

TTHM & HAA5 Workshop

Instructions

- You will be working through compliance calculations for TTHM and HAA5. Use a blank sheet of paper for calculations, if necessary.

Question 1

- Routine quarterly monitoring

Quarter	Sampling Results (in mg/L)	
	TTHM	HAA5
Q4 2004	0.075	0.030
Q1 2005	0.050	0.045
Q2 2005	0.082	0.055
Q3 2005	0.057	0.038

Answer to Question 1

- Results:

$$\begin{aligned} \text{TTHM} &= 0.075 + 0.050 + 0.082 + 0.057 = 0.264 \\ &0.264 / 4 = 0.066 \\ \text{RAA} &= 0.066 \text{ mg/L} < \text{MCL} \end{aligned}$$

$$\begin{aligned} \text{HAA5} &= 0.030 + 0.045 + 0.055 + 0.038 = 0.168 \\ &0.168 / 4 = 0.042 \\ \text{RAA} &= 0.042 \text{ mg/L} < \text{MCL} \end{aligned}$$

The system is in compliance with the TTHM and HAA5 requirements of the Stage 1 DBPR.

Question 2

- Routine annual monitoring:
 - Date samples collected: 8/04/2005
 - Sample results:
 - TTHM = 0.087 mg/L
 - HAA5 = 0.060 mg/L
 - Has the system committed a violation?

Answer to Question 2

- The system has not committed a violation.
 - Although the TTHM result exceeded the MCL, it was not high enough to immediately trigger an MCL violation
 - $0.087 / 4 = 0.022 < \text{MCL}$
 - The system must begin quarterly monitoring next quarter (4th Quarter)

Question 3

- **Routine annual monitoring:**
 - **System collects 4 TTHM samples (3 samples more than required; specified in monitoring plan as compliance samples)**
 - **Results of 4 TTHM samples:**
 - 0.075 mg/L; 0.078 mg/L; 0.084 mg/L; 0.077 mg/L
 - **Determine next steps for the system**

Answer to Question 3

- **Results:**
 - $0.075 + 0.078 + 0.084 + 0.077 = 0.314$
 - $0.314 / 4 = 0.079$
 - Annual Average = 0.079 < MCL**
- **The system remains on routine annual monitoring**