



Winner of the 2015
**Water Management
Company of the Year**

CASE STUDY

Manhole Water Treatment System

CUSTOMER: PECO Energy

DISTRIBUTOR: JoDan Technologies, Ltd.

LOCATION: Philadelphia, PA

Application

Treat 14,000 gallons per day manhole discharge water.

OBJECTIVE OF THE TREATMENT

Treat the following inlet conditions:

Oil and Grease: 10 ppm to 1%

Arsenic: 112 ppb

DATA

Average discharge levels with MYCELX:

Oil and Grease: less than 5 ppm

PCB: less than 300 ppb

Arsenic: less than 4.5 ppb





Challenge

MYCELX distributor, JoDAN Technologies, Ltd. was approached by PECO Energy of Philadelphia, Pennsylvania to design a system to treat manhole discharge water collected from routine citywide pumping associated with underground utility electrical maintenance. At the time, approximately 14,000 gallons per day was being collected in a pump truck and transported to a regional waste water treatment plant for processing at a treatment cost of \$0.25/gal. The wastewater contained small amounts of hydrocarbons from transformer oil, gasoline, lubricating oil, vegetable oil, transition, alkali and heavy metals from a variety of citywide sources. In order to reduce treatment costs, a treatment system was designed that would treat 30 gallons per minute and meet discharge effluent requirements as specified by the City of Philadelphia Water Department combine sewer discharge requirements.

SOLUTION

MYCELX designed a treatment system based on gravity separation, sedimentation, Oil Water Separator (OWS), micron filtration, MYCELX® based hydrocarbon treatment, heavy metals treatment and arsenic specific treatment. The treatment system was designed to fit inside an 8' W x 40' L x 9.5' H modified Seabox™. The system was ordered in the spring of 2005 and put online in the summer and fall of 2005 with treatment cost of \$0.036/gal.

IMPACT

The MYCELX system allowed PECO to treat the water on-site, saving an average of \$0.21/gal compared to hauling it off for processing.



30 gpm OWS



Bag Filter and Polisher System



Heavy Metal Removal



Arsenic Removal Media

