

**PERFORMANCE EVALUATION
AEROBIC DIGESTER**

Facility Name:	NPDES Permit:
Contact Name:	Telephone:
Inspector Name:	Date:

I. DESIGN INFORMATION

1. Type of Digester (check one):
 Primary High Rate Secondary Low Rate

2. Number of units: _____ In operation: _____

3. Type of sludge digested:
 Primary Sludge Secondary Sludge Combined Sludge
If combined sludge, what is the ratio by volume? _____

4. Mode of operation: Batch Semi-Batch Continuous

5. Digester dimensions (L x W x D) _____ ft

6. Total volume of digester: _____ cu ft _____ gal

7. Design sludge application rate: _____ gal/day _____ lbs/day

8. Design volatile solids loading: _____ lbs/cu ft/day

9. Hydraulic retention time: _____ days

10. What type of aeration equipment is used: _____

11. If diffused air is used do air diffusers require frequent cleaning? Yes No

12. Aeration source: Air Pure Oxygen

13. Air supply capacity: _____ CFM/1,000 cu ft _____ horsepower (HP/1,000 cu ft)

14. Are the digesters open or covered: _____

II. PROCESS INFORMATION

1. Describe operational strategy: _____

2. Sludge application rate: _____ gal/day _____ lbs/day

3. Frequency of application: _____ hr

II. PROCESS INFORMATION (Continued)		Monitoring Frequency
4. Raw sludge solids concentration: _____ %		
5. Raw sludge volatile solids content: _____ %		
6. Digested sludge solids concentration: _____ %		
7. Digested sludge volatile solids content: _____ %		
8. Digested sludge removal rate: _____ gal/day _____ lbs/day		
9. Reactor solids concentration: _____ %		
10. Reactor volatile solids content: _____ %		
11. Reactor temperature (average): _____ °f		
12. Reactor dissolved oxygen: _____ mg/l		
13. Reactor pH: _____		
14. Sludge recycle rate to the digester: _____ ft		
15. Are there foaming problems? <input type="checkbox"/> Yes <input type="checkbox"/> No		
16. Are there odor problems? <input type="checkbox"/> Yes** <input type="checkbox"/> No		
17. Location of supernatant return in plant: _____		
Supernatant return rate: _____ gal/day		
Supernatant solids concentration: _____ mg/l		
18. Are adequate operating records maintained? <input type="checkbox"/> Yes <input type="checkbox"/> No**		
III. MAINTENANCE INFORMATION		
1. Is there an adequate preventative maintenance program? <input type="checkbox"/> Yes <input type="checkbox"/> No**		
2. Is there adequate equipment redundancy? <input type="checkbox"/> Yes <input type="checkbox"/> No**		
3. Is the spare parts inventory adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No**		
4. Housekeeping adequate? <input type="checkbox"/> Yes <input type="checkbox"/> No**		
5. Are air diffusers and tanks inspected at least once per year? <input type="checkbox"/> Yes <input type="checkbox"/> No**		
6. Are mixing, pumping, and blower equipment inspected annually for worn blades and impellers? <input type="checkbox"/> Yes <input type="checkbox"/> No**		
7. Are air filters serviced at regular intervals? <input type="checkbox"/> Yes <input type="checkbox"/> No**		

VI. PROCESS SCHEMATIC

(Sketch or replace with plant schematic)

**COMPARISON OF ACTUAL AEROBIC DIGESTER
CONDITIONS TO DESIGN AND TYPICAL CONDITIONS**

PARAMETER	ACTUAL	DESIGN	TYPICAL	40 CFR 257
Solids Retention Time (days)			10-20	From 60 days at 59°F to 40 days at 68°F
Temperature (Fahrenheit)			> 59	
Volatile Solids Reduction %				38
Volatile Solids Loading (lb VS./cu ft/dy)			0.024-0.14	
Air Requirements Diffuser System (cfm/1,000 cu ft) Activated Sludge Primary & Activated Sludge			20-35 > 60	
Air Requirements Mechanical System (hp/1,000 cu ft)			1.0-1.25	
Dissolved Oxygen Minimum (mg/l)			1.0-2.0	
Reactor pH			> 6.5	