



July 14, 2020

Via Electronic Mail Delivery

Mr. Darrin Gordon
General Manager
Lewes Board of Public Works
107 Franklin Avenue
Lewes, DE 19958

Subject: June 2020 Monthly Report to BPW

Dear Mr. Gordon:

White Marsh Environmental Systems, Inc. (WMES) is pleased to submit the June 2020 monthly report. The report contains a summary of the operations and maintenance activities at the BPW lift stations and wastewater treatment plant by WMES for the month of June, 2020. In addition, the report contains the following documents:

1. Corrective Action Items Summary – This will be submitted each month until all items have been completed.

If you have any questions, please feel free to contact me at pperis@middlesexwater.com.

Sincerely,

Paul S. Peris

Paul S. Peris
Director of Production and Maintenance
White Marsh Environmental Systems, Inc.

June 2020

I. Effluent Quality and Compliance

The data below confirms that the effluent meets all permit requirements.

Sample Data	Total Nitrogen	Total Phosphorus	BOD	TSS	Enterococcus
Average:	1.97 mg/L	1.31 mg/L	<2.4 mg/L	<1.14 mg/L	<1 Col.
Maximum:	1.97 mg/L	1.31 mg/L	<2.4 mg/L	<2.0 mg/L	<1 Col.
Permit Limit:	8 mg/L average	2 mg/L average	15 mg/L average	15 mg/L average	10 Col. average
Maximum Permit Limit	N/A	N/A	23 mg/L MAX	23 mg/L MAX	104 Col. MAX

- Maximum daily flow - 1.0856 MGD
- Monthly average flow - .9442 MGD

II. Activities – June 2020

Lift Stations Activities

- All Lift Stations monitored daily with Point Watch system.
- WMES personnel conducted bi-monthly lift station inspections. No deficiencies noted.
- 6/16/20 - Lift Station 17B “Contactor Feed Fault”. WMES personnel reset. No further issues with the contactor.
- 6/18/20 - WMES personnel investigated a high level alarm at Lift Station #20. Alarm wires were found to be touching and triggering a false alarm. Wires were properly terminated by WMES personnel and alarm circuit tested. No further deficiencies have been noted.
- 6/24/20 - Pump #1 at Lift Station #8 lost prime. WMES personnel primed the pump and placed back on line.
- 6/25/20 - WMES personnel replaced a control relay at Lift Station #74.

Plant Activities

- 6/2/20 - WMES personnel replaced the piping for the pre-filter for the air compressor.
- 6/3/20 - Flow EQ pump #2 tripped out. WMES personnel found the variable frequency drive (VFD) was inoperable. A replacement is on order.
- 6/3/20 – During the inspection of Flow EQ pump #2, WMES personnel found an isolation valve that did not function properly. A replacement valve is on order.
- 6/4/20 - Train #4 turbidimeter was sent to Hach for warranty repair. A spare unit was installed to keep the train online.
- 6/5/20 - 7,000 gallons of sludge hauled from digester by CDI to help maintain mixed liquor concentration.
- 6/8/20 - 21,000 gallons of sludge hauled from digester by CDI to help maintain mixed liquor concentration.
- 6/8/20 - Supernate pump #1 from drying beds pulled for replacement. Pump #2 remains online. Replacement pump has been ordered.
- 6/9/20 - Increased air to bioreactors to facilitate further phosphorus reduction.
- 6/9/20 - George and Sons hauled two trailer loads of dry sludge. BPW staff onsite with equipment to load the trailers.
- 6/9/20 – The chlorine regulator for the membrane maintenance clean was adjusted and manual cleans were performed on train's 1, 2, and 4.
- 6/10/20 - George and Sons hauled one tractor trailer load of dry sludge. BPW staff onsite with equipment to load the trailer.
- 6/11/20 - Increased aluminum sulfate pumps to facilitate phosphorus removal. Summer temperatures result in higher phosphorus levels requiring chemical feed adjustments.
- 6/15/20 – Suez technician onsite uploading the programming of the new control panel.
- 6/15/20 - Digester diffuser was cleaned by WMES personnel.
- 6/16/20 – A 2nd digester blower was turned on to increase the dissolved oxygen. (DO) This is a normal process during the summer months.
- 6/17/20 – BPW integrator Keystone worked on the PLC communications with Josh Gritton from BPW.

- 6/17/20 - All Straub couplings were checked and tightened to manufacturer's specifications.
- 6/18/20 – Preventive Maintenance was performed on the generator by WMES personnel.
- 6/18/20 – BPW integrator Keystone continued work on PLC communications with Josh Gritton from BPW.
- 6/18/20 - 14,000 gallons of sludge hauled from digester by CDI to help maintain mixed liquor concentration.
- 6/19/20 - 21,000 gallons of sludge hauled from digester by CDI to help maintain mixed liquor concentration.
- 6/23/20 - 2 tractor trailer and 2 dump truck loads of dry sludge were hauled from the sludge storage building.
- 6/23/20 - Train 2 shut down due to high turbidity alarm after maintenance clean. Train was reset and returned to service.
- 6/25/20 - 26,200 gallons of sludge hauled from the digester by CDI to help maintain mixed liquor concentration.
- 6/29/20 – During inspection of the headworks auger trough, WMES personnel found a small hole. WMES contacted Powertrans to evaluate and possibly repair. A temporary repair was made to keep the equipment in operation. The evaluation revealed the auger and trough had reached useful life and needed replacement. Powertrans will provide a cost estimate to WMES and will advise BPW.
- 6/29/20 - Digester recycle pump tripped out. WMES personnel pulled the pump and found it clogged. After the pump was unclogged it was returned to service. No further deficiencies noted.
- 6/30/20 - WMES personnel replaced macerator on the 2mm screen.

SAFETY INFORMATION

- No work place injuries reported. Days without workplace injury: 191
- Performed monthly PPE inspection. No deficiencies noted.
- Performed monthly eyewash station and fire extinguisher inspections. No deficiencies noted.
- Connor Strong Safety Analysis Report June 2020 Status Update. (Attached, with dates that items were addressed; and estimated completion dates for remaining items).

Additional Information

- Suez field technician was onsite to support the remote download of the software program and perform startup of the new control panel. Plant was returned to service following the upload. The Suez Insight system was unable to be activated due to communication issues. BPW integrator Keystone is working with Josh Gritton from BPW to solve the communication issues.
- Bruce Patrick and Paul Peris from WMES attended the June 2020 Lewes BPW monthly meeting remotely via Zoom.

Open Items

No open items at this time.

Attachments

- June 2020 Influent and Effluent Report
- June 2020 TMP chart for Kubota Digester Membranes
- June 2020 Influent Flow vs. Rainfall Chart
- June 2020 TMP and Permeability charts for Zeeweed Membranes
- June 2020 Membrane Turbidity Trend Chart
- June 2020 Sussex County pumpage numbers to Lift Station #4
- June 2020 E-DMR
- June 2020 MLSS Report
- June 2020 WWTP Monthly Operation Report
- June 2020 Nutrient Offset Report
- Corrective Action Items Summary
- Connor Strong Safety Analysis Report Update