding these data points as unrepresentative of the discharge.

We recognize that, since the receiving water is listed as impaired for mercury pursuant to Section 303(d) of the Clean Water Act, the Regional Board has decided to carry over the previous performance-based effluent limit for mercury, which is based on a

concentration less than the CTR criterion for mercury, and essentially more protective. We are concerned, however, that if this were not the case, the Regional Board's practice of discarding high data points as outliers from the reasonable potential analysis would result in a lack of water quality protection and would violate NPDES permitting regulatory requirements.

We appreciate the opportunity to provide input on the draft permit. Please contact me at (415) 972-3464 or Elizabeth Sablad of my staff at (415) 972-3044 if you have any questions regarding our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "David Smith". The signature is fluid and cursive, with the first name "David" and last name "Smith" clearly distinguishable.

David Smith, Manager
NPDES Permits Office (WTR-5)

