

Design, Construction & Start-up of A Covered Anaerobic Digester Treating Manure From a Sow Farm

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S-5 10,000 Sow Site



S-5 Digester Cover



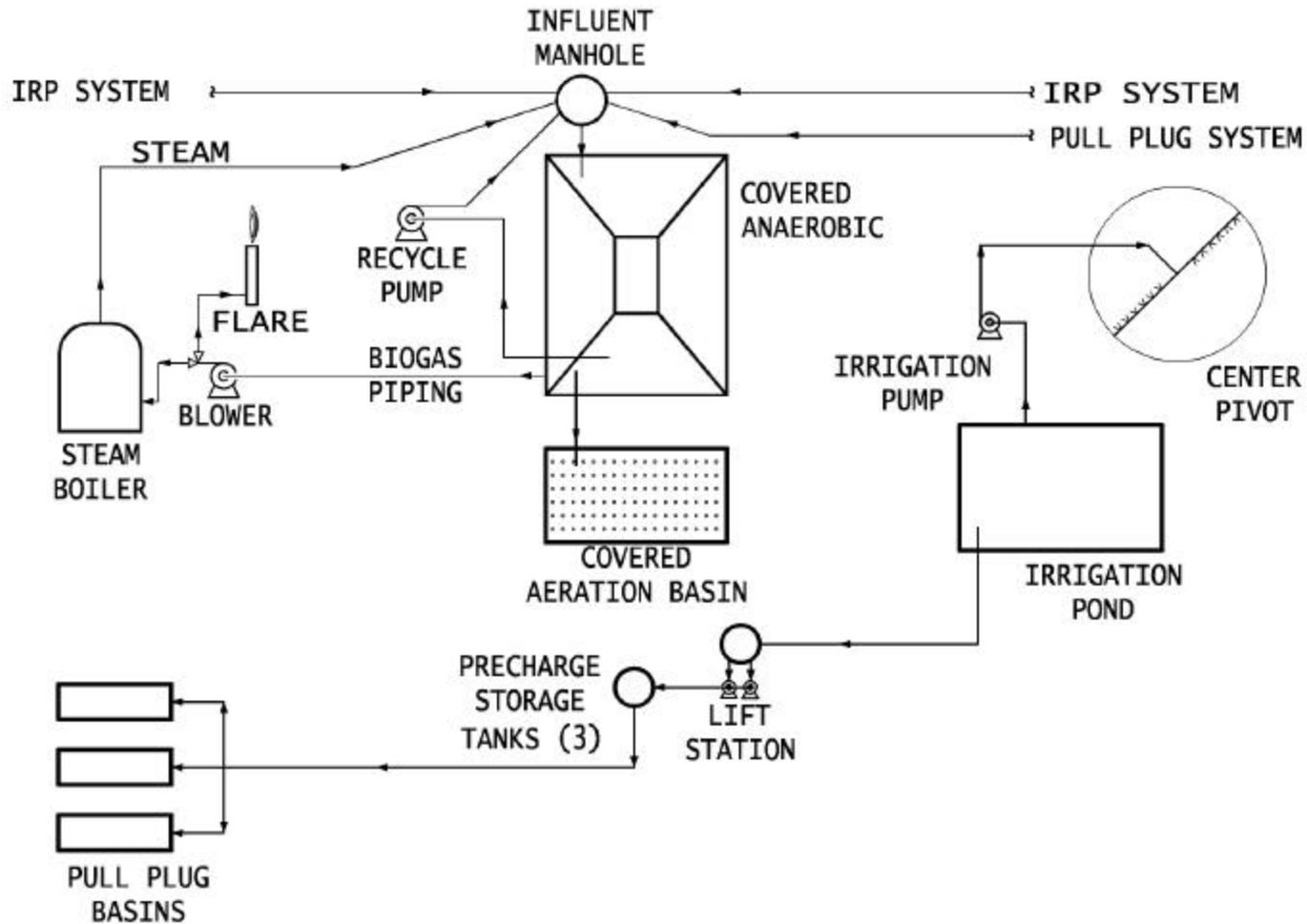
S-5 Boiler



S-5 Biogas Blower



Flow Schematic – S-5



Anaerobic Digester Loadings

S-5

- Flow ----- 0.100 mgd
- BOD₅, Concentration ----- 6,385 mg/l
- BOD₅, ----- 5,325 lbs/day
- TSS, Concentration ----- 15,960 mg/l
- TSS ----- 13,310 lbs/day
- Volatile Solids, Conc. ----- 16,595 mg/l
- Volatile Solids, ----- 13,840 lbs/day

Design Loadings

- Hydraulic Detention Time 23.0 days
- Volatile Solids /1000 ft³ 60 lbs
- BOD₅/1000 ft³ 23.4 lbs

Projected Vs Actual Anaerobic Effluent BOD₅

- **Influent, Projected** 6,385 mg/l
- **Influent Actual** 6,568 mg/l
- **Effluent, Projected** 958 mg/l
- **Effluent Actual** 301 mg/l
- **% Reduction, Projected** 85%
- **% Reduction, Actual** 93.2%

Projected Vs Actual Anaerobic Effluent TSS

- **Projected Influent TSS** 15,960 mg/l
- **Actual Influent TSS** 16,120 mg/l
- **Projected Effluent TSS** 2,394 mg/l
- **Actual Effluent TSS** 2,590 mg/l
- **Projected % Reduction** 85%
- **Actual % Reduction** 76.3%

Projected Vs Actual Anaerobic Effluent Volatile Solids

- **Projected Influent VS** 16,595 mg/l
- **Actual Influent VS** 18,475 mg/l
- **Projected Effluent VS** 6,638 mg/l
- **Actual Effluent VS** 2,430 mg/l
- **Projected % Reduction** 60%
- **Actual % Reduction** 85.3%