

**New York State  
Environmental Investment Program  
Capital Project Summary  
Quad/Graphics**

**Project Background**

Quad/Graphics is the largest privately held commercial printer in the western hemisphere, with 19 facilities and 10,000 employees. Quad's Saratoga Springs operation is one of nine highly automated and volume-driven printing and distribution facilities the company has in the U.S. In 1998, Quad/Graphics in Saratoga became the first web offset facility in the industry to offer 100% digital imaging and computer-to-plate technologies, and today remains the nation's largest producer of magazines and catalogs. Quad employs 1,000 in Saratoga.

**Project Description**

This project had two components. First, it would install a non-chemical cooling tower water treatment system called a Dolphin System™ that would eliminate the need to discharge tower "blow down" to the sewer. Currently, cooling tower water is treated with chemicals and biocides to avoid mineral build up and clogging the chillers. The Dolphin System™ uses high-frequency magnetic fields to remove minerals from the water and could potentially reduce annual chemical purchases by \$30,000/year, decrease wastewater flow to the local publicly owned treatment works by 2.3 million gallons, and save \$45,800 annually on sewage treatment. The project is designed to help Quad keep sewer discharges below 25,000 gallons/day and maintain a Commercial User designation, saving \$5,488/year on sampling and testing typically required of Industrial Users.

Second, this project would install a centrifuge to recycle blanket wash and silicone solution, reducing hazardous waste shipments by 1,250 gallons/year to

a total annual volume of less than 200 gallons. It was calculated that the centrifuge could cut purchase costs by \$4,745/year and waste hauling fees by \$5,700. The reduction in hazardous waste could also enable the facility to be reclassified a Small Quantity Generator, and save the company \$76,000/year on related regulatory fees.

**Project Results**

Quad paid \$54,575 less for chemicals for water treatment from 2005 to 2007. Although chemical use could be reduced more, plant personnel determined that it is still necessary to maintain a chemical chill loop to serve as back up in case the Dolphin System™ fails. The new system also reduced sewage discharge by 1.487 million gallons, not the projected 2.3 million gallons. It is believed that the water reduction shortfall was due to significant increases in production and levels of contaminants in Quad's water towers that required the addition of water. The project ensures the plant remains a Commercial User.

The blanket wash recycling process was not as successful as hoped. Technical barriers tied to the centrifuge that was selected and problems getting the production department to accept the recycled blanket wash as equal to virgin only reduced blanket wash purchases by 1,300 gallons and hazardous waste generated by 660 gallons. Plant personnel are confident that additional operational changes will recycle enough blanket wash in the future to allow Quad's Saratoga facility to achieve Small Quantity Generator status.

**Contractor:** Saratoga Economic Development Corp.  
**County:** Saratoga  
**ESD Region:** Capital Region  
**ESD Contact:** 518/292-5340

**NYS EIP Investment:** \$55,000  
**Contractor Match:** \$85,882  
**Total:** \$140,882  
**Completion Date:** Dec. 2007