



CVCWA

Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

MICHAEL RIDDELL – CHAIR, CITY OF RIVERBANK
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August 6, 2012

Via Electronic Mail

Dania Jimmerson
Regional Water Quality Control Board
Central Valley Region
1020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114
djimmerson@waterboards.ca.gov

Re: The Central Valley Clean Water Association's Comments on the Tentative Waste Discharge Requirements for the City of Angels Wastewater Treatment Plant

Dear Ms. Jimmerson:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to submit these comments on the tentative waste discharge requirements (Tentative Order) for the Wastewater Treatment Plant (WWTP) of the City of Angels (City). CVCWA is a non-profit organization representing more than 50 publicly owned treatment works throughout the Central Valley Region in regulatory matters affecting surface water discharge, land application, and water reuse. We approach these matters with a perspective to balance environmental and economic interests consistent with state and federal law.

Upon reviewing the Tentative Order, and for the reasons explained in more detail below, we respectfully request that you: (1) delete the requirement for the City to perform a chemical additives evaluation and minimization study; (2) revise the Tentative Order to remove the use of existing plant performance as a baseline for determining compliance with the Antidegradation Policy (State Water Resources Control Board (State Water Board) Resolution No. 68-16);

(3) revise the ultraviolet (UV) disinfection requirements to ensure proper disinfection without dictating the manner of permit compliance; (4) modify the findings regarding ammonia to be consistent with the applicable water quality objective; and (5) replace the effluent limitations for bis (2-chloroethyl) ether with monitoring requirements consistent with the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005) (SIP).

A. The Requirement to Perform a Chemical Additives Evaluation and Minimization Study Is Improper and Should Be Deleted

The City currently adds a hydrated lime slurry to the treatment system to aid the nitrification/denitrification process of the WWTP. (Tentative Order at p. F-71.) Due to concerns that this may increase discharges of hardness and salinity, the Tentative Order would require the City to prepare and submit a Chemical Additives Evaluation and Minimization Study. (*Id.* at pp. 22, E-17, F-71.) Consistent with applicable law and the Central Valley Regional Water Quality Control Board's (Central Valley Water Board) current permitting practice, CVCWA respectfully requests that you remove this operation-driven, rather than compliance-driven, study requirement from the Tentative Order.

As demonstrated by the Tentative Order's plain language, the study requirement inappropriately focuses directly on the City's operations, rather than its compliance with effluent limitations. (See e.g., Wat. Code, § 13360 [placing the emphasis of permit requirements on compliance, rather than operations].) For example, in preparing the study, the City is to identify and quantify the "chemical additives necessary *for the proper operation and treatment*" of the WWTP. (Tentative Order at p. 22, emphasis added.) As part of the study, the City must "evaluate and implement feasible methods for reducing the amount of chemical additives while still providing adequate treatment." (*Ibid.*) Further, the City must incorporate the results of the study *into the operation and maintenance manual* for the WWTP. (*Ibid.*)

The Tentative Order would establish various technology-based effluent limitations and water quality-based effluent limitations (WQBELs) for the WWTP's discharge. (Tentative Order at pp. 10-11, F-12, F-42.) The Central Valley Water Board has the authority to reopen the permit at anytime to establish additional or more stringent effluent limitations as appropriate. (*Id.* at p. 26.) Further, the Tentative Order would require a Salinity Evaluation and Minimization Plan that would address the concerns related to hardness and salinity. Therefore, it is unnecessary to require the Chemical Additives Evaluation and Minimization Study.

Our request for removal of this study is consistent with the Central Valley Water Board's current permitting practice. In March 2012, the Central Valley Water Board released a tentative order for the Linda County Water District's (District) Wastewater Treatment Plant that would have required a Chemical Additives Evaluation and Minimization Study for reasons similar to those identified in this case. (Order R5-2012-XXXX, NPDES NO. CA0079651 at pp. 30, E-20,

F-107.) CVCWA and the District submitted comments requesting that the study requirement be removed from that tentative order, as the requirement improperly focused on, and could potentially constrain, the District's operations. Upon considering these comments, the Central Valley Water Board staff stated in its Response to Comments (at p. 6):

Central Valley Water Board staff agrees, and determined that the Salinity Evaluation and Minimization Plan will produce similar conclusions as the Chemical Additives Evaluation and Minimization Study. Therefore, the Chemical Additives Evaluation and Minimization Study requirement was removed from the proposed NPDES Permit.

As recommended by staff, the Central Valley Water Board adopted the permit for the District without the Chemical Additives Evaluation and Minimization Study. (Order R5-2012-0034, NPDES NO. CA0079651.) For similar reasons, this case warrants a similar outcome.

B. The Tentative Order's Use of Recent Treatment Plant Performance Is an Improper Baseline for Determining Consistency with the Antidegradation Policy

The Tentative Order inappropriately uses the existing performance of the WWTP as a baseline to determine compliance with the state's Antidegradation Policy respecting ammonia. (See Tentative Order at p. F-23.) The Central Valley Water Board may impose increasingly stringent requirements on a permitted discharge by adopting WQBELs. (40 C.F.R. § 122.44(d).) However, setting treatment *outcomes* based on antidegradation is beyond the scope of the Central Valley Water Board's authority. WQBELs are based on the effects of a discharge on the immediate receiving waters to provide reasonable protection of beneficial uses, while giving due consideration of applicable policies (e.g., *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005)). (See 40 C.F.R. § 122.44(d)(1).) In Finding G titled, "Water Quality-based Effluent Limitations (WQBELs)," the Tentative Order explains: "Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements *where necessary to achieve applicable water quality standards.*" (Tentative Order at p. 4 emphasis added.) Appropriately, Finding G does not mention the Antidegradation Policy. (*Ibid.*)

In contrast, antidegradation determinations require consideration of the impact to water quality when compared to the existing permitted condition of that water body. (Administrative Procedures Update No. 90-004, State Water Board (July 1990) at p. 4.) Accordingly, calculating WQBELs and preventing antidegradation are two different processes. Using the procedure in the Tentative Order for determining the WQBELs for ammonia thus undercuts the existing water quality planning process and impermissibly amounts to open-ended regulatory authority to dictate outcomes in the permitting process. We therefore request that you revise the Tentative Order to remove the use of existing plant performance as a baseline for determining compliance with the Antidegradation Policy.

C. The UV Requirements Should Be Modified In a Manner That Ensures Proper Disinfection Without Dictating the Manner of Permit Compliance

The Tentative Order includes UV operational and monitoring requirements for the WWTP's discharge. (Tentative Order at pp. 22-23.) The stated purpose of the UV requirements is to ensure that adequate disinfection or pathogen removal occurs in accordance with the Tentative Order's provision that the discharge "be oxidized, coagulated, filtered, and adequately disinfected pursuant to the Department of Public Health ... reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22), or equivalent." (*Id.* at pp. 23, F-47, F-72.) CVCWA submits that the UV operating criteria impermissibly specify the manner of compliance with the Tentative Order's disinfection requirement.

Water Code section 13360 prohibits a discharge permit from specifying the manner in which the permittee must comply with a permit requirement. (*Tahoe-Sierra Preservation Council v. State Water Resources Control Board* (1989) 210 Cal.App.3d 1421, 1438 (*Tahoe-Sierra*.) In relevant part, this section states:

No waste discharge requirement or other order of a regional board or the state board or decree of a court issued under this division shall specify the design, location, type of construction, or particular manner in which compliance may be had with that requirement, order, or decree, and the person so ordered shall be permitted to comply with the order in any lawful manner. (Wat. Code, § 13360(a).)

Water Code section 13360 "preserves the freedom of persons who are subject to a discharge to elect between available strategies to comply with that standard." (*Tahoe-Sierra, supra*, 210 Cal.App.3d at 1438.) That is, "[t]he discharger must be allowed to comply with the permit in any lawful manner." (State Water Board Order WQO 2002-0015¹ at p. 37; see State Water Board Order No. WQ 90-5² at p. 87 [board orders must "allow[] the dischargers to select the manner of compliance"]; State Water Board Order No. WQ 83-3³ at p. 4 [Water Code section 13360 "allows the Regional Board to regulate discharges of waste fully, so long as it does not tell the discharger precisely how to meet the established limits."].)

¹ State Water Board Order WQO 2002-0015, *In the Matter of the Review on Own Motion of Waste Discharge Requirements Order No. 5-01-044 for Vacaville's Easterly Wastewater Treatment Plant* (Oct. 3, 2002).

² State Water Board Order No. WQ 90-5, *In the Matter of Petition of Citizens for a Better Environment (CBE), et al.* (Oct. 4, 1990).

³ State Water Board Order No. WQ 83-3, *In the Matter of the Petition of the United States Department of Agriculture, Forest Service of Review of Order No. 6-82-123* (April 21, 1983).

In this case, the Tentative Order impermissibly dictates the manner in which the WWTP must comply with the requirement for disinfection. For example, one criterion states that the WWTP "shall operate the UV disinfection system to provide a minimum hourly average UV dose per channel of 100 millijoules per square centimeter (mJ/cm²) at peak daily flow[.]" (Tentative Order at p. 22.) Another criterion states that "[t]he minimum hourly average UV transmittance (at 254 nanometers) in the wastewater exiting the UV disinfection system shall not fall below 55 percent. (*Id.* at p. 23.) The Tentative Order also contains detailed operational requirements related to turbidity, quartz sleeves, and lamps. (*Ibid.*)

For these reasons, CVCWA recommends that you replace Section VI.C.4.b with the following:

- b. Disinfection System Specifications.** The Discharger shall operate and maintain the Facility to achieve equivalency to Title 22 disinfected tertiary recycled water as described in Section VI.C.5.a.
- c. Filtration System Operating Specifications.** To ensure the filtration system is operating properly to provide adequate disinfection of the wastewater, the turbidity of the filter effluent measured at FIL-001 shall not exceed:
 - i. 2 NTU, as a daily average;
 - ii. 5 NTU, more than 5% of the time within a 24-hour period; and
 - iii. 10 NTU, at any time.

D. The Findings Regarding Ammonia Should Be Revised to Be Consistent With the Applicable Water Quality Objective

The Tentative Order's findings regarding the reasonable potential for ammonia state in part:

The Discharger currently uses nitrification to remove ammonia from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. *Discharges of ammonia would violate the Basin Plan narrative toxicity objective.* (Tentative Order at p. F-43, emphasis added.)

CVCWA requests that you revise the last sentence above to be consistent with the Basin Plan's narrative toxicity objective, which provides in part: "All waters shall be maintained free of toxic substances *in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at p. III-8.01.) Specifically, we request that you modify the sentence to state: "Discharges of ammonia in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life would violate the Basin Plan

narrative toxicity objective." Alternatively, the sentence could be modified as follows: "Discharges of ammonia in toxic amounts would violate the Basin Plan narrative toxicity objective." (See *NPDES Permit Writers' Manual*, EPA-833-K-10-001 (Sept. 2010) at p. 6-12 [recognizing that states may adopt "narrative 'no toxics in toxic amounts' criterion"].)

E. The Effluent Limitations for Bis (2-Chloroethyl) Ether Should Be Replaced With Monitoring Requirements In Accordance With the SIP

The Tentative Order includes average monthly and maximum daily effluent limitations of 0.41 micrograms per liter ($\mu\text{g/L}$) and 0.82 $\mu\text{g/L}$, respectively for bis (2-chloroethyl) ether. (Tentative Order at p. 10.) The Fact Sheet of the Tentative Order states that the data collected under the existing permit was insufficient to conduct a reasonable potential analysis. (*Id.* at p. F-44.) The Fact Sheet further states: "Therefore, the data used for the last permit was included in the dataset, which results in a finding of reasonable potential[.]" (*Id.* at pp. F-44 to F-45.) Concluding that reasonable potential exists based on data used to develop the prior permit is improper. Rather, in accordance with the SIP, the Tentative Order should "require additional monitoring for the pollutant in place of a water quality-based effluent limitation." (SIP at p. 7.) We request that you replace the effluent limitation for bis (2-chloroethyl) ether with appropriate monitoring requirements and make conforming changes as appropriate.

CVCWA appreciates your consideration of these comments. Please feel free to contact me at (530) 268-1338 or eofficer@cvcwa.org if I can be of further assistance.

Sincerely,



Debbie Webster,
Executive Officer

cc: Pamela Creedon, Central Valley Regional Water Quality Control Board
(Via Electronic Mail: pcreedon@waterboards.ca.gov)