Iowa Department of Natural Resources
Wastewater Section
Construction Permit Application
SCHEDULE O, Aeration Tanks or Basins

DNR USE ONLY
Project No. _____
Permit No. _____

Date Prepared _____ Date Revised _____	Project Identity

1. Classification of Process: _____

2. Design Loadings: (waste entering tank unit operations)

	ADW	AWW	MWW	PHWW
Flow, MGD				
Design Temp: _____ °F BOD_5, mg/l				
TSS, mg/l				
NH_3-N, mg/l				

3. Aeration tank unit operation follows: _____ and precedes: _____

4. Design data: First stage: _____ Second stage: _____

Parameter	Unit 1	Unit 2	Unit 3
Specify whether new or existing			
Dimensions (length x width)			
SWD (ft)			
Freeboard (in)			
Effective Volume (gal)			
Detention time at AWW flow (hrs)			
BOD Loading (#/D/1,000 ft^3)			
Air provided (ft^3/#BOD_5)			
Oxygen Provided (#O_2/#BOD_5)			
F/M Ratio			
MLSS/MLVSS (mg/l)			
SRT (days)			
Hydraulic Loading (gpm/ft^2)			
Sludge Return: Percent			
Sludge Return: GPM			
Gallons of Waste Sludge @ ____ % solids			
Sludge Wasting: Method			
Sludge Wasting: Location			

5. Is service bypass provided? ☐ Yes ☐ No Discharge to: _____

6. Is cold weather protection provided? ☐ Yes ☐ No How: _____

7. Aeration Equipment: Design Air Temperature: _____ °F to _____ °F

A. Rotors: Number of Rotors: _____ Dimensions: _____
Each _____ HP Maximum submergence: _____ inches
Cross Section velocity _____ fps
Specify provisions for cross-sectional velocity control _____

B. Diffusers: Number of Blowers: _____ Each _____ CFM at _____ psi
Type of Diffusers: _____ Number/Tank: _____
Total CFM of air required: _____ Provided: _____

C. Mechanical: Number and Type of Unit: _____
Each _____ HP Rated Capacity: _____ #O_2/hour

8. Sludge Return Pump Number of Pumps: _____ Type: _____ Each _____ GPM
Rated TDH: _____ Required TDH: _____
Range: _____ GPM to _____ GPM Type of Control: _____