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**STATE OF CALIFORNIA**  
**DEPARTMENT OF PUBLIC HEALTH**

**IN RE:** Chuckawalla Valley/Ironwood State Prison  
P.O. Box 2289  
Blythe, CA 92225

**TO:** Mr. A.M. Gonzales  
Warden

**COMPLIANCE ORDER - WATER SYSTEM NO. 3310802**  
**COMPLIANCE ORDER NO. 05-20-13R-001**  
**Issued on March 14, 2013**

*Section 116655, Article 9, Chapter 4, Part 12, Division 104 of the California Health and Safety Code (H & S Code), authorizes the issuance of a compliance order for failure to comply with the requirements of the California Safe Drinking Water Act, or any regulation, standard, permit or order issued thereunder.*

**VIOLATION**

The *California Department of Public Health, Drinking Water Field Operations Branch* (hereinafter Department), hereby issues a compliance order to the *Chuckawalla Valley / Ironwood State Prison* (hereinafter Chuckawalla) (mailing address: P.O. Box 2289, Blythe, California 92225) for the following violation:

1. Pursuant to *§64431 Maximum Contaminant Levels – Inorganic Chemicals, Title 22 of the California Code of Regulations (CCR), et seq.*, in December 2012, Chuckawalla failed to comply with the maximum contaminant level (MCL)

1 requirements for arsenic. A public water system is in violation of the MCL  
2 requirements for arsenic when the annual quarterly running average concentration  
3 for arsenic exceeds 0.010 mg/L.  
4

5 **BACKGROUND**

6 The Chuckawalla water system supplies water to a population of approximately 7,000.  
7 Pursuant to *Domestic Water Supply Permit No. 05-20-07P-001* (Permit) the  
8 Department has directed Chuckawalla to sample for arsenic at its *Distribution Water*  
9 *Compliance Point* once a week.  
10

11 The Chuckawalla water system operates a reverse osmosis (RO) membrane  
12 treatment facility, and an activated alumina unit (AAU) treatment facility for the  
13 reduction of arsenic, fluoride, and total dissolved solids. The Chuckawalla well  
14 sources supply either of the two treatment facilities and the resulting effluent from the  
15 two treatment facilities are then blended and sent to the distribution system.  
16

17 The compliance monitoring location is the blended water from the two treatment  
18 facilities prior to the distribution system. Pursuant to its *Permit*, Chuckawalla is  
19 required to collect weekly arsenic compliance monitoring samples from its distribution  
20 compliance point.  
21

22 Compliance for arsenic is determined by the annual quarterly running average. For  
23 the four quarters ending on December 31, 2012, the compliance point arsenic  
24 concentrations were 0.008 mg/L, 0.008 mg/L, 0.017 mg/L, and 0.012 mg/L  
25 respectively.  
26

1 In 2012, 25 of the 52 weekly arsenic compliance-monitoring samples reported by  
2 Chuckawalla exceeded 0.010 mg/L. Though Chuckawalla had many weekly arsenic  
3 concentrations greater than 0.010 mg/L, the annual quarterly running average was not  
4 exceeded until the fourth quarter 2012 arsenic monitoring data was reported.

5 Because of the sporadically high arsenic concentrations during the year, the  
6 Department has contacted Chuckawalla multiple times throughout the year to discuss  
7 the arsenic concentrations and to discuss changes or corrective actions reportedly  
8 being implementing for the treatment systems.

9  
10 By cover letter dated January 25, 2012, Chuckawalla submitted its December 2012  
11 monthly monitoring data. When the arsenic data was reviewed and the annual  
12 quarterly running average was calculated, the Department determined that the MCL  
13 for arsenic was exceeded and immediately notified the system.

## 14 15 **CHRONOLOGY OF EVENTS**

16 Sometime about late 2010, the Department began noticing problems with  
17 Chuckawalla's monthly data submittals where the compliance monitoring results were  
18 inconsistent. In discussing this with the operator, we became aware of performance  
19 problems from the RO and AAU treatment facilities and occasional high arsenic  
20 concentrations. We were advised that various corrective actions were being taken,  
21 and saw temporary improvements with the water quality produced by the treatment  
22 facilities. However, problems returned sporadically and compliance monitoring results  
23 fluctuated from non-detect to over the arsenic MCL, but the system managed not to  
24 violate any MCL. It became clear that the AAU and RO treatment facilities were not  
25 performing appropriately and the water quality going to the distributions system was  
26 inconsistent. There appeared to be problems beyond the ability of the operator to  
27 evaluate and correct.

1 A chronology of the recent events regarding the arsenic MCL exceedence is listed  
2 below.

3

4 **Wednesday, September 11, 2012**, by e-mail the Department informed Chuckawalla  
5 that the annual quarterly running average concentration for arsenic had reached  
6 0.093 mg/L (for monitoring data collected through August 22, 2012) and that a  
7 violation may occur if subsequent, arsenic-monitoring data exceeded the MCL. The  
8 Department provided the arsenic monitoring data information to Chuckawalla in an  
9 excel spreadsheet.

10

11 **Thursday, September 12, 2012**, by e-mail the Department provided additional  
12 arsenic monitoring information to Chuckawalla.

13

14 **Wednesday, October 3, 2012**, by e-mail the Department asked Chuckawalla to  
15 evaluate its RO facility and informed Chuckawalla that the RO facility has serious  
16 difficulties removing arsenic from its feed water.

17

18 **Thursday, October 4, 2012**, by e-mail the Department informed Chuckawalla that the  
19 arsenic monitoring data for the first two weeks of September were high and that the  
20 blended water arsenic concentration was close to exceeding the MCL for the annual  
21 quarterly running average for arsenic.

22

23 **Tuesday, October 23, 2012**, by telephone the Department discussed the arsenic  
24 concentrations and RO operations. We were informed that the RO membranes were  
25 not yet replaced.

26

1 **Tuesday, November 20, 2012**, by telephone the Department discussed membrane  
2 status. Chuckawalla was reportedly waiting for membranes for installation in RO #1,  
3 RO #2 was offline, and RO #3 had received new membranes.

4  
5 **Monday, January 7, 2013**, by telephone the Department was informed that RO #1  
6 was offline, RO #2 had all new membranes, and RO #3 now needed new  
7 membranes. This information was different from previous information. Chuckawalla  
8 reported having some difficulties with the replacement membranes not being in a  
9 usable condition.

10  
11 **Monday, January 14, 2013**, by e-mail the Department informed Chuckawalla that the  
12 November 28, 2012, arsenic concentration was 15 mg/L and the December 5, 2012  
13 arsenic concentration was reported as 18 mg/L. We informed Chuckawalla that an  
14 MCL violation was a serious matter and due to the ongoing problems with the  
15 treatment facilities, extensive measures may be necessary to review and correct a  
16 violation.

17  
18 **Tuesday, January 29, 2013**, we received, by cover letter dated January 25, 2013,  
19 Chuckawalla's complete December 2012, monthly monitoring report. The December  
20 arsenic monitoring data averaged 0.016 mg/L. The average arsenic concentration for  
21 the fourth quarter of 2012 was 0.012 mg/L and the running annual quarterly average  
22 arsenic concentration was 0.011 mg/L. At this time, Chuckawalla was considered in  
23 violation of the drinking water standard for arsenic, per §64432(i) Monitoring and  
24 Compliance – Inorganic Chemicals.

25

1 The quarterly arsenic concentrations for 2012 are listed in the **Table 1. Chuckawalla**  
2 **Quarterly Arsenic Concentrations for 2012.** A table and a chart of all the reported  
3 arsenic concentrations for 2012 are included as Attachment No. 1.

4  
5 **Table 1.** Chuckawalla Quarterly Arsenic Concentrations for 2012.

<b>Quarter</b>	<b>Result (mg/L)</b>	<b>Running annual quarterly average (mg/L)</b>
First	0.008	Not calculated
Second	0.008	0.007
Third	0.017	0.010
Fourth	0.012	<b>0.011 (MCL exceedence)</b>

6

7

8 **DISCUSSION OF CONTRIBUTING PROBLEMS, SANITARY HAZARDS, AND**  
9 **PUBLIC HEALTH SAFEGUARDS**

10 Chuckawalla has had five reporting violations since November 2008. One violation  
11 was for failing to collect bacteriological monitoring data, two violations for not  
12 monitoring during the required monitoring period, one violation with citation for failing  
13 to collect perchlorate confirmation monitoring samples and failing to notify the  
14 Department that the perchlorate results were greater than the MCL, and one violation  
15 for late reporting of lead and copper data.

16

17 During the past twelve to eighteen months, the RO and AAU treatment systems have  
18 both experienced various problems with producing an appropriate water quality  
19 necessary for blending prior to the distribution system in order to meet all drinking  
20 water standards. With the limited monitoring that was being conducted, the problems  
21 have been transitory and therefore have proven difficult to assign to a specific  
22 treatment facility or component. The entire plant, and each treatment facility, needs to

1 be carefully evaluated and tested to ensure they are performing optimally and  
2 according to the manufacturer's specifications. Any treatment facility or component  
3 problems must be identified and corrected in order for the treatment facility to provide  
4 a safe and reliable water supply to the system.

5

6 **DIRECTIVES**

7 Chuckawalla is hereby directed to take the following actions:

8

- 9 1. Forthwith, Chuckawalla shall cease and desist from failing to comply with the  
10 primary drinking water MCL standard for arsenic.
- 11
- 12 2. Provide a public notice for the MCL exceedence for arsenic. (A Department  
13 approved public notice was provided March 5, 2013.)
- 14
- 15 3. Provide a public notice on a quarterly basis until the system is notified in writing by  
16 the Department that it has returned to compliance with the arsenic drinking water  
17 standard.
- 18
- 19 4. Submit a *Proof of Notification* certification along with a copy of the public notice  
20 each quarter until the system is notified in writing by the Department that it has  
21 returned to compliance with the arsenic drinking water standard.

22 Attachment No. 2.

23

- 24 5. By April 2, 2013, Chuckawalla shall submit to the Department an *arsenic reduction*  
25 *plan* (plan).  
26

- 1 a. The plan will be used by Chuckawalla to evaluate and reduce the arsenic  
2 concentrations from its treatment facilities to achieve reliable compliance with the  
3 MCL for arsenic.
- 4 b. The plan shall include specific measures and trouble-shooting procedures for  
5 the RO facility and for the AAU facility.
- 6 c. The assigned project manager shall have experience reviewing and trouble-  
7 shooting RO treatment and AAU treatment. The qualifications of the project  
8 manager shall be included in the plan.
- 9 d. The plan shall describe the measures to be implemented to achieve  
10 compliance with the arsenic MCL concentrations.
- 11 e. The plan shall include a time schedule for review and evaluation of the RO and  
12 AAU facilities.
- 13 f. The proposed time schedule to achieve reliable compliance with the arsenic  
14 MCL shall not be greater than one-year from receipt of this Compliance Order.
- 15 g. The plan shall include increased monitoring of each individual RO, AAU unit  
16 process and the blend discharge.
- 17 h. The plan shall include confirmation of instrument calibration and an ongoing  
18 calibration schedule.
- 19
- 20 6. By June 3, 2013, the monitoring data and a written report describing the measures  
21 taken to reduce the arsenic concentration shall be submitted to the Department.
- 22 a. All monitoring data shall be tabulated and graphed.
- 23 b. A quarterly written report describing the implementation of the plan shall be  
24 submitted until Chuckawalla achieves and demonstrates one-year of compliance  
25 with the arsenic MCL.
- 26
- 27

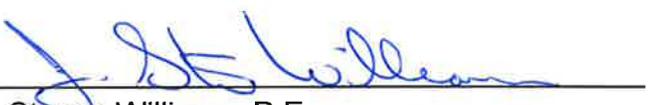
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All submittals required by this Compliance Order shall be sent to:

J. Steven Williams, P.E.  
District Engineer  
Department of Public Health  
Division of Drinking Water and Environmental Management  
1350 Front Street, Room 2050  
San Diego, CA 92101

Failure to comply with any provision of this Compliance Order may result in the Department imposing an administrative penalty of not more than \$1000.00 (one thousand dollars) per day as of the date of violation of any provision of this Compliance Order.

March 14, 2013  
Date

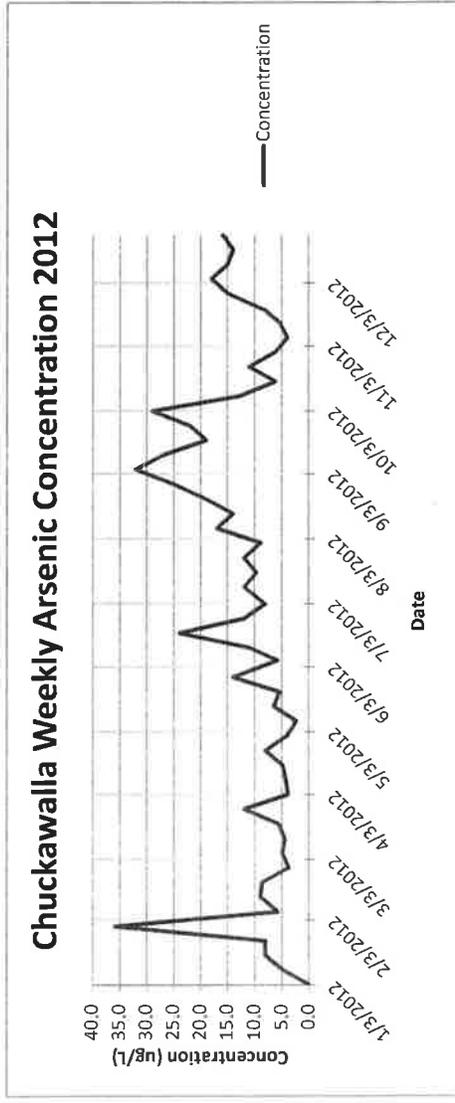
  
J. Steven Williams, P.E.  
District Engineer  
Riverside District  
Drinking Water Field Operations Branch

Attachments:

- 1. Arsenic Data Table and Graph for 2012
- 2. Proof of Notification

cc: County of Riverside, Department of Environmental Health

date	Concentration
1/3/2012	0.0
1/10/2012	4.9
1/17/2012	8.1
1/24/2012	8.1
1/31/2012	36
2/7/2012	5.8
2/14/2012	9.0
2/21/2012	8.7
2/28/2012	3.8
3/6/2012	5.0
3/13/2012	4.5
3/20/2012	5.6
3/27/2012	12
4/3/2012	3.9
4/10/2012	4.3
4/17/2012	4.9
4/24/2012	8.1
5/1/2012	4.1
5/8/2012	2.4
5/15/2012	6.5
5/22/2012	5.5
5/29/2012	14.0
6/6/2012	5.8
6/12/2012	11.0
6/19/2012	24.0
6/26/2012	12.0
7/3/2012	8.1
7/11/2012	12.0
7/18/2012	9.7
7/25/2012	12.0
8/1/2012	8.9
8/8/2012	17.0
8/15/2012	14.0
8/22/2012	19.0
8/29/2012	25.0
9/5/2012	32.0
9/12/2012	27.0
9/19/2012	19.0
9/26/2012	22.0
10/3/2012	29.0
10/10/2012	13.0
10/17/2012	6.2
10/24/2012	11.0
10/31/2012	6.3
11/7/2012	4.0
11/14/2012	5.4
11/20/2012	8.1
11/28/2012	15.0
12/5/2012	18.0
12/12/2012	15.0
12/19/2012	14.0
12/26/2012	16.0



**Drinking Water Notification to Consumers**

**PROOF OF NOTIFICATION**

**Name of Water System:** \_\_\_\_\_

Please explain what caused the problem if you have determined what it was and what steps you have taken to correct it. \_\_\_\_\_

\_\_\_\_\_

Consumers Notified \_\_\_\_\_ Yes \_\_\_\_\_ No

If not, Explain: \_\_\_\_\_

\_\_\_\_\_

Date of Notification: \_\_\_\_\_

On the date of notification set forth above, I served the above referenced document(s) on the consumers by:

\_\_\_\_\_ Sending a copy through the U.S. Mail, first class, postage prepaid, addressed to each of the resident(s) at the place where the property is situated, pursuant to the California Civil Code. Attach copy of Notice.

\_\_\_\_\_ Newspaper (if the problem has been corrected). Attach a copy of Notice.

\_\_\_\_\_ Personally hand-delivering a copy to each of the consumers. Attach a copy of Notice.

\_\_\_\_\_ Posted on a public bulletin board, that will be seen by each of the consumers (for small, non-community water systems with prior Department approval). Attach copy of Notice.

**I hereby declare the forgoing to be true and correct under penalty of perjury.**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Signature of Person Serving Notice

**\*\* Notice:** Complete this Proof of Notification and return it along with a copy of the notification to the Department within 10 days of posting the notification.

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