The Pretreatment Times

Volume 2

Summer 2010

MISSION STATEMENT -
The mission of the Industrial Waste Unit is to protect the City's freshwater resources and wastewater treatment plants by enforcing local, state and federal regulations governing wastewater discharges to the City's wastewater and stormwater collection systems.

IWU NOW ON THE WEB

On April 28, 2010, the Industrial Waste Unit (IWU) launched its new website:

www.phila.gov/water/iwu.html

This website will offer the latest information on IWU's activities. It will include sections for industrial users on permits, surcharge and sewer rental factors as well as frequently asked questions. Contact information and downloads for all IWU's forms can be found here in PDF format. You will also be able to view recent and archived versions of the Pretreatment Times. Industrial Users' comments, suggestions and questions are always encouraged and welcomed. You can call, email or mail them in to the contact information found on the back page or on the contacts page on the website.

Inside This Issue

Proper Disposal of Cooking Grease

- Never pour grease, oil, or animal fat down sinks, drains or toilets.
- Scrape grease and food scraps from trays, plates, pots, pans, utensils, and grills and cooking surfaces into a can or the trash for disposal or recycling.
- Install devices such as grease traps, filters & oil/water separators.
- Check filters periodically for backups, foul odors, and high BOD levels.
- Do not put grease down garbage disposals. Put strainers in sink drains to catch food scraps and other solids, and empty the strainers into the trash for disposal.

REMINDERS:

Semi-Annual Compliance Reports are Due:
July 31, 2010

Renewal Permit Applications
(Baseline Monitoring Reports) Due:
July 31, 2010

Submitting a Report more than 30-days late is considered Significant Non-Compliance.

What's Happening at PWD

Tour of Northeast Water Pollution Control Plant (NEWPCP)

Many Industrial Users have not been to see a Water Pollution Control Plant (WPCP). They are not aware of how their wastestreams are affecting the Publicly Owned Treatment Works. The Industrial Waste Unit, in conjunction with the Northeast Water Pollution Control Plant, is pleased to offer a tour of the plant. You can see first hand what it takes for the NEWPCP to maintain its daily operations.

The NEWPCP cleans 190 million gallons of wastewater per day and is the oldest water pollution control plant in Philadelphia. The plant was built in 1923 with secondary treatment facilities first installed in 1952, twenty years before such treatment at WPCP was required by an act of Congress across the United States.

Wastewater Treatment Process

Steps One to Three: Preliminary Treatment. Wastewater flows through several sets of bar racks and screens where debris is removed. The debris is collected from the bar racks and screens and is hauled to a landfill off-site. Approximately, 75% of the wastewater must then be pumped where it meets with the "gravity flow." It then flows through basins at a speed that allows only the heaviest suspended particles, called grit, to settle. Grit is composed of inorganic materials such as sand and gravel that enter the plant through storm sewers. Grit is removed from the basins and sent to a landfill off-site.

Step Four: Primary Treatment. Primary treatment physically removes 45-50% of the solids suspended in the wastewater. The wastewater flows slowly through primary sedimentation tanks. The solids that are heavier than water sink to the bottom, while scum and grease float to the top. The solids on the bottom are scraped out and pumped to digesters, while the scum and grease are pumped to concentration tanks and then landfilled off-site.

Steps Five to Six: Secondary Treatment. Secondary treatment uses biological processes to remove organic materials -- materials from living organisms -- still dissolved or suspended in the wastewater after primary treatment. The wastewater is combined with activated sludge - material containing the same microorganisms or "microbes," that decompose sewage in nature. The wastewater and activated sludge are aerated with air and mixed together in aeration tanks.

This creates an ideal environment for the microorganisms to "eat" the organic materials. The wastewater from the aeration tanks then flows to the final sedimentation tanks. Wastewater slowly flows through these tanks, allowing the solids to settle. The settled solids, secondary sludge, are pumped to another process where they are thickened to 4% to 5% and then pumped to the digesters. Just before reaching the river, the water is mixed with enough chlorine to kill any remaining disease-causing organisms. The EPA requires 85% removal of suspended solids from wastewater. The treated water that leaves the plant -- called effluent -- is even cleaner than that.

The digested sludge from the Northeast Plant is barged 12 miles down the Delaware River and up the Schuylkill River to the Biosolids Recycling Center where it is thickened, or dewatered, to 25% - 30% solids. After dewatering, the biosolids may be composted, land applied or landfilled off-site.

*Tour Date To Be Determined

*Please contact the Industrial Waste Unit at 215-685-6236 if interested in attending a tour.

Pictures by waterandwastewater.com

COMPLIANCE ASSISTANCE

Preventing Reporting Violations

Set up a Compliance Program to include the following:

- Set up automatic reminders on your calendar
- Schedule lab monitoring early in the month
- Have the lab report violations immediately to you
- Make a checklist to ensure all paperwork is included to avoid incomplete reports
- Complete all reports at Least 10 Days Before due date to ensure proper mailing time

Grab vs. Composite Sampling

When discharging wastewater, there are two ways to sample to make sure the water is with in compliance; grab and composite. Each of these sample types have different circumstances in which they should be used.

Grab Sample:

A grab sample is taken directly from the wastestream. Grab samples are done on a one time basis with no regard to the flow of the wastestream or time. A single grab sample should be taken over a period of time not to exceed 15 minutes.

When are Grab Samples needed?

Grab samples are needed to check for certain deposits within the wastewater and also for Baseline Monitoring. Grab samples must be used for monitoring pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds.

These above samples also coincide with Baseline Monitoring. Baseline Monitoring is for facilities where historical sampling data does not exist. In this case there should be four grab samples over a 90 day period checking for the above deposits, to ensure the facility is within compliance. The City may authorize a lower minimum for facilities that have historical sampling data available.

Composite Sample:

Composite samples are composed of two or more discrete samples. The aggregate sample will reflect the average water quality covering the compositing or sample period.

How to obtain an accurate composite sample:

A twenty-four hour composite sample must be obtained through flow proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is authorized by the City.

Suggestions on obtaining accurate composite samples may include combining multiple timed grab samples or employing the use of an automatic sampler.

Sample Requirements Analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, including but not limited to, analytical methods and sample holding time.

PWD's Important Things To Know

Swimming Pool Discharge Guidance

Water from swimming pools contain high levels of chlorine. Discharging chlorinated pool water into streams or ponds is harmful to fish and other aquatic life. The discharge of any sewage or industrial waste. Including swimming pool water, to a water of the Commonwealth without a permit is a violation of the Clean Streams Law, the Act of June 22,1937, P.L. 1987, as amended. These guidelines shall not be construed so as to waive or impair any rights of the Department of Environmental Protection or City of Philadelphia (City) to prosecute the property (pool) owner and/or pool company for any stream damage that occurs as a result of the discharge.

Pool Discharge Guidelines:

A. Disposal of Water to Sanitary Sewer

1. If the City grants permission, you can discharge the pool backwash water, pool cleaning wastewater to the sewer system.

   ***To obtain permission contact the Industrial Waste Unit (IWU).**

2. Use a small volume pump and control discharges so it doesn't spill out (<800 gallons per minute).

3. Discharge with a hose into access cap of the private property sewer drain. DO NOT use public manholes, inlets or cleanouts. They are strictly prohibited.

4. Care should be taken in making sure the discharge is to a sanitary sewer and not a storm sewer, which would result in a discharge to a stream.

B. Discharge of Water to Property

1. If discharge to sanitary sewer is not feasible, then the following guidelines must be followed before discharging the water:

   a. Prior to disposing or using the water in irrigation, shut off the chlorination system if you have one, or stop adding chlorine.

   b. Hold the water in the pool for two weeks to reduce the chlorine level.

   c. Discharge or use the water for irrigation in an area where the water will not flow into a stream or storm sewer (street inlet).

   d. Discharge or use the water for irrigating your property and ensure that it does not flow off your property.

   e. Discharge or use the water for irrigation in a manner that will prevent nuisance conditions (such as creation of odors, and fly and mosquito breeding conditions). Nuisance conditions occur when water is held in the pool for a prolonged period.

2. The discharge should be at a rate which prevents erosion and optimizes filtration. Pool water should never be directly discharged into waters of the Commonwealth.

C. Pool water should be pumped from the top so as not to disturb settled solids. Solids on the pool bottom should not be discharged. Once the water is pumped out, solids should be cleaned out manually.

WATER DEPARTMENT NEWS

New Water Department Rates

Starting July 1, 2010 Philadelphia Water Department customers' bills will reflect new rates for water, sewer and storm-water services for the period of July 1, 2010 to June 30, 2011. The new rate change effective July 1, 2010 will be entering its third phase of rate changes. These rates will keep the Department's rates among the lowest in the region.

The new rates will enable the Water Department to meet rapidly escalating costs of fuel, chemicals, employee benefits, regulatory demands, and debt service, and to continue a variety of initiatives that are critical to protecting Philadelphia's drinking water quality, preserving its waterways, and improving stormwater management programs.

If you would like more information about other rates or Water Department projects, please call the PWD at 215-685-6300 or visit our website at www.phila.gov/water. The following changes have been made to the City's water and sewer rate structure:

Wastewater Discharge Permits

The fee for new and renewed permits is now $1000.

Surcharges Rates

Biochemical Oxygen Demand—rate for BOD in excess of 250 mg/l has been increased from $0.300 per pound of BOD to $0.314 per pound of BOD.

Suspended Solids—rate for TSS in excess of 350 mg/l has been increased from $0.305 per pound of TSS to $0.315 per pound of TSS.

Surcharge rates will be increasing annually as part of the phased implementation of the new rates program. Current and future rates can be found in the Philadelphia Water Department Regulations, Section 303.4.

Water/Sewer Quantity Fees

Bill rates for the quantity of water used as well as the quantity of water sewered have increased. The new rates, like the surcharge rates, are scheduled to increase annually as part of the new rates schedule. The current and future rates for water and sewer quantities can be found in Sections 302 and 303 of the Philadelphia Water Department Regulations.

Water/Sewer Service Fees

These fees, a part of every water/sewer bill, are based upon the size of the water meter present at your facility. The new costs for these fees can be found in Sections 302 and 303 of the Philadelphia Water Department Regulations.

Stormwater Fees: General Rule of Thumb for Stormwater Costs

All Non-residential Customers will see Stormwater Fees adjusted over a 4 year period starting 7/1/2010. Properties such as Parking Lots and Vacant Land will now be billed based on their impact to PWD system.

*Big Meter Size + Large Land = Small Change in Cost

*Small Meter Size + Large Land = Increase in Cost

*Big Meter Size + Small Land = Decrease in Cost

*Small Meter Size + Small Land = Small Change in Cost

Industrial Waste Unit Contact Information

Questions, comments and suggestions for future topics are always welcome and suggested.

For comments on draft permits contact us at:

Industrial Waste Unit
1101 Market Street, 3rd Floor
Philadelphia, PA 19107
Phone: 215-685-6236
Fax: 215-685-6232

Philadelphia PWD Water Department

For questions about your permit:
Baxter Water Treatment Plant
9000 State Road
Philadelphia, PA 19136
Joe Cerrone: 215-685-8030
Bob Gonsiewski: 215-685-8093
Evan Schofield: 215-685-8068
Fax: 215-685-8008