



SPECIAL 50th ANNIVERSARY ISSUE

Pumping Station Aids Green Project

The Delaware Solid Waste Authority (DWSA) is near completion of an environmentally green project of constructing a landfill phyto-cap (vegetative covering) over a landfill for the purpose of treating leachate generated by rainwater and decomposition of materials at the Solid Waste Management Center in Sandtown, Del.

The landfill location, known as Area A/B, generates an average of 8,000 gallons of leachate each day. Before the project, leachate was collected in storage tanks and taken



Delivery and installation of a prefabricated housed pump station is done by simply lifting the structure and setting it on a pad. After piping in, piping out and running power, installation is complete.

periodically by tanker to a treatment facility in Wilmington. Considered wastewater due to its acidity and chemical makeup, authorities cannot dump Leachate into streams because it is not of drinking water quality.

When landfills near capacity, they are covered with either a geo synthetic cap, or a natural earth cap depending on the age of the landfill as mandated by the Environmental Protection Agency. Given the age of this

particular landfill, a natural cap, technically known as a "phyto cap" was the answer utilizing an environmentally friendly leachate treatment system that avoids having to transport and store the waste.

The process treating the leachate consists first of a 3-cell vertical Wetland Biofilter System that sits atop the phyto cap that filters the leachate. The phyto cap is 25-acres in size and consists of man-made wetlands and over 10,000 planted trees that play a crucial role in the water recycling process. The treated fluid from the Biofilter System will drain into an existing storage pond, which is covered. From there the water is pumped to irrigate the phyto cap's trees and plant life. The plants absorb this water and release uncontaminated water below the roots.

Working together with Engineer GeoSyntec of Portland, Contractor Tetra Tech EC, Inc., of Cranston, R.I., Metropolitan Industries, Inc. of Romeoville, Ill., supplied a prefabricated housed irrigation pump station that takes the treated leachate from the storage pond and pumps it through an irrigation system that waters the phyto cap's trees and plant life.

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50 Years and Counting!

As we celebrate our 50-year anniversary, we want to thank our loyal customers who have supported our growth from a small company working out of a house to the major equipment manufacturer/supplier we have become today.

Our goal has always been, and will always be, to provide our clients with state-of-the-art products complete with technical systems engineering and quality service.

Over the years, our keys to success have been hiring quality personnel and allowing them to "think outside the box," and express their ideas and opinions. By doing so, we have obtained over 22 patents and have the ability to offer cutting edge products and solutions to the end user. Our employees are the foundation and backbone of this company.

In the near future, we plan to build a new facility 50% larger than our present building and expandable to 300,000 sq. ft. This expansion will give us the room we need to continue our growth into the future.

I hope to see everybody on September 7 at our 50th Anniversary Open House. This is a milestone event for us and it gives us the opportunity to thank you personally for your support over the years. Come on out and enjoy the live music, food and drinks from 11-6 PM. If you haven't RSVP'd yet, you may do so by logging onto MetroTurns50.com.

Again, thank you for your support. We look forward to the future.



John Kochan, Jr.
President

John Kochan, Sr.
Chairman

Pumping Station Aids Green Project

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The irrigation pump station was completely factory built at Metropolitan's Romeville plant requiring only water and power connections once the station was delivered to the site. Prefabricating the system in-house provided the added benefit of having a controlled environment during manufacturing which saved time and cut costs.

"A prefabricated system benefits the customer by eliminating the headaches during scheduling, logistics and varying site conditions. The result is a system delivered on-time because we eliminate these problems up front," says Metropolitan National Sales Manager Mike Tierney who oversaw the sale of the equipment.

The station includes a modular building; all pumps, motors, valves, internal piping, electrical distribution equipment and a variable speed pump control system.

The station was delivered with the intent that the irrigation system supplier would provide an interface control panel to coordinate the operation of the main pumps with the field installed irrigation spray nozzles.

Metropolitan Industries installed a vacuum prime system on the two vertical multi-stage pumps used in this system for their easy accessibility for service and maintenance.

"Using the vacuum prime system put all equipment in one room on the floor so, it is accessible. This benefit will be realized during maintenance and repair work," says Tierney.

The primer system used is a .6 hp vacuum pump, with a 30 gallon vacuum storage tank, simplex control panel, (2) automatic air release valves and a water level control switch.

The two vertical multi-stage pumps each rated 350 gallons per minute (GPM), total system flow of 700 GPM @245' total dynamic head, pump the water from the storage pond through the irrigation system and finally to the plants and vegetation.

A Metropolitan custom-designed variable-speed control panel controls the entire system. It came complete with a touch screen

interface, logic controller and two variable speed drives each rated 30HP.

Variable speed systems are fast becoming the first choice for both operating and design engineers due to the advantage of reduced equipment maintenance costs, reduced energy costs, and variable speed's ability to maintain accurate pressure settings.

Variable speed water pressure systems use a transducer to sense pressure and automatically adjust the speed of the pump in order to maintain a constant discharge pressure regardless of demand or flow. During off-peak usage, the pump system will sit idle reducing energy consumption and pump wear and tear.

The prefabricated building was constructed of steel using a Sandex finish and measured 18' long x 10' W x 8' 2" D. All equipment was installed inside the building and was tested on Metropolitan's test lab and operational before delivery.

Another unique aspect of the prefabricated housed system was the installation of a filtration system. This system removes any small solids that remain in the water after treatment by the Wetland Biofilter System. Using a unique backwash process, the filter removes small solids that could clog the irrigation sprinkler heads and prevent water from reaching areas of the phyto cap's plant life.

Other accessories inside the building included HVAC with thermostatic control, indoor and outdoor lighting, a drain kit, smoke alarm and a portable crane for moving the pumps.

Metropolitan Industries manufactures a variety of factory prefabricated water and wastewater pump systems such as booster systems, self-priming pump stations, submersible pumping systems, above and below-grade sewage valve vaults, custom

control panels and more for the municipal, commercial and industrial markets.

For information about their company or products, you may log onto their website at: <http://www.metropolitanind.com>.



A view inside the pump house that contains everything required for operation including pumps, motors, valves, internal piping, variable speed controls, vacuum pump, filtration system, electrical distribution equipment and HVAC equipment.



Custom designed variable speed controls with touchscreen operate entire system, reducing equipment wear, energy and operating costs and all the while maintaining accurate pressure settings.

Plainfield's New Pumping Station

The Village of Plainfield, Ill., recently unveiled their much-anticipated water pumping station located on 127th street that supplies Lake Michigan water to area residents.

Located 35 miles southwest of Chicago, Plainfield is one of the fastest growing communities in the State of Illinois. Back in 2001 and facing a 2003 Environmental Protection Agency mandate that all well water comply with its strict radium-free water quality standards, the Village needed to decide whether to continue using the current deep well system or abandon the wells and bring in Lake Michigan water.

The village had three options to comply with the EPA's order to remove the radium by December 2003: install a central ion exchange system that softens the water; install a lime softening system; or pump in Lake Michigan water.

Each of the options would result in higher water bills. The ion exchange system would raise the average monthly household bill from \$19.70 to \$32; Lake Michigan water would raise it to \$44.80; and the lime softening treatment would raise it to \$53.40.

However staying with the deep-well system and keeping up with demand would require drilling a new well every three years so that by 2020, the village would have 15 deep wells. Eventually the Village decided to go with Lake Michigan water and by April of 2004, the community began receiving treated Lake Michigan water as their source supply.

The Plainfield water system currently consists of one lake water metering station, 2 miles of water transmission main, one pressure station, one treatment facility, five water towers, 2,100 fire hydrants, and over 140 miles of water distribution main. Three groundwater wells remain on standby status in the event of an emergency.

The newest addition to their water system is a state-of-the-art water pumping station that receives the Lake Michigan water, stores it in a huge 5-million gallon reservoir and pumps it to residents.

Working with engineer Baxter and Woodman and Vissering Contracting, Metropolitan Industries' municipal south department headed by Keith Girup supplied the pumps and generator, which are at the heart of this station.

In total, this new pumping station uses seven split case pumps ranging in horsepower from 100 up to 450 and gallons per minute ranging 1730 to 5200. Plainfield has the ability to add two pumps in the future as demand increases.

Pumps are housed in a new brick structure that sits in front of the large reservoir. Plans for constructing a second 5-million gallon reservoir is in the works for the same location.

In the event of a power failure, Metropolitan also supplied a large 600 kw Caterpillar diesel generator that will run the station



Top Photo: The Village of Plainfield's newest water pumping station located on 127th St. that supplies Lake Michigan water to area residents.

Middle: In the event of a power failure, Metropolitan supplied a large 600kW Caterpillar diesel generator that will run the station and maintain water pressure in the building.

Bottom: This pump station uses seven split case pumps ranging in horsepower from 100 up to 450 and gallons per minute ranging from 1730 to 5200.

maintaining water pressure in the Village. The station will automatically switch to standby power if an outage is detected making the transition seamless.

Completion of this job caps a three-year effort that saw multiple sales presentations, meetings and ultimately construction. Plainfield officials discussed all possibilities but in the end chose Metropolitan Industries, Inc. to supply the pumps, generator and ancillary equipment.

Metropolitan Industries, Inc.

37 Forestwood Drive
Romeoville, IL 60446

Metropolitan Raises Anniversary Flag



Metropolitan Industries, Inc. officially celebrated their 50th year in business this month with the raising of a commemorative flag along with most of their 120+ staff at their headquarters in Romeoville, Ill. Later this summer, two more celebratory events are scheduled to include a large golf outing and open house in September. Metropolitan Industries, Inc. is a national OEM manufacturer, wholesaler and distributor for the commercial, industrial, municipal and residential pump and control markets. For more information, please log on to www.metropolitanind.com or phone 800-323-1665.



New Websites Help Operators, Engineers Easily Obtain Education Credit



Metropolitan Industries, Inc. is pleased to announce the launch of three new websites designed to help both water operators obtain continuing education credits and engineers obtain professional development hours.

Water Operators from Illinois log onto www.ILCEU.com

Water Operators from Indiana log onto www.INDCEU.com

Engineers log onto www.PDHCREDIT.com

These websites will help streamline the education process by allowing users to easily register for classes while providing access to information regarding class schedules, times, descriptions, outlines, directions and more. Users can register as an individual or they can

register their entire office or shop.

Most importantly, information regarding your education is now a click away. And best of all, there is never a fee associated with our classes.

Metropolitan Industries, Inc. has a large selection of CEU and PDH classes and can accommodate class sizes up to 30 people. Each student that attends receives a certificate of achievement for documentation.

Any questions regarding the websites or our educational classes can be directed to Joe Sanchez at 815-886-9200 x260.