Permit-to-Install/Plan Approval Application

Attachment VII: Sludge Treatment and Disposal

Sludge Thickening, Stabilization, Conditioning, Dewatering, Reduction, Disposal and Storage

1. Sludge Thickening ☐ N/A	New	Existing
a. Thickening type		
b. Number of thickeners		
c. Surface area dimensions (feet, each)		
d. Side water depth or height (feet, each)		
e. Detention time (hrs & min, total)		
f. Surface overflow rate (gpd/ft^2)		
g. Solid surface loading		
h. Thickened sludge concentration (%)		
i. Others:		
j. If air flotation is the thickening process:		
i. Air-to-solids ratio		
ii. Air pressure		
iii. Tank operating pressure		
iv. Recycling ratio (%)		
v. Others:		
vi. Will air flotation thickening be aided by polymer addition? ☐ Yes ☐ No		
k. If centrifugal thickening is the thickening process:		
i. Centrifuge type		
ii. Number		
iii. Rate		
iv. Others:		
v. Will centrifugal thickening be aided by polymer addition? ☐ Yes ☐ No		

2. Sludge Stabilization ☐ N/A	New	Existing
a. Number of sludge stabilization tanks		
b. Surface area dimensions (feet, each)		
c. Retention time (hrs & min, total)		
d. Side water depth (feet, each)		
e. If aerobic digestion is the stabilization process:		
i. Number of aerators		
ii. Type		
iii. Oxygen supplied (with largest blower out of service)	CFM at PSI	CFM at PSI
	lb oxygen/day	lb oxygen/day
iv. Others:		

2. Sludge Stabilization (cont.)	New	Existing
f. If anaerobic digestion is the stabilization process:		
i. Solids loading (lb vss/cu ft/day)		
ii. Solid retention time (hours & minutes)		
Influent Solids Content (% dry basis)		
Effluent Solids Content (% dry basis)		
iii. Digestor cover type		
iv. Digestion temperature		
v. Sludge heating type		
vi. Sludge heating rate (BTU/hr)		
vii. Sludge mixing type		
viii. Number of withdrawal levels		
ix. Sludge withdrawal pipe size		
x. Gas withdrawal pipe size		
xi. Others:		

3. Other Sludge Stabilization ☐ N/A ☐ Yes ☐ No

a. Describe:

b. Design Criteria:

4. Sludge Dewatering ☐ N/A ☐ Yes ☐ No

a. Describe:

b. Design Criteria:

5. Sludge Reduction ☐ N/A ☐ Yes ☐ No

a. Describe:

b. Design criteria:

6. Sludge Disposal ☐ N/A	New	Existing
a. Sludge dry solids content (%)		
b. Method of disposal		
c. Estimated sludge production (tons of dry solids/year)		

7. Sludge Storage Tanks ☐ N/A	New	Existing
a. Location		
b. Number		
c. Surface area dimensions (feet, each)		
d. Storage time (days, total)		
e. Side water depth (feet, each)		
f. Sludge removal method		

g. Will mixing be provided? ☐ Yes ☐ No

If **Yes**,

Mixing type: _____

Describe: _____

h. Will aeration be employed? ☐ Yes ☐ No

If **Yes**,

Number of blowers: _____

Type: _____

Capacity: _____

i. Will chemicals be used to control odors? ☐ Yes ☐ No

If **Yes**,

Chemical type: _____

Describe: _____

8. Sludge Management Plan

Has plan been approved? ☐ Yes ☐ No

If **Yes**, date of approval: / / If **No**, date to be submitted: / /