

MOVING BED ANOXIC REACTOR FIELD REPORT

Date			
Client			
Address			
City		State	
Inspector			

Reason For Site Visit:

- O & M Commissioning
 Testing Other:

(1) Pumps and Control Panel

Note: Do NOT remove media retention screen prior to shutting off mixer and ancillary equipment and also lowering the liquid level in the reactor.

	Train A	Train B (if applicable)
Record the applicable sludge recycle pump timer setting(s):	min <input style="width: 30px;" type="text"/> hrs <input style="width: 30px;" type="text"/> on: off:	min <input style="width: 30px;" type="text"/> hrs <input style="width: 30px;" type="text"/> on: off:
Record the applicable post aerator timer settings:	min <input style="width: 30px;" type="text"/> min <input style="width: 30px;" type="text"/> on: off:	min <input style="width: 30px;" type="text"/> min <input style="width: 30px;" type="text"/> on: off:

	Reactor # A	Reactor # B
Is the mixer operating properly?:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are there any dead zones in the anoxic tank?:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do the effluent screen(s) need cleaning?:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Record the variable frequency drive % on HMI screen:	<input style="width: 40px;" type="text"/> %	<input style="width: 40px;" type="text"/> %
Record mixer amperage from HMI screen or amp meter:	<input style="width: 40px;" type="text"/> Amps	<input style="width: 40px;" type="text"/> Amps

(Mixer speed should be set to 75% (45 Hz) during normal operation)

For the following checklist, set sludge pump, and post aeration unit(s) timers to a test cycle.

	Reactor # A	Reactor # B
Record the amperage of recycle pump(s) (if applicable):	<input style="width: 40px;" type="text"/> Amps	<input style="width: 40px;" type="text"/> Amps
Record the amperage of post aerators (if applicable):	<input style="width: 40px;" type="text"/> Amps	<input style="width: 40px;" type="text"/> Amps
Are all timer(s) operating properly? (if applicable):	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

(Please visually inspect relays for wear and provide all necessary details in the report summary section).

(2) Plumbing

If applicable, is the recycle piping siphon break weep hole(s) operating as designed? Yes No
(If "no", clean weep hole.)

Are any components of the pump plumbing leaking? Yes No
(If "yes", then repair necessary components)

MOVING BED ANOXIC REACTOR FIELD REPORT

(3) Sludge Management

(Measure the sludge in the settling tank quarterly.)

Sludge Depth (inches): Scum Depth (inches):

Note: Settling tank must be pumped when sludge level reaches approximately 18 inches or greater. Alternatively, the sludge pump timer setting may be increased slightly.

(4) Field Testing

Were influent/effluent samples taken for lab analysis? Yes No

If process control test samples were taken, please provide the following information:

	Alkalinity (as CaCO ₃) <input style="width: 50px; height: 25px;" type="text"/>	pH <input style="width: 50px; height: 25px;" type="text"/>	Turbidity (NTU) <input style="width: 50px; height: 25px;" type="text"/>
Sample Locations: <input style="width: 150px; height: 50px;" type="text"/>	Temperature (F) <input style="width: 50px; height: 25px;" type="text"/>	DO (mg/l) <input style="width: 50px; height: 25px;" type="text"/>	NH ₃ -N (mg/l) <input style="width: 50px; height: 25px;" type="text"/>
	NO ₃ -N (mg/l) <input style="width: 50px; height: 25px;" type="text"/>	Other: <input style="width: 100px; height: 25px;" type="text"/>	<input style="width: 50px; height: 25px;" type="text"/>

(5) Biofilm Characterization

	Reactor # A	Reactor # B
1) What is the color of the biofilm on the media? <i>(White, Grey, Grey/Brown, Brown, Red/Brown, Black)</i>	<input style="width: 100%; height: 25px;" type="text"/>	<input style="width: 100%; height: 25px;" type="text"/>
2) Classify the thickness of the biofilm on the media. <i>(1=light, 2=medium, 3=heavy) Inspect while submerged.</i>	<input style="width: 100%; height: 25px;" type="text"/>	<input style="width: 100%; height: 25px;" type="text"/>
3) What is the dissolved oxygen concentration? <i>Measure at effluent end of reactor basin.</i>	<input style="width: 50%; height: 25px;" type="text"/> mg/l	<input style="width: 50%; height: 25px;" type="text"/> mg/l
4) What is the effluent Nitrate-N concentration? <i>Measure at effluent end of reactor basin.</i>	<input style="width: 50%; height: 25px;" type="text"/> mg/l	<input style="width: 50%; height: 25px;" type="text"/> mg/l
5) What is the water temperature?	<input style="width: 50%; height: 25px;" type="text"/> Deg. C	<input style="width: 50%; height: 25px;" type="text"/> Deg. C
6) Basin satisfactorily mixed (no dead spots)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

(6) Chemical Feed Calibration

Note: Chemical dosing is based upon one of the following methods: (1) Pumps in the pre or post equalization chamber/lift station
(2) 24-hour clock
(3) Flow meter

Record the chemical being utilized (% and type):

Record and maintain history of the external carbon chemical level: (inches above tank bottom)

Record dosing rate: (milliliters/min)

If there are discrepancies or test results are not satisfactory, re-calibrate pump and/or adjust the dosing rate based on the influent (nitrate + nitrite) concentration and the average daily flow. Measurement of the influent/effluent Nitrate-N and Nitrite-N will be necessary. Field test kits for Nitrate-N are acceptable for process control. Dissolved oxygen (DO) concentration must remain < 0.5 mg/l to effectively denitrify. See Aquapoint technical manual for assistance with chemical dosing calculations. Call Aquapoint if you require any assistance.

MOVING BED ANOXIC REACTOR FIELD REPORT

(7) Mixer Maintenance

	Train A	Train B (if applicable)
Is the cooling fan functioning & free from debris?:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there a positive air flow out of the anoxic tank and riser?:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is the or gearbox leaking?:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there excessive vibration at mixer support or flange?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the mixer mounting bolts & anchor bolts secure?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Date of last lubrication change:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
Type of lubrication used:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>

*Consult the Mixer O&M manual for recommended lubrication frequency and type.
 Mixer is installed with food grade lubricant.*

(8) Final Check

- Main power "on" and toggle for all pumps and mixers set to "normal" (or "auto") position
- Alarm toggle set to the "on" position
- Sludge pump and post aeration unit(s) timers are set to original cycles in control panel
- Lock control panel
- Lock all applicable doors, gates and tank access hatches
- Record potable water usage meter reading or flow meter reading (if possible):

Is the mixer control set to the power save mode?: Yes No

What is the power save timer setting?: On: Off:

What is the exercise cycle timer setting?: On: Off:

What is the exercise interval timer setting?: On: Off:

(9) Report Summary

Note: Contact Aquapoint for pump, mixer and control component replacement parts.

Signature: _____