

**New York State
Environmental Investment Program
Capital Project Summary
IceStone, LLC**

Project Background

IceStone, LLC manufactures IceStone®, a 100 percent recycled glass and concrete durable surface material for commercial and residential applications (countertops, showroom surfaces, bathroom vanities, bathroom dividers, etc.) in a 55,000 square foot daylight facility in the Brooklyn Navy Yard. IceStone is non-toxic, free of volatile organic compounds and manufactured using a low emission process. The company has 60 employees. In the manufacturing process, recycled glass is mixed with cement, water, pigments and proprietary ingredients, poured into molds, cured and polished. IceStone began operations in 2003 after purchasing the recycled glass/concrete manufacturing system from Great Harbor Design Center. The production yield of the manufacturing system was low due to a combination of many factors (curing conditions, mix design, vibration conditions, etc). Most of these were addressed and corrected via an Environmental Investment Program R&D project completed in September 2006. The remaining factor affecting product output was the polisher.

Polishing is a crucial, final step in the manufacturing process, ensuring the product's structural integrity and revealing the luminescence of the glass, and creating the look for which the product is named. The polishing machine had been purchased at the time the Great Harbor Design Center was formed and was now nearly ten years old. The equipment's age, as well as its outmoded technology, regularly caused structural problems in the slabs, such as bowing and breaking. The machine also required three passes to complete each slab. Only 37 percent of the polished slabs were saleable. The company was spending money on labor, overhead and raw materials to produce slabs that ultimately could not be sold and the poor production yields adversely affected the company's ability to keep up with the growing demand for its product.

Project Description

At the outset of the project, a European manufacturer was chosen to supply the polishing equipment. A purchase order was placed in June 2006. The manufacturer completed construction of the polisher in May 2007 and the machine was shipped to a warehouse in the U.S. for holding until IceStone was ready for installation. Preparation of the area for machine installation started in May 2007. A building and some structures on the factory floor were removed. Then, geotechnical and structural engineers determined that, in order to support the weight of the machinery, the foundation needed to be strengthened. This was an unforeseen and major obstacle for IceStone. It required an additional \$600,000 construction contract that included a new foundation, the driving of 20, 60 foot steel piles into that foundation, and the construction of a four foot thick concrete pile cap. Because of the additional construction (and the need to identify and negotiate financing for it), final site preparation was not complete until May 2008. During the installation, it was discovered that the polishing belt had been damaged during shipment. A replacement part was ordered and in November 2008 the equipment was turned on for the first time and calibrated. The first production runs began in December 2008.

Project Results

Initial production runs indicate that the new polisher is yielding 86 percent saleable product and IceStone anticipates that this will increase over time. The improved yield has helped to boost IceStone annual sales by \$ 3.7 million, reduce waste by 3,348 tons per year (compared to what the old polisher would have generated at present day sales levels), and saved the company \$2.4 million per year in raw material and disposal costs (compared to what it would have cost using the old polisher at present day sales levels).

Contractor: Brooklyn Economic
Development Corporation
County: Kings
ESD Region: New York City
ESD Contact: 518.292.5340

NYS EIP Investment: \$100,000
Contractor Match: \$636,283
Total: \$736,283
Completion Date: Dec., 2008