

MRF of the Month

Republic Services North Texas Recycling Complex



Technical Specifications

Republic Services North Texas Recycling Complex

Location:
Fort Worth, Texas

Start-up date:
June 2013

Number of processing lines:
One

Throughput:
35 tons per hour

Tons of material expected to be processed in 2014:
100,000 tons

Residue rate:
15 percent

Originally an Army post following the Mexican-American War, Fort Worth gained prominence when the outpost became a stop for cowboys herding cattle along the famed Chisholm Trail in the late 19th Century. Though the fifth-largest city in Texas may not see 100,000 head of cattle being driven down its streets anymore, Republic Services' North Texas Recycling Complex can expect to see 100,000 tons of recyclables tumbling down its conveyor belts in 2014.

The brand-new, 90,000-square-foot facility handles single-stream collected mate-



rials from 500,000 households in communities around the Dallas-Fort Worth area, including Arlington, Dallas, Denton, Parker, Tarrant and the surrounding counties. The MRF also receives single-stream recyclables from commercial entities in the area.

Republic Services' newest state-of-the-art MRF is LEED-certified and was designed and built with The CP Group – CP Manufacturing, MSS, IPS Balers and Advanced MRF for the facility's electrical control platform. Equipment at the MRF includes a drum feeder, several screens for various materials, three MSS CIRRUS optical sorters for separating various plastics and an IPS two-ram, auto-tie baler for multiple materials.

The facility also is outfitted with The CP Group's advanced Supervisory Control and Data Acquisition (SCADA) control package, which provides operators with seamless plant-wide control and the ability to monitor material sorting and flow throughout the plant.

The MRF, which had its grand opening in September 2013, is able to process 35 tons of material per hour (TPH) on one processing line for residentially collected recyclables, with the ability to add an additional 20 TPH line for commercial recyclables in the future. The material mix is approximately 60 percent fiber and 30 percent containers, by weight, and the facility has approximately a 15 percent residue rate.

Issues facing the facility will be recognized by many MRF operators around the country, and they stem primarily from items that



aren't recyclable or don't fit the profile of typical single-stream recyclables – especially items that can wind around equipment such as garden hoses, electric extension cords and Christmas lights.

One hard-to-handle issue faced down by the new MRF is plastic film, which is processed via several film vacuum systems on the processing line that lead to a patent-pending film screw compactor. The compactor extrudes the plastic film into long tubes “similar to a sausage maker,” according to a Republic Services spokesperson. “The pre-compressed tubes of film can then be stored and baled at a later point in time.”

Republic Services' North Texas Recycling Complex runs two shifts, five days a week, employing 62 people, including sorters, equipment operators, scale attendants, drivers and administrative and supervisory staff.

