

MINUTES
Progress Meeting 3
Upgrade of WWTF

Date: July 21, 2015
Time: 10:00 AM
Place: WWTF, Town Farm Road, Ledyard, CT

Attending:

Jeff McDonald F&O Project Manager, JMcDonald@fando.com, 860-646-2469 x5339
Steve Banks WPCA Supervisor, wpcasupervisor@ledyardct.org, 860-536-1769

1. Work in Progress

- Demolition Contract bid opening
 - Bids ranged from \$69,500 to \$375,000
 - Average of three low bids was \$82,014
 - Low bid – Standard Demolition Services - \$69,500
 - F&O recommended Project Awarded to Standard Demolition Services
- Field Survey work of Headworks Area completed
 - Developing revised site plan

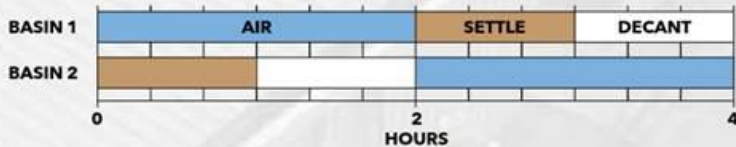
2. Status Reports

- Headworks Upgrade
 - Reviewed Building proposals
 - Contacted Pelletier Builders for powdered coated metal building: they advised against. Thought not cost effective due to size and need to ship components out to get coated. They recommended using precast.
 - F&O Recommends Precast Building
 - Reviewed Screen proposals
 - F&O Recommends similar to existing Schloss screen; JWC, Headworks, or equal
- Blower Upgrade
 - F&O reviewed need to confirm Air requirement. Discussed desired operating conditions and compared with original design. Original design was based on nitrification and did not allow for denitrification in cycle. This requires more air over shorter cycle time as is currently practiced.
 - Ledyard ABJ O&M Manual indicates system designed with 6 hour normal cycle and 4 hour storm cycle for Nitrification (see NIT Cycle next page)

ICEAS incorporates two or more hydraulic cycle control features that allow you to operate the system in two basic process modes: Nitrification (NIT) and Denitrification (NDNP).

NIT Cycle

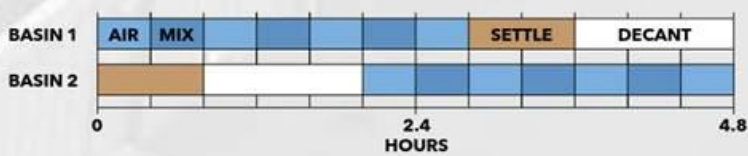
The simple cycle provides half the cycle for aeration and treatment of the sewage and a total of 2 hours for settle and decant. The cycles are staggered so one blower can provide air to a pair of basins while ensuring that only one basin is aerated at any time.



4 hour cycle
 120 minutes Air/cycle
 6 Cycles/day
 12 hours Aeration per reactor
Need 490 cfm blower

NDNP Cycle

If nutrient removal is required the cycle time is extended to provide time for anoxic periods to allow denitrification and Bio P removal. The continual feed provides BOD at all times to provide good denitrification rates at all points in the cycles and optimize nitrogen removal.



4.8 hour cycle
 96 minutes Air/cycle
 5 Cycles/day
 8 hours Aeration per reactor
Need 560 cfm blower

- System now operating to achieve denitrification as follows:

6 hour cycle
 100 minutes Air/cycle
 4 Cycles/day
 6.7 hours Aeration per reactor
Need 665 cfm blower

3. Old Action Items

- F&O to obtain blower proposals; **with updated blower needs**
- F&O to define SCADA scope

4. New Action Items

- F&O to develop Equipment Procurement Schedule
- F&O to confirm Decanter repair scope
- F&O to confirm power supply for new blowers
- Ledyard to execute Demolition Contract
- Ledyard to obtain letter from Groton Utilities on Electrical Disconnect for Demolition site
- Ledyard to proceed with sampler replacement

5. Next Meeting

- August 25th, 2015; 10 AM