



CVCWA Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

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December 17, 2012

Via Electronic Mail Only

Kari Holmes
Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670
kholmes@waterboards.ca.gov

Re: Central Valley Clean Water Association's Comments on the Tentative Order for the Mountain House Wastewater Treatment Plant

Dear Ms. Holmes:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to submit comments on the Tentative Order for Mountain House Community Services District's (District) Mountain House Wastewater Treatment Plant (WWTP). CVCWA is a non-profit organization representing more than 50 publicly owned treatment works (POTWs) throughout the Central Valley in regulatory matters affecting surface water discharge, land application, and water reuse. We carefully review permits for POTWs being proposed for adoption with a perspective to balance environmental and economic interests consistent with applicable law.

For the reasons described in Section A below, we believe the Tentative Order's ultra violet (UV) disinfection requirements would impermissibly dictate how the District must comply with the permit. We, therefore, request that you revise the UV Disinfection System Operating Specifications and related findings and add the compliance determination provision as suggested in Section B.

A. The Tentative Order's UV Disinfection System Operating Specifications

The Tentative Order contains highly prescriptive UV Disinfection System Operating Specifications for the WWTP.¹ These specifications are inconsistent with the Water Code's prohibition against dictating the manner of permit compliance. In particular, Water Code section 13360(a) 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.

Water Code section 13360 "preserves the freedom of persons who are subject to a discharge standard to elect between available strategies to comply with that standard."² Under this section, "[t]he discharger *must* be allowed to comply with the permit in any lawful manner."³ Accordingly, the Tentative Order and adopted permit must "allow[] the dischargers to select the manner of compliance."⁴ However, in this case, the Tentative Order would establish requirements that impermissibly dictate the District's manner of permit compliance. For example, the Tentative Order would require the District to "operate the UV disinfection system to provide a minimum UV dose per channel of 100 millijoules per square centimeter (mJ/cm²) at peak daily flow[.]"⁵ In addition, the Tentative Order contains detailed requirements related to UV transmittance, flow, lamps, quartz sleeves, and other parameters.⁶

B. CVCWA's Suggested Revisions

Because the UV Disinfection System Operating Specifications (Section VI.C.4.a) run afoul of the Water Code, we respectfully request that you replace them with the following, which retains the Tentative Order's turbidity specifications:

¹ Tentative Order at pp. 23-24.

² *Tahoe-Sierra Preservation Council v. State Water Resources Control Board* (1989) 210 Cal.App.3d 1421, 1438.

³ *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*, Order WQO 2002-0015 (Oct. 3, 2002) at p. 37, emphasis added.

⁴ *In the Matter of Petition of Citizens for a Better Environment (CBE), et al.*, Order No. WQ 90-5 (Oct. 4, 1990) at p. 87; see *In the Matter of the Petition of the United States Department of Agriculture, Forest Service of Review of Order No. 6-82-123*, Order No. WQ 83-3 (April 21, 1983) 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."].

⁵ Tentative Order at p. 23.

⁶ *Id.* at pp. 23-24.

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.6.b.

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 UVS-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.

We further request that you add the following related provision to Tentative Order, Section VII. Compliance Determination:

- I. **Title 22 Disinfected Tertiary Recycled Water, or Equivalent (Section IV.C.4.a and Section IV.C.6.b).** Compliance with the final effluent limitations for total coliform organisms and the turbidity operational requirements shall verify compliance with Special Provisions VI.C.4.a and VI.C.6.b, for equivalency to Title 22 disinfected tertiary recycled water.

We believe these revisions will ensure proper operation of the UV disinfection system without impermissibly dictating the manner of permit compliance. In support of the revisions, we request that you replace the findings for the UV Disinfection System Operating Specifications at pages F-93 to F-94 (Section VII.B.4.a) with the following:

4. Construction, Operation, and Maintenance Specifications

- a. **Disinfection System Specifications.** Section VI.C.6.b of this Order requires that wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the Department of Public Health (DPH; formerly the Department of Health Services) reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22), or equivalent. The Discharger shall operate the Facility to achieve equivalency to Title 22 disinfected tertiary recycled water as described in Section IV.C.6.b.

Ultraviolet Light (UV) disinfection is used at the Facility. The National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWRF's *Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse* first published in December 2000 and revised as a Second Edition dated May 2003 (NWRI guidelines) includes UV operating specifications for compliance with Title 22. For water recycling in accordance with Title 22, the UV system shall be an

approved system included in the Treatment Technology Report for Recycled Water, December 2009 (or a later version, as applicable) published by the DPH. A Memorandum dated 1 November 2004 issued by DPH to Regional Water Board executive officers recommended that provisions be included in permits for water recycling treatment plants employing UV disinfection requiring Dischargers to establish fixed cleaning frequency of lamp sleeves, as well as, include provisions that specify minimum delivered UV dose that must be maintained (per the NWRI Guidelines).

The beneficial uses of the receiving water include municipal and domestic supply, water contact recreation, and agricultural irrigation supply. Although the Discharger does not recycle its wastewater, to protect these beneficial uses the Central Valley Water Board finds that the wastewater must be disinfected and adequately treated to a level equivalent to Title 22 disinfected tertiary recycled water. As part of the Report of Waste Discharge the Discharger certified that the UV disinfection system is properly designed, and is operated and maintained to achieve equivalency to Title 22 disinfected tertiary recycled water described in Section IV.C.6.b.

- b. Filtration System Operating Specifications.** Turbidity is included as an operational specification as an indicator of the effectiveness of the filtration system for providing adequate disinfection. The tertiary treatment process utilized at this Facility is capable of reliably meeting a turbidity limitation of 2 nephelometric turbidity units (NTU) as a daily average. Failure of the treatment system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity and could impact UV dosage. Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. The operational specification requires that turbidity prior to disinfection shall not exceed 2 NTU as a daily average, 5 NTU more than 5 percent of the time within a 24-hour period, and an instantaneous maximum of 10 NTU.

Thank you for considering these comments and requested revisions. Please contact me at (530) 268-1338 or ecofficer@cvcwa.org if I can be of assistance.

Sincerely,



Debbie Webster,
Executive Officer

Cc: *Via electronic mail:*

Nader Shareghi, Mountain House CSD (nshareghi@sjgov.org)

Pamela Creedon, Central Valley RWQCB (pcreedon@waterboards.ca.gov)