

METCALF AND EDDY ACADEMIC DESIGN COMPETITION 2007-2008 PROBLEM 1 ERRATA AND CLARIFICATIONS

Following are corrections and clarifications for the 2007-2008 Academic Design Competition Problem 1: Retrofit of wastewater treatment plant for biological nutrient removal.

1. Table showing wastewater characteristics

Title:

The table in the second page of the design problem entitled "Typical primary effluent quality characteristics" should be titled "Typical raw wastewater quality characteristics"

Total Suspended Solids:

In the same table which is to be titled "Typical raw wastewater quality characteristics," the value of TSS should read 152 mg/L, instead of 125 mg/L.

Typical ~~primary effluent~~ raw wastewater quality characteristics

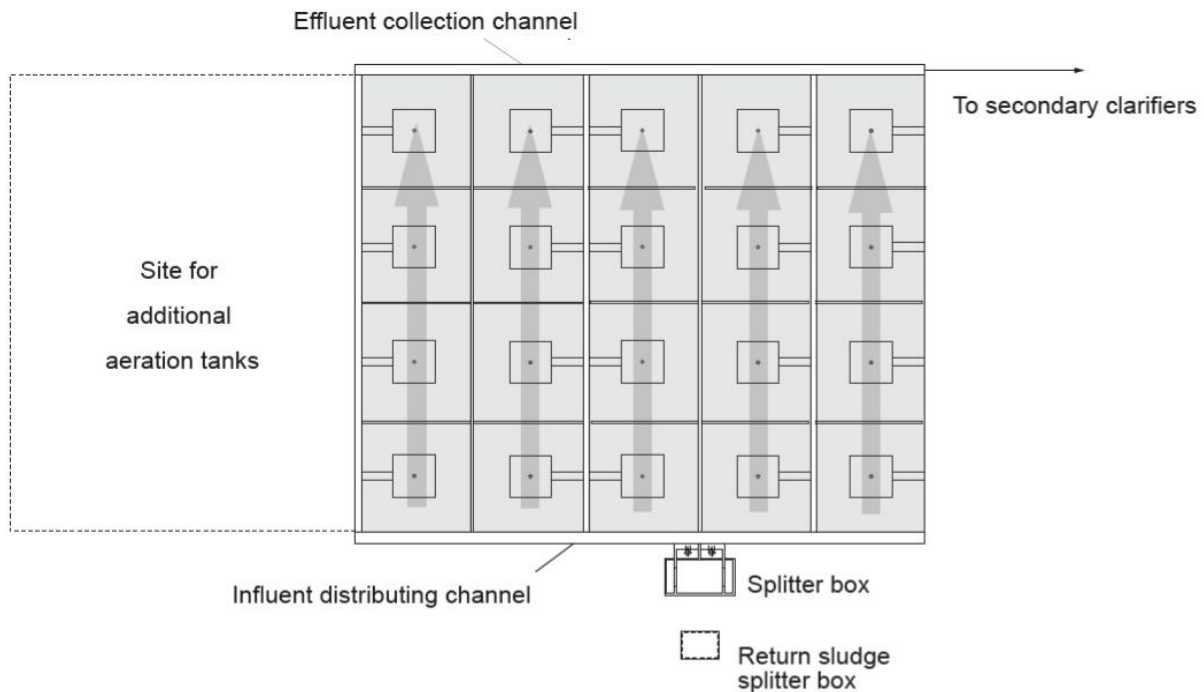
PE characteristics	Average value
Wastewater temperature (°F)	Low month (January): 53 – High month (July): 72
Existing/new average flow rate (MGD)	12/16
Existing/new peak flow capacity (MGD)	36/48
BOD ₅ (mg/L)	155
TKN (mg-N/L)	32
Ammonia (mg-N/L)	27
Total phosphorus (mg-P/l)	4
Nitrate (mg-N/L)	0.5
Alkalinity (mg/L as CaCO ₃)	90
TSS (mg/L)	125 -152
ISS (mg/L)	16

2. Configuration of existing biological reactors

There are five (5) aeration tanks, each of which has four (4) zones. Wastewater flows from the bottom side of the simplified plan shown in page 3 of the design problem. Effluent is collected to the effluent collection channel and sent to the clarifiers. A simplified plan view of the existing aeration tanks is shown below. The

dimensions shown in the second page of the design problem (56'W×56'L×16'D) is the dimension of each zone. Each zone has a surface aerator with an access bridge.

Specifications of the baffles between the zones are not given in the problem statement so that students can configure them creatively.



Any further questions should be addressed to Ryujiro Tsuchihashi, a program coordinator (ryujiro.tsuchihashi@m-e.aecom.com), or your Metcalf & Eddy liaison assigned to your school.