New York State
Environmental Investment Program
Capital Project Summary

Solvay Paperboard, LLC

Project Background

Solvay Paperboard is a state-of-the-art 100% recycled paper mill in Solvay, New York. Solvay is a Limited Liability Company formed in 1992. The members are Southern Container Corp., Schiffenhaus Industries, Inc., Jamestown Containerboard, Ltd. and Tencorr Packaging, Inc. At the time the project was proposed, the company operated two linerboard paper machines and was strongly considering addition of a third machine to manufacture recycled corrugating medium. The new machine would require an additional 794,000 gallons per day of fresh water, 90% of which would be discharged to the municipal sewer system, causing Solvay to exceed its permitted wastewater discharge level (1.5 mgpd) at the county wastewater treatment facility. To address this, Solvay proposed installation of a Water Recycling Facility (WRF). With the WRF, Solvay would be able to reuse most of the water discharged by the existing two paper machines in the third machine. The proposed system would also extract waste fibers from the effluent, which could be introduced as feedstock to the third machine. Without the reuse of water, Solvay could not install a third paper machine.

Project Description

The WRF significantly reduced the solids and BOD_5 loading of the entire flow of wastewater generated by all three paper machines. Without treatment, this flow would be unavailable for use in the third machine and would contain a level of loadings in excess of the processing capabilities of the municipal treatment plant. Treatment is completed in three steps. The first step uses the Biothane anaerobic process in which wastewater is introduced into a Biobed reactor vessel where a biological process converts most of the BOD to carbon dioxide and methane gas. In the second step, a Moving Bed Bioreactor uses an aerated biological process to remove most of the remaining BOD in the wastewater. In the third step, a dissolved air flotation clarifier causes suspended solids to float to the surface for removal.

Project Results

By the end of 2003, Solvay was recycling an additional 241,332 tons per year of paper into corrugating medium. The WRF allowed the company to reduce its fresh water use by 211 million gallons per year, saving approximately $200,000. Annual sewer cost savings were estimated at $1.6 million.

Overall, the benefits from the project were: a reduced demand of fresh water; increased capacity at the county wastewater treatment facility (which results in the enhanced ability of Onondaga County to attract other industrial projects); creation of 80 jobs from the new paper machine and the WRF; and development of a potential market for the sale of excess anaerobic biomass to support start-up of other water recycling facilities.

Contractor:	Onondaga County IDA	**NYS EIP Investment:**	$500,000
County:	Onondaga	**Contractor Match:**	$14,577,239
ESD Region:	Central New York	**Total:**	$15,077,239
ESD Contact:	518/292-5340	**Completion Date:**	June, 2003