

MRF of the Month

Rumpke Recycling Cincinnati

Started by a spark from a truck dropping off recyclable materials and exacerbated by high winds, Rumpke Recycling's Cincinnati materials recovery facility was destroyed by fire on April 9, 2012. Even worse, the fire happened just two years after the facility had undergone an upgrade to add optical sorting and increase throughput at the plant. Undaunted,

Rumpke Recycling announced plans to build a bigger and better facility in the place of the MRF felled by flames.

"Rumpke is committed to recycling," said Jeff Rumpke, vice president. "We are making our largest investment to date with this recycling center, ensuring the region has access to the best available recycling technology."

The \$32 million, state-of-the-art plant was designed, engineered and installed by Machinex and includes a combination of sorting technologies offered by the firm, such as a glass cleaning system, optical sorting, disc screens and magnets. Machinex was also selected to supply two of its MLP-155TP balers to add redundancy and handle the high volume of containers and fiber generated by the system.

Technical Specifications*

Rumpke Recycling Cincinnati

Location:

St. Bernard, Ohio

Start-up date:

November 2013

Number of processing lines:

Three

Throughput:

55 tons per hour

Tons of material expected to be processed in 2014:

150,000 tons

Residue rate:

7 percent



The facility receives single-stream materials – including aseptic containers thanks to a grant from the Carton Council – from more than 4.5 million residents throughout the Greater Cincinnati, Greater Miami Valley and Greater Louisville areas. It receives single-stream and source-separated materials from commercial collections from the same areas.

The material mix for the MRF is around 65 percent fiber and 35 percent containers, managed by three processing lines: one for residential single-stream, one for commercial single-stream and another for old corrugated cardboard (OCC) processing. The facility processes around 150,000 tons of recyclables in its first year of operation.

Added together, the new plant, warehouse, tipping floors, office and plant support areas total approximately 100,000 square feet, including what the company is calling "the largest single-level sorting platform in the country," at 18,600 square feet. The facility also includes a covered rail dock capable of handling three cars at a time.

When asked what is the biggest issue facing the facility, the firm noted that "plastic bags are always an issue in single



stream processing. To help alleviate this issue, our new facility incorporates 16 plastic bag collection points at pre-sort and post-sort stations.” The MRF will also include ample pre-sort areas to help deal with contamination that stems from materials coming from some public drop-off locations.

Glass, of course, can also be a problem for some MRFs, though glass recovery has been a priority for Rumpke since 2004, when the company built its own glass processing facility in Dayton, Ohio. Thanks, in part, to a \$250,000 grant from the Ohio Environmental Protection Agency and Hamilton County Solid Waste District, the Cincinnati MRF also features a cutting-edge glass recovery system from Machinex. Prepared material from the Cincinnati facility is sent to Rumpke’s Dayton plant for further processing, with the resulting cullet being shipped to Owens-Illinois and Johns Manville to make glass containers and home insulation.

The Rumpke Recycling Cincinnati MRF runs three shifts, with the first being a full-production shift, the second a scheduled maintenance shift and the third shift running a full-time baling operation with part-time single-stream operations as needed. Total employee count for all three shifts is just under 100.

