Choosing When to Sample a Rinse Stream

Scoring guide · one credit per question · review written work against each rubric

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Question 1

Choice (1)

Both average 4 mg/L, but Q reaches 13 mg/L in the third interval, which exceeds the interval limit of 9 mg/L.

Question 2

P gives (4+4+4+4)/4 = 4 mg/L. Q gives (1+1+13+1)/4 = 4 mg/L. The mixed reading is the same despite the different interval peaks.

Question 3

The second or third interval can exceed 9 mg/L without changing the two recorded values. For example, 4, 10, 2 and 4 mg/L gives the stated first and fourth readings and an average of 5 mg/L, but fails the peak limit.

Question 4

Sample all four intervals separately and keep the readings separate. Compare the highest of the four readings with 9 mg/L. Also calculate the mean of the four concentrations, with equal weights because the intervals have equal duration and constant flow. Compare that mean with 5 mg/L.