

**New York State  
Environmental Investment Program  
Capital Project Summary  
Karp Associates, Inc.**

**Project Background**

Karp Associates is a leading manufacturer and worldwide distributor of “access doors.” These metal doors are mounted on walls to provide access to pipes, wiring or other building elements that are otherwise behind walls. The doors are paired with metal frames for direct installation into walls. Karp also makes a line of metal shelving using similar manufacturing processes. The business was founded in 1956, and has a workforce of 100 at its facility in Maspeth, Queens.

During the final stage of Karp’s manufacturing process, the doors and shelves are washed and painted at one of two distinct paint lines located in separate production buildings. The doors and shelves are hung on automated conveyors that take them through a wash cycle (in preparation for painting), a drying oven, and a powder spray paint booth. Shelving undergoes a three-stage wash cycle: The first stage degreases the parts; the second stage rinses the degreaser and other contaminants from each shelf; and the third stage applies a sealant to the product. Access doors go through a different, one-stage wash cycle.

Prior to this project, the wash cycle employed re-circulated water that was flushed quarterly and shipped to a licensed facility, where it would be treated chemically, biologically and mechanically. Because the wash water was being re-circulated and used for three months at a time, the wash cycle was creating contamination at rates of up to 30%. Contaminants would adhere to the parts before they were painted. If

the dirty parts were observed before painting, they were rewashed. When contaminants were not noticed, the pieces were painted with the contaminants stuck to them. As these products would not meet Karp’s specifications they were recycled as scrap metal.

**Project Description**

Karp proposed purchasing two Arbortech water recycling systems, one for each paint line. Arbortech systems prolong the time that water-based cleaning baths remain effective by pumping the wash water across a membrane filter, where contaminants are concentrated and removed. The water can then be returned to use. Based on the technology, Karp Associates estimated that the new systems would reduce its parts contamination rate from 30% to 5%, reduce wastewater disposal by 16,000 gallons per year, and save the company \$112,744 on avoided water and raw material costs, wastewater treatment costs, and labor.

**Project Results**

The company initially installed only one Arbortech recycling system, and soon discovered that it was sufficient to capture contaminants from both paint lines. The system is mobile and can be transported between the two lines. Karp Associates reduced contamination to zero, reduced wastewater disposal by 14,366 gallons per year, and saved \$123,041 on avoided costs and labor.

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**Contractor:** NYC ITAC  
**County:** Queens  
**ESD Region:** New York City  
**ESD Contact:** 518/292-5340

**NYS EIP Investment:** \$ 5,446.73  
**Contractor Match:** \$ 5,446.73  
**Total:** \$ 10,893.46  
**Completion Date:** October, 2007