



State Water Resources Control Board
Division of Drinking Water

July 16, 2014

System No. 3910023

James Bewley, Director of Operations
Oakwood Lake Water District-Subdivision
208 Seaview Drive
Richmond, CA 94801

TRANSMITTAL OF CITATION NO. 03-10-14C-006 FOR FAILURE TO OPERATE THE WATER TREATMENT PLANT IN ACCORDANCE WITH THE PERMIT CONDITIONS

Dear Mr. Bewley

In June 2014, the Oakwood Lake Water District-Subdivision (OLWD) failed to operate its water treatment plant in accordance with the permit conditions established in the domestic water supply permit (03-10-08P-003), issued by the Division on September 29, 2008. The Division has issued a Citation (03-10-13C-006) in response to these violations. This Citation is being transmitted to OLWD under cover of this letter.

Please respond to the directives of this Citation by the deadlines established with each item. If you have any questions regarding this Citation, please contact Brian Kidwell by email at Brian.Kidwell@waterboards.ca.gov or by phone at (209) 948-3963.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bhupinder S. Sahota".

Bhupinder S. Sahota, P.E.
District Engineer, Stockton District
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS

Attachments: Citation No. 03-10-14C-006

H:\Stockton System Files\San Joaquin County\3910023\Enforcement\OLWD Subdivision CIT cover letter July 16, 2014

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

31 E. Channel Street, Room 270, Stockton, CA 95202 | www.waterboards.ca.gov

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27

**STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER**

IN RE: Oakwood Lake Water District-Subdivision
874 E. Woodward Avenue
Manteca, CA 95337

TO: Mr. James Bewley
Director of Operations

CITATION

No. 03-10-14C-006

WATER SYSTEM NO. 3910023

Issued on July 16, 2014

Section 116650, Article 9, Chapter 4, Part 12, of Division 104 of the California Health and Safety Code, authorizes the State Water Resources Control Board, Division of Drinking Water (hereinafter, Division) to issue a Citation for failure to comply with a requirement of Chapter 4 (California Safe Drinking Water Act), or any regulation, standard, permit, or order issued there under.

VIOLATION

The Division hereby issues a Citation to the Oakwood Lake Water District-Subdivision (hereinafter, OLWD), physical address: 874 E. Woodward Avenue, Manteca, California 95337, Public Water System No. 3910023, for violation of the following conditions of its domestic water supply permit (03-10-08P-003):

1 **Condition No. 1c:** LayneOx arsenic and manganese removal treatment system is
2 approved as a treatment to remove the arsenic and manganese from raw water sources
3 of Wells 3 and 4 to below 8 µg/l for arsenic and 5 µg/l for manganese.

4
5 **Condition No. 2b:** All water supplied by the OLWD for domestic purposes shall meet all
6 Maximum Contaminant Levels (MCL) established by the Division.

7
8 Specifically, the monthly Arsenic Removal Treatment System report, submitted to the
9 Division by the OLWD on July 14, 2014, reported that the treated effluent arsenic level
10 for the month of June 2014 was 11 ug/L. This result exceeds the MCL of 10 ug/L. The
11 OLWD failed to take another sample. Therefore the one sample that was collected,
12 which was over the MCL, was the treated effluent arsenic level reported to the Division
13 for the month of June 2014.

14
15 In accordance with Section 116650 of the Health and Safety Code, the above violations
16 are classified as non-continuing violations.

17 18 **BACKGROUND**

19
20 OLWD operates a small water system located approximately five miles outside the City
21 of Manteca. The system is a community water system that serves the residents in the
22 subdivision surrounding Oakwood Lake and sells water to the Oakwood Lake Water
23 District-MHP (3910029). According to the 2013 Annual Report to the Division, the
24 OLWD Subdivision (System No. 3910023) serves approximately 399 people through 203
25 service connections, and the OLWD Mobile Home Park (System No. 3910029) serves
26 approximately 114 people through 58 service connections. The system obtains its water
27

1 supply from two active wells, Well No. 3 and Well No. 4, located on the subdivision
2 property. Both Wells exceed the arsenic MCL of 10 ug/l and manganese MCL of 50 ug/l.

3

4 In addition to the wells, the facilities include a manganese and arsenic treatment plant, a
5 49,000-gallon backwash storage tank, a 500,000-gallon ground-level finished water
6 storage tank, and a booster pump station. The domestic water is routinely disinfected
7 using sodium hypochlorite.

8

9 The OLWD manganese and arsenic treatment plant is a coagulation and filtration system
10 designed by Layne Christensen Company. The filtration media is LayneOx™, which is a
11 high-rate granular filter media. The media operates as a classical filter and as a catalytic
12 media that insures the reaction goes to completion rapidly. The media that is used in the
13 filters is a naturally mined manganese dioxide ore called pyrolusite. The pyrolusite has
14 a very high manganese dioxide content (70-80 percent by weight). The media is NSF 61
15 certified and normally lasts for the life of the system if properly backwashed.

16

17 Ferric chloride is added as a coagulant aid to assist in the removal of arsenic. The highly
18 positive charged ferric ion, attached to the media, attracts the negatively charged
19 dissolved arsenate and the arsenate becomes adsorbed onto the ferric ion on the
20 LayneOx™ media. The oxidize manganese dioxide also adsorbs onto the media and
21 manganese that is not oxidize becomes catalytically precipitated and adsorbs directly on
22 the media. This process continues until there is a high differential pressure across the
23 media bed. Backwashing is then required to abrade the excess particulate from the
24 media grains and carry it out of the bed to waste. In addition to oxidizing the arsenic and
25 manganese, sodium hypochlorite continuously regenerates the LayneOx™ media
26 surface and replenishes the manganese dioxide so that the media retains it adsorption
27 and catalytic oxidation.

1 The LayneOx arsenic and manganese removal treatment system is approved as a
2 treatment to remove arsenic and manganese from raw water sources. The system is
3 capable of maintaining arsenic and manganese levels below 8 µg/l and 5 µg/l
4 respectfully.

5
6 **DIRECTIVES**
7

8 Because of the above violation, the OLWD is hereby directed to take the following
9 actions:

- 10
- 11 1. By August 1, 2014, the OLWD shall provide to the Division a written detailed
12 incident report that describes how the treated water arsenic levels were above the
13 MCL of 10 ug/L and all corrective actions that were taken by the OLWD.
14
 - 15 2. By September 30, 2014, the OLWD shall submit a revised Operation and
16 Maintenance Plan to show the changes that the OLWD has made to avoid similar
17 incidents from happening in the future. Please forward a copy of the revised
18 Operations and Maintenance Plan to the Division for review and approval.
19
 - 20 3. The OLWD shall provide a Tier 3 public notice to the consumers. The Tier 3 notice
21 consists of publishing information on the violation in the 2014 Consumer
22 Confidence Report (CCR), which is required to be distributed to all consumers by
23 July 1, 2015. The OLWD must also complete the attached Proof of Notification
24 form and submit it to the Division, with a copy of the CCR, by July 1, 2015.
25
26
27

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27

Responses to the above required directives shall be submitted to:

Brian Kidwell
Associate Sanitary Engineer
Stockton District
State Water Resources Control Board, Division of Drinking Water
31 E. Channel St., Room 270
Stockton, CA 95202

CIVIL PENALTIES

Section 116650(d) and Section 116650(e) of the Health and Safety Code allow for the assessment of a civil penalty for failure to comply with the requirements of Chapter 4. Failure to comply with any provision of the Citation may result in the Department imposing an administrative penalty of not less than two hundred fifty dollars (\$250) per day as of the date of violation of any provision of this Citation.

July 16, 2014

Date



Bhupinder S. Sahota, P.E.
District Engineer, Stockton District
SOUTHERN CALIFORNIA BRANCH
DRINKING WATER FIELD OPERATIONS

Attachment: Proof of Notification

PROOF OF NOTIFICATION

As required by Section 116450 of the California Health and Safety Code, I notified all users that water supplied by the _____ was over the arsenic MCL for the month of June 2014.

Notification was made on _____ by
(date)

_____ written notice.
hand delivery or posted (circle one)

Signature of Water System Representative

(date)

DISCLOSURE: Be advised that Section 116725 and 116730 of the California Health and Safety Code state that any person who knowingly makes any false statement on any report or document may be liable for a civil penalty not to exceed five thousand (5,000) for separate violation for each day that violation continues. In addition, the violators may be prosecuted in criminal court and upon conviction, be punished by a fine of not more than \$25,000 for each day of violation, or be imprisoned in the county jail not to exceed one year, or by both the fine and imprisonment.

Due By: July 1, 2015

Served water with Arsenic levels above MCL: June 2014

System Number: 3910023 and 3910029

Citation No.: 03-10-14C-006