Operation of Activated Sludge

FREE Zoom—Mentoring Session

Provides the range of loading and conditions for AS operation. Troubleshooting AS problems and case histories given.

Includes: Control parameters, equations and operational tools for assessing and changing plant operation.

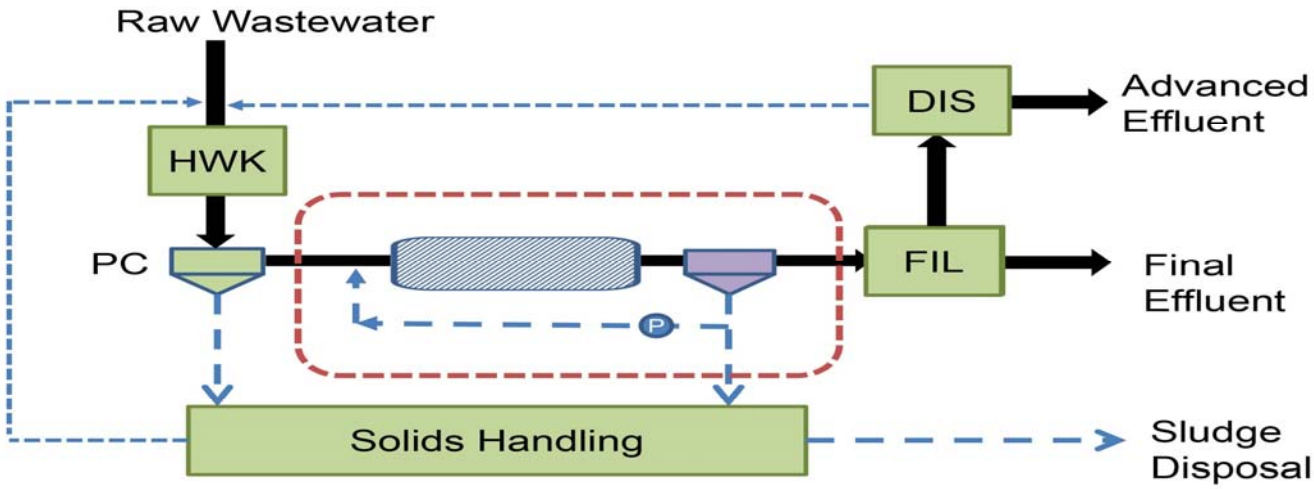
Conveyed will be a clear understanding of the activated sludge process, process control, monitoring equipment, and troubleshooting including determining the effects of changing WAS and RAS rates. Participants will become familiar with treatment units and components of activated sludge. They should be able to grasp the acceptable range and use of parameters such as: food-to-microorganism (F/M) ratio, respiration rate, and the mean cell retention time (MCRT).

Answer these Example Questions:

1. Draw a schematic for conventual activated sludge system and for step feed activated sludge?
2. Given a primary effluent BOD of 150 mg/L and 2.0 mgd flow; what is the BOD load to the aeration basin?
3. How do F/M and MCRT affect plant performance, oxygen demand and solids yield?
4. Calculate F/M, MCRT and respiration rates.
5. What are biological selectors and how are they constructed and sized?
6. What are possible solutions to common operating problems with activated sludge?

Example Slides: Range of Solids Yield & Oxygen Requirements

	MCRT	Solids Yield		Oxygen Rqt		Process Rating
	Days	w Pri	wo Pri	COR	BOR	
Young	3	0.8	0.9	0.8	0.8	High rate AS
	7	0.7	0.8	1.0	1.4	Conventional AS
Old	15	0.6	0.7	1.2	1.7	Adv AS or Low AS



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