



ARCA Advanced Processing (AAP) Fast Facts

ARCA Advanced Processing regional recycling facility – Philadelphia, Pa.

Overview

- AAP employs 75 employees, including 52 new green jobs.
- AAP operates in a 56,000 square-foot building on three acres of land.

Recycling systems

AAP's facility houses two systems:

Hammermill Shredder

- Used primarily to shred all appliance types excluding refrigerators and freezers.
- Throughput — approximately 600,000 appliances annually.
- Processes 10 to 12 major appliances per minute.
- Rotates at 160 miles per hour.
- By-products for recycling include ferrous and non-ferrous metals.

UNTHA Recycling Technology (URT) System

- Used to shred refrigerators and freezers.
- First URT system in North America.
- Largest integrated refrigeration recycling system of its scale in the U.S.
- Processes approximately one refrigerator or freezer per minute.
- 40-foot tall, sealed refrigerator-recycling system.
- Throughput: approximately 150,000 refrigerators/freezers annually.
- High-quality by-products for recycling include ferrous and non-ferrous metals, plastics and foam pellets.

How AAP differentiates

- Ensures all used appliances in AAP's chain of custody are recycled and not resold.
- One-stop de-manufacturing facility, which manages end-of-life processes for all appliances.
- Services 12 states in the Northeast and Mid-Atlantic regions of the U.S. through one regional recycling facility.

The installation of the URT System and other capital equipment represents an approximate \$10 million AAP investment that has created over 50 additional green jobs in the Philadelphia facility.

Now operational, AAP's advanced refrigerator recycling technology, the UNTHA Recycling Technology (URT) system:

- Recovers approximately 95 percent of the insulating foam in refrigerators.¹
- Reduces typical landfill waste of the refrigerator by 85 percent by weight.²
- Lowers greenhouse gas (GHG) and ozone depleting substance (ODS) emissions recovered from insulating foam compared to what typically happens in the industry today.
- Recovers high-quality plastics, aluminum, copper, steel and even pelletized foam from refrigerators that can be used to make new products, such as GE locomotives.

AAP servicing its primary customer – GE Appliances

The total weight of appliances processed from GE (from January 2011 to July 2011) is 25 million pounds, or 11,161 tons.

Appliance mix

- | | |
|-----------------|-----|
| • Refrigeration | 19% |
| • Laundry | 46% |
| • Ranges | 14% |
| • Dishwashers | 13% |
| • Microwaves | 06% |
| • Other | 02% |

Material types recovered at AAP

- Ferrous metal: steel.
- Nonferrous metals: aluminum and copper.
- PCB-containing capacitors.
- Mercury-containing components – approximately 280 components per week.
- Refrigerant and oils.
- Polyurethane foam insulation and foam-blowing agents.
- Refrigerator and freezer – CFCs, such as CFC-12 and CFC-11; HCFCs, such as HCFC-141b; HFCs, such as HFC-134a; HCs, such as cyclopentane.
- NAK thermostats.
- 15 tons of glass per month.
- Nickel.
- Plastics.
- Rubber.
- Wire.
- Universal waste.

“At AAP, we’ve created a sustainable business model that’s good for both the environment and the economy. We have a viable business that has the potential to grow well beyond the twelve states we now serve. The AAP facility in Philadelphia is a true investment in our environment, our economy, and our community. ARCA’s goal is to ensure the success of this program so it can be replicated throughout the country.” — Jack Cameron, President and CEO, ARCA

Notes:

1 Based on ARCA Advanced Processing letter dated December 2010 re: PUR recovery rates.

2 ARCA Advanced Processing 2010 Landfill Data, based on the component listing found in the American Plastics Council 1994 Composition, Properties and Economic Study of Recycled Refrigerators Report.