Los Angeles Regional Water Quality Control Board

November 30, 2020

Mr. Rob Whitaker, General Manager
Water Replenishment District of Southern California
4040 Paramount Boulevard
Lakewood, CA 90712

REQUEST TO MODIFY THE TURBIDITY COMPLIANCE MONITORING LOCATION - WATER REPLENISHMENT DISTRICT (WRD) ALBERT ROBLES CENTER (ARC) ADVANCED WATER TREATMENT FACILITY (AWTF), 4230 SAN GABRIEL RIVER PARKWAY, PICO RIVERA, LOS ANGELES COUNTY

Dear Mr. Whitaker:

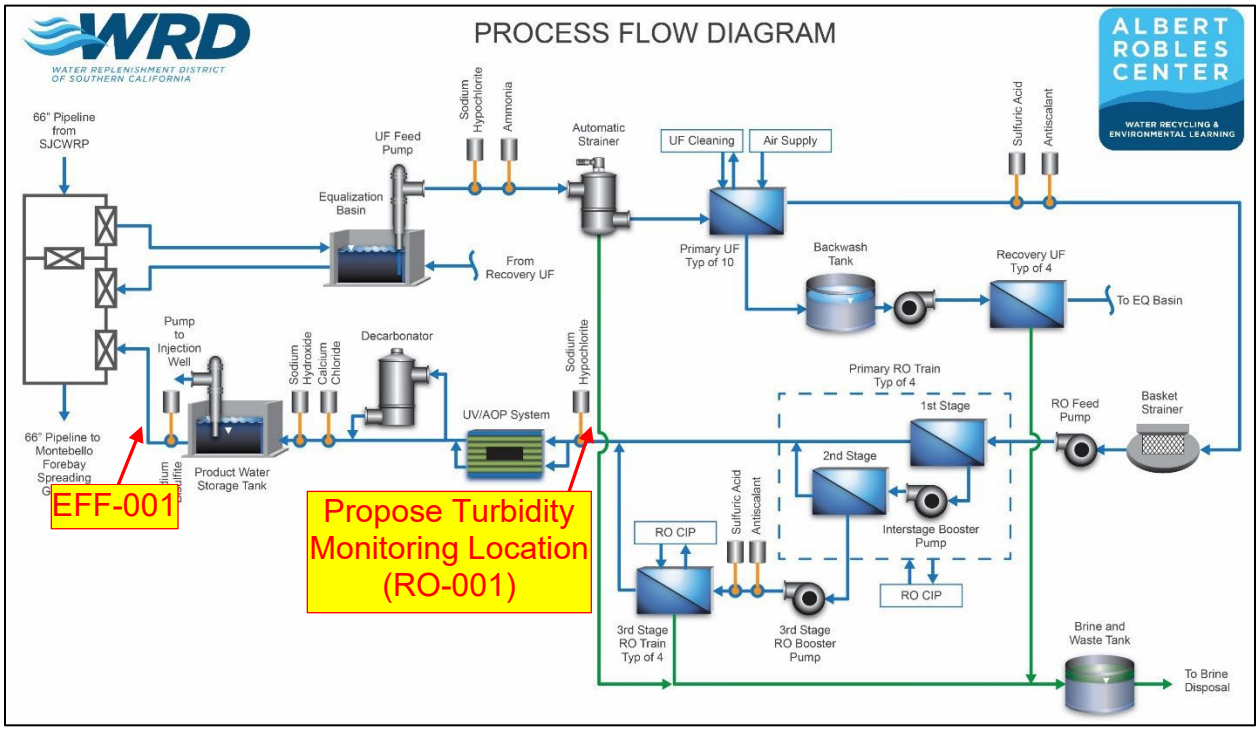
The Regional Water Quality Control Board, Los Angeles Region (Los Angeles Regional Water Board) received an email from the Water Replenishment District (WRD) dated October 16, 2020, submitting a request to modify the turbidity compliance monitoring location for the ARC AWTF. The turbidity monitoring is required under the Waste Discharge Requirements (WDRs) and Water Reclamation Requirements (WRRs) adopted by Order No. R4-2018-0129 and the National Pollutant Discharge Elimination System (NPDES) Permit No. CA0064645 adopted by Order No. R4-2017-0187, to demonstrate the log reduction credit for pathogens and to determine the adequacy of the treatment processes to produce advanced treated recycled water for surface spreading and groundwater recharge.

Among other requirements, Order Nos. R4-2017-0187 and R4-2018-0129 require that the treated effluent shall be adequately treated so that the turbidity in the advanced treated recycled water (i.e., product water) does not exceed 0.2 Nephelometric Turbidity Units (NTU) for more than 5 % of any 24-hour period and 0.5 NTU at any time per CCR, title 22, sections 60301.302(b) and 60320.108(b). The turbidity is measured by an online turbidimeter. The current turbidity monitoring location is EFF-001 (Figure 1), which is located after the remineralization step, which can include the addition of calcium hydroxide or calcium chloride. During the plant commissioning in 2019, it was noticed that the addition and slow dissolution of calcium hydroxide in the remineralization step can cause turbidity exceedances in the product water. To alleviate this problem the remineralization step was modified from using calcium hydroxide and sodium hydroxide to calcium chloride and sodium hydroxide.

While using calcium chloride and sodium hydroxide in the remineralization step reduced the turbidity in the product water to the lower level, these changes resulted in significant

increases in operating costs for sodium hydroxide and resulted in insufficient storage capacity for reliable plant operation.

Figure 1. Process Flow Diagram and Turbidity Monitoring Locations



Due to these operational cost and storage capacity issues, WRD proposed that the compliance point for turbidity monitoring of the product water be relocated from EFF-001 to the reverse osmosis system effluent/permeate (RO-001) (Figure 1). This location meets permit requirements for pathogen removal and will prevent unnecessary alarms and plant shutdowns from false indicators of pathogens (as measured by turbidly) due to the injection of calcium chloride/calcium hydroxide.

After reviewing your request and consulting with State Water Board Division of Drinking Water staff, the Los Angeles Regional Water Board approves the request to relocate the turbidity compliance monitoring location from EFF-001 to the reverse osmosis system effluent/permeate (RO-001).

If you have any questions, please contact Jeong-Hee Lim via email at jeong-hee.lim@waterboards.ca.gov.

Sincerely,

R Purdy

Digitally signed by R Purdy
Date: 2020.11.30 20:01:41 -08'00'

Renee Purdy
Executive Officer

cc: Jeff O'Keefe, Brian Bernados, Randy Barnard, Asad Faraz, State Water Board Division of Drinking Water