

**Regional Water Quality Control Board
Central Valley Region
Board Meeting – 5/6 December 2013**

**Response to Written Comments for
Friant Ranch, A Limited Partnership,
Fresno County Water Works District No.18,
SWD Investments, Inc.
Friant Ranch Wastewater Treatment Facility
Fresno County
Tentative Waste Discharge Requirements**

At a public hearing scheduled for 5/6 December 2013, the Regional Water Quality Control Board, Central Valley Region, (Central Valley Water Board) will consider adoption of Waste Discharge Requirements (WDRs) for the Friant Ranch Wastewater Treatment Facility (WWTF). This document contains responses to written comments received from interested parties regarding the tentative WDRs circulated on 19 September 2013. Written comments from interested parties were required by public notice to be received by the Central Valley Water Board by 5:00 pm on 21 October 2013 to receive full consideration. On 26 September 2013, the California Department of Public Health, Division of Drinking Water (CDPH) submitted comments on a report (also referred to as a Title 22 Engineering Report) that was prepared by the Dischargers to comply with the California Code of Regulations, Title 22, sections 60323(a), 60323(b), and 60323(c). Some of the comments from CDPH on the Title 22 Engineering Report are relevant to the tentative WDRs. On 14 October 2013, written comments specific to the tentative WDRs were also received from the CDPH. On 21 October 2013, on behalf of the Dischargers, written comments were received from Somach Simmons & Dunn (SSD).

Written comments from CDPH and SSD on the tentative WDRs and relevant comments from CDPH on the Title 22 Engineering Report are summarized below, followed by the responses of Central Valley Water Board staff. Based on the comments, Central Valley Water Board staff did make some changes to the tentative WDRs. Central Valley Water Board staff also made some changes to the tentative WDRs to correct typographical errors and to improve clarity and are summarized at the end of this document.

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH COMMENTS

On 26 September 2013, CDPH submitted the following comments No. 1 through 3 on the Title 22 Engineering Report that are relevant to the tentative WDRs. On 14 October 2013, CDPH submitted the following comments No. 4 through 14 on the tentative WDRs.

CDPH Comment No. 1: CDPH recommends monitoring the following ultraviolet light (UV) disinfection system components:

1. Status of each UV reactor, on/off,
2. Status of each UV lamp, on/off,
3. UV intensity measured by at least on probe per reactor,
4. Cumulative number of reactor on/off cycles,
5. Cumulative UV disinfection system power consumption,
6. Reactor power set point (if system has variable power input to lamps),

7. Liquid level in the UV disinfection reactor trains (if system has free water surfaces and where UV lamps can be exposed to air), and
8. Ground fault interruption.

Response: The Ultraviolet Light Disinfection System Monitoring Section of the Monitoring and Reporting Program has been revised to include monitoring requirements for the eight components listed above.

CDPH Comment No. 2: CDPH recommends reporting the following information to Central Valley Water Board staff: results of daily total coliform bacteria monitoring, running 7-day median calculation, maximum daily coliform reading, results of minimum daily UV operational dose, minimum daily filter effluent UV transmittance, 95th percentile effluent turbidity (24-hour period), and daily maximum turbidity reading.

Response: The Reporting Section of the Monitoring and Reporting Program has been revised to include reporting requirements as listed above.

CDPH Comment No. 3: CDPH indicates any of the following shall initiate a WWTF shut down, diversion of inadequately treated water, and notification of Central Valley Water Board staff within 24 hours:

1. Failure of UV disinfection equipment,
2. Effluent total coliform bacteria greater than 240 MPN/100mL,
3. Turbidity greater than 0.5 NTU,
4. UV operational dose lower than 80 mJ/cm², or
5. UV transmittance at 254 nm lower than 65%.

Response: Ultraviolet Disinfection System Operating Specification F.8 on page 22 has been revised, in addition to the revisions noted in CDPH Comment No. 10 below, as follows:

The UV system must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. Conditions that shall **initiate WWTF shut down** and divert flow include: ~~inability to meet the minimum UV dose~~ **UV operational dose lower than 80 mJ/cm², UV transmittance at 254 nm lower than 65%, effluent total coliform bacteria greater than 240 MPN/100mL, turbidity prior to disinfection greater 0.5 NTU, UV transmittance meter failure,** intensity sensor failure, multiple lamp failure, or reactor failure. **Central Valley Water Board staff shall be notified within 24 hours of WWTF shut down or flow diversion.**

CDPH Comment No. 4: When referring to the California Department of Public Health in the tentative WDRs, the reference should further be specified as the California Department of Public Health, Division of Drinking Water.

Response: The California Department of Public Health, Division of Drinking Water has been defined as CDPH in the tentative Order. This abbreviation is used throughout the

tentative Order when referring to the California Department of Public Health, Division of Drinking Water.

CDPH Comment No. 5: CDPH recommends the following edits to Finding No. 57 on page 13.

Title 22, Section 60323, requires recyclers of treated municipal wastewater to submit an engineering report detailing the use of recycled water, contingency plans, and safeguards. The Discharger has **not** submitted a Title 22 Engineering Report to the Central Valley Water Board and CDPH, ~~but it has not been approved yet.~~ A provision requiring the Discharger to submit a written copy of the letter from CDPH approving the Title 22 Engineering Report (including approval of the design and field commissioning **tests/demonstration** and long term operation and maintenance of the UV disinfection system) and a copy of the approved Title 22 Engineering Report prior to the application of recycled water is included in this Order.

Response: Finding No. 57 has been revised, as recommended above.

CDPH Comment No. 6: CDPH recommends the following edits to Ultraviolet Disinfection System Operating Specification F.3 on page 21.

WWD No. 18 shall provide continuous, reliable monitoring of **UV dose**, flow, UV transmittance, UV power, **UV intensity, lamp age**, and turbidity.

Response: Ultraviolet Disinfection System Operating Specification F.3 has been revised, as recommended above.

CDPH Comment No. 7: CDPH recommends the following edits to Ultraviolet Disinfection System Operating Specification F.5 on page 21.

The lamp sleeves shall be cleaned periodically as necessary to comply with these requirements **and as required by CDPH.**

Response: Ultraviolet Disinfection System Operating Specification F.5 has been revised, as recommended above.

CDPH Comment No. 8: CDPH recommends the following edits to Ultraviolet Disinfection System Operating Specification F.6 on page 21.

Lamps shall be replaced **as required by CDPH** ~~per the manufacturer's operations manual~~, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records shall be maintained.

Response: Ultraviolet Disinfection System Operating Specification F.6 has been revised, as recommended above.

CDPH Comment No. 9: CDPH recommends the following edits to Ultraviolet Disinfection System Operating Specification F.7.c on page 22.

The required frequency of calibration for all monitoring equipment measuring turbidity, flow, **UV transmittance**, and UV intensity.

Response: Ultraviolet Disinfection System Operating Specification F.7.c has been revised, as recommended above.

CDPH Comment No. 10: CDPH recommends the following edits to Ultraviolet Disinfection System Operating Specification F.8 on page 22.

The UV system must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. Conditions that shall divert flow include: inability to meet the minimum UV dose, **UV transmittance meter failure**, intensity sensor failure, multiple lamp failure, or reactor failure.

Response: Ultraviolet Disinfection System Operating Specification F.8 has been revised, as recommended above and as shown in response to CDPH Comment No. 3.

CDPH Comment No. 11: CDPH recommends the following edits to Ultraviolet Disinfection System Operating Specification F.9 on page 22.

UV transmittance meters, UV intensity sensors and flow meters must be properly calibrated to ensure proper disinfection.

Response: Ultraviolet Disinfection System Operating Specification F.9 has been revised, as recommended above.

CDPH Comment No. 12: CDPH recommends the following edits to Provision G.11 on page 24.

All wastewater discharged to the recycled water storage pond shall be oxidized, filtered, and disinfected pursuant to ~~CDPH reclamation criteria, CCR, Title 22, Division 4, Chapter 3 (Title 22), or equivalent as~~ **determined by CDPH.**

Response: Provision G.11 has been revised, as recommended above.

CDPH Comment No. 13: CDPH recommends the following edits to Provision G.12 on page 24.

At least 60 days prior to initiating discharge from the WWTF to the recycled water storage pond, a written copy of the letter from CDPH approving the Title 22 Engineering Report (including approval of the design and field commissioning **tests/demonstration** and long term operation and maintenance of the UV disinfection system) and an approved copy of the Title 22 Engineering Report shall be submitted.

Response: Provision G.12 has been revised, as recommended above.

CDPH Comment No. 14: CDPH recommends "UV Intensity" and "UV lamp hours of operation" should be added to the Constituent/Parameters list in the Ultraviolet Light Disinfection System Monitoring Section of the Monitoring and Reporting Program.

Response: The Ultraviolet Light Disinfection System Monitoring Section of the Monitoring and Reporting Program has been revised, as recommended above.

SOMACH SIMMONS & DUNN COMMENTS

SSD Comment No. 1: SSD indicates Discharge Specification B.11 and Provisions G.16, G.18, G.19, G.20, and G.28 found within the "IT IS HEREBY ORDERED" section that starts on page 16 and pertains to the Fresno County Waterworks District No. 18 are duplicative and should be deleted.

Response: Central Valley Water Board staff agrees. The subject Discharge Specification and Provisions were inadvertently included and have been deleted as requested. In addition to the duplicative Specifications and Provisions identified by SSD, Provisions G.26 and G.30 are also duplicative and have been deleted from the tentative WDRs.

SSD Comment No. 2: SSD indicates Discharge Specification B.8, Water Recycling Specification C.31, and Provisions E.9, E.10, E.11, E.16, E.17, and E.18 found within the "IT IS HEREBY ORDERED" section that starts on page 27 and pertains to Friant Ranch, L.P., and SWD Investments, Inc., are duplicative and should be deleted.

Response: Central Valley Water Board staff agrees. The subject Discharge Specification, Water Recycling Specification and Provisions were inadvertently included and have been deleted as requested.

SSD Comment No. 3: SSD indicates Water Recycling Specification C.29 on page 31 conflicts with Water Recycling Specification C.27 on the same page and should be deleted.

Response: Central Valley Water Board staff agrees. In concurrence with the CDPH, Water Recycling Specification C.29 on page 31 has been removed. This Specification is contradictory to Water Recycling Specifications C.27 and C.30 and would prohibit the Discharger's use of San Joaquin River Water to supplement recycled water irrigation.

CENTRAL VALLEY WATER BOARD STAFF CHANGES

Change No. 1: Reference to "Waterworks District No. 18" has been changed to "Fresno County Waterworks District No. 18" throughout the tentative WDRs.

Change No. 2: Reference to "plant" has been changed to "WWTF" throughout the tentative WDRs.

Change No. 3: The following text has been removed from the end of Finding No.12 on page 3 since it is already stated at the end of Finding No.11 on the same page:

~~A site map of the WWTF and Friant Ranch is shown on Attachment A and a process flow schematic is shown on Attachment B, both of which are attached hereto and made part of this Order by reference.~~

Change No. 4: Text has been added to Finding No. 15 on page 3 to indicate surface water from the San Joaquin River is available, as needed, to supplement recycled water agricultural irrigation at the Beck property and recycled water landscape irrigation at Friant Ranch.

Change No. 5: The date of the Memorandum of Agreement between the State Water Board and the California Department of Public Health, referenced in Finding No. 54 on page 12, has been changed from 1998 to 1996.

Change No. 6: The monitoring location description SPL-001 in the table on page 2 of the Monitoring and Reporting Program was clarified to indicate the San Joaquin River sampling location shall be at a safe river access point between the WWTF and the United States Geological Survey Gauging Station 11251000, approximately 1.5 miles upstream of the WWTF.

Change No. 7: The abbreviations of the units for UV dose (mW-sec/cm²) and UV intensity (mW/cm) are defined in the Glossary on page 11 of the Monitoring and Reporting Program.

Change No. 8: The analytical suite for General Minerals and Metals included in the Glossary on page 11 of the Monitoring and Reporting Program has been revised as follows:

General Minerals:

Alkalinity (as CaCO ₃)	Carbonate (as CaCO ₃)	Magnesium	Potassium
Arsenic	Chloride	Manganese	Sodium
Bicarbonate (as CaCO ₃)	EC	pH	Sulfate
Boron	Hardness (as CaCO ₃)	Phosphate	TDS
Calcium	Iron	Potassium	

Metals:

Antimony	Chromium	Mercury	Thallium
Arsenic	Chromium VI	Molybdenum	Vanadium
Barium	Cobalt	Nickel	Zinc
Beryllium	Copper	Selenium	
Cadmium	Lead	Silver	