

Water Pollution Control Plant Monthly Report



January 2011

OVERVIEW AND HIGHLIGHTS

The month of January was highlighted by the long anticipated installation of the new butterfly valves, used to control the new aeration system. The valves will permit the operation of the new aeration system to be controlled more precisely. Expansion joints were installed in advance to facilitate the butterfly valves new dimensions.

During the next two to three months plant staff will be installing new butterfly valves in the pipework for the tertiary treatment building. The new valves will replace old valves that are in poor condition.

Operations staffed spent a great deal of time in January cleaning sidewalks, roads and parking lots of snow and ice. The maintaining of these pavements is important to prevent slips and falls. Painting in the tertiary building continued through the winter months.

WPCP MONTHLY STAFF MEETING AND DISCUSSION

1. WPCPF Construction
 - a) New Valve Installations taking place these last couple of weeks. Will be having HMI back in to calibrate the new blower controls.
2. Anti-Fatigue Matting – Work Station areas will be addressed with anti-fatigue matting. Primary focus is the laboratory and maintenance shop area.
3. No Lost Time – 2010 No Lost Time for the Year.
4. Natural Gas – Review handout of natural gas usage totals for the last four years.
5. Gas meter – plans are to install a permanent gas monitor in the lower control chamber to detect gas leaks that may be harmful.

JANUARY EVENTS AND MEETINGS

1. Maintenance staff installed a VFD, that we removed from Lake East Hospital, on the Belt Press Sludge Pump in the month of January, 2011. The VFD will allow the press operator to regulate sludge flow to the belt filter press.
2. New expansion joints were installed in the aeration piping in January to allow the new installation of butterfly valves. The new expansion joints and butterfly valves will allow the operation of the aeration control system.
3. Kevin Aiken, Safety Coordinator, attended the Citywide Safety meeting on January 12, 2011.
4. On January 12 and 13, 2011 maintenance staff replaced the drum roller on the belt filter press conveyor.
5. On January 14, 2011 Randy Bruback visited Pucell Industries, Cleveland, OH to price maintenance cabinets and lockers.
6. The WPCP held on monthly safety meeting on January 20, 2011.

7. Plant maintenance and operations staff replaced the butterfly valves on all three aeration zones during the month of January, 2011. The new butterfly valves will improve the air control to each zone.
8. Randy Bruback met with Rita McMahon, City Manager and Joe Gurley, Law Director on January 25, 2011 to discuss sewer agreements with Lake County Utilities.
9. On January 26, 2011 the Utility Department Supervisors met with Rita McMahon, City Manager to discuss the operations of the City Utilities.
10. The Northeast Section Ohio Water Environment Association held its annual Operation Seminar in Richfield, OH. The WPCP plant sent ten staff members to this meeting.

GOALS AND ACCOMPLISHMENTS

1. The new installation of expansion joints and butterfly valves bring us near the end of the WPCLF project construction.
2. Plant staff utilizes equipment scavenged from Lake East Hospital to improve the operation of the belt filter press (VFD Drives).

Mission Statement

The mission of the Water Pollution Control Plant is to provide the most effective customer oriented wastewater collection and treatment to the citizens of Painesville.



*Grand River
Painesville, OH*

Results

	<u>This Month</u>	<u>Last Month</u>
Avg. Daily Flow	2.39 MGD	2.91 MGD
Flow Treated	74.1 Mill. Gal.	90.31 Mill. Gal.
Raw PO	3.36 Mg/L	2.93 Mg/L
Final PO	0.15 Mg/L	0.34 Mg/L
% Removed	95.5 %	88.4 %
PO to River	0.046 Tons	0.128 Tons
Raw C-BOD	169 Mg/L	135 Mg/L
Final C-BOD	1 Mg/L	1 Mg/L
% Removed	99.4 %	99.3 %
C-BOD to River	0.31 Tons	0.377 Tons
Raw Suspended Solids	229 Mg/L	214 Mg/L
Final Suspended Solids	1 Mg/L	1 Mg/L
% Removed	99.6 %	99.5 %
Suspended Solids to River	0.31 Tons	0.38 Tons

Meters

The Total Plant Flow meter was calibrated weekly, and found to be correct. The Lubrizol meter is checked weekly. The Total Plant Flow meter recorded 74.10 million gallons flow. The Lubrizol meter recorded 5.08 million gallons flow.

Detritors

1.67 tons of grit was removed during the month.

Comminutors

1.54 tons of screenings was removed during the month.

Chemical Treatment

21,500 pounds of alum was required at a cost of \$3,225 for the removal of 1983.8 pounds of phosphorus. Cost of phosphorus removal for the month was \$1.63/pound.

Primary Clarifiers

The primary clarifiers operated satisfactorily during the month, removing 391,899 gallons of raw sludge containing 3.5% solids.

Anaerobic Digesters

The primary digesters operated satisfactorily during the month, transferring 470,672 gallons of raw sludge for pressing containing 3.0 % solids.

Secondary Treatment

The secondary clarifiers operated satisfactorily during the month.

Tertiary Treatment

The tertiary filters operated satisfactorily during the month.

Liquid Sludge

The filter press processed 531,377 gallons of liquid sludge, including 60,705 gallons of water plant sludge, producing 259.44 tons of wet cake containing 23.3% solids or 54.75 tons of dry solids. 1,084 pounds of polymer were used at a cost of \$1,125.19. Cost of disposal at the Lake County Landfill was \$7,879.50.

Digester and Greenhouse Heating

The anaerobic digesters consumed 185,300 cubic ft. of generated methane and 116,902 cubic ft. of purchased gas. The greenhouse used 52,723 cubic ft. of purchased gas.

Pump Stations

Erie Street pumps recorded 77.79 hours and pumped 466,740 gallons of wastewater.

Fern Drive pumps recorded 45.29 hours and pumped 597,828 gallons of wastewater.

Poplar Lane pump recorded 122.85 hours and pumped 4,054,050 gallons of wastewater.

Jackson Street pump recorded 47.98 hours and pumped 878,034 gallons of wastewater.

Recreation Park pump recorded 68.14 hours and pumped 1,226,520 gallons of wastewater.

Sanford Street pump recorded 64.74 hours and pumped 971,100 gallons of wastewater.

Valley View pumps recorded 59.25 hours and pumped 639,900 gallons of wastewater.

Brookstone flow meter recorded 1,058,009 gallons of sewer flow.

The Seven (7) pump stations pumped 8,834,172 gallons of wastewater and 32 man-hours were required in maintenance.

Respectfully Submitted,



Randy Bruback
Superintendent
Water Pollution Control Plant