

Chlorine and Chloramines Workshop

Workshop Instructions

- Your system serves 5,432 customers and uses chlorine as a disinfectant.
- Based on your TCR monitoring requirements, you sample for chlorine 6 times per month.
- Your task:
 - Complete a compliance calculation.
 - Answer questions about how your TCR monitoring affects your monitoring requirements for chlorine and chloramines.

Calculating Compliance - Questions

1. Calculate your monthly average for Sept. 2005 from the following results:

2.4 mg/L	2.8 mg/L	2.8 mg/L
2.6 mg/L	5.2 mg/L	5.0 mg/L

2. Calculate your RAA from the following monthly averages, and determine whether you are in compliance with the chlorine MRDL:

3.5 mg/L	2.5 mg/L	3.4 mg/L	4.0 mg/L
4.2 mg/L	2.8 mg/L	3.1 mg/L	3.8 mg/L
4.2 mg/L	3.0 mg/L	2.5 mg/L	3.3 mg/L

Calculating Compliance - Answers

1. Your monthly average for Sept. 2005 is 3.5 mg/L:

$$2.4+2.8+2.8+2.6+5.2+5.0 = 20.8$$

$$20.8 / 6 = 3.5 \text{ mg/L}$$

2. Your RAA of monthly averages is 3.5 mg/L:

$$3.5+2.5+3.4+4.0+4.2+2.8+3.1+3.8+4.2+3.0+2.5+3.3 = 40.3$$

$$40.3 / 12 = 3.4 \text{ mg/L}$$

Your system is in compliance with the chlorine MRDL!

Special Scenarios - Questions

Your system takes a sample that is total coliform positive.

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| <p>3. How many follow-up TCR samples are you required to take the next day?</p> <p>A) 1
B) 3
C) 6</p> | <p>4. How many chlorine samples will you take the next day, as a result?</p> <p>A) None
B) 6
C) 3</p> |
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Special Scenarios - Answers

3. The correct answer is: B) 3
- 1 at the same tap as the original sample
 - 1 within 5 service connections upstream of the original sample
 - 1 within 5 service connections downstream of the original sample
4. The correct answer is: C) 3
- Any time you sample for total coliform, you must also sample for chlorine or chloramines (and at the same locations)!

Special Scenarios - Question

5. Keeping in mind the additional chlorine samples that you took due to the total coliform-positive sample, how many samples will you be using to calculate the next monthly average?

Special Scenarios - Answer

5. You will use all 9 samples from the month to calculate the monthly average: the 6 routine samples you are required to take and the 3 chlorine samples taken due to increased TCR monitoring.