#### 

#### **SELEE Corporation**





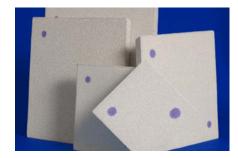






### **SELEE** Corporation

- SELEE is a technical ceramics company
- Applications of our productions include:
  - Filtering molten metals
  - Investment casting
  - Thermal processing









### **SELEE Corporation**

- Hendersonville, NC
  - Wuhan, China
  - Gilberts, IL

In 1995, SELEE joined Porvair plc and became part of Porvair Corporation in the United States.



In Hendersonville, NC since 1979





## Goals & Objectives

- Zero Landfill by 2025
- Reduce solid waste to landfill by 3% annually
- Implement an EMS/ ISO 14001 Functionally Equivalent by 2020
- Conduct an energy audit





#### Solid Waste Assessment

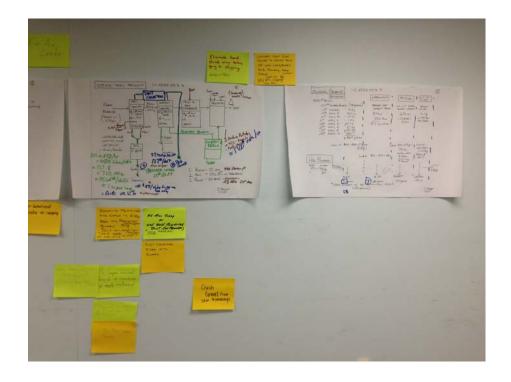
#### **Summary of Potential Waste Reduction Options**

| Waste Type  | Reduction Measure   | Reduction Potential<br>(tons/year) |
|---|---|------------------------------------|
| Filter cake   | Recycle through Ardleigh Minerals or<br>Compost with Earth Farms  | 250                                |
| Saw trimmings   | Recycle into Green Leaf Brick (found by SELEE)                    | 250                                |
| Alumina scrap, Si<br>C, ceramic filters,<br>ceramic rollers | Recycle through Ardleigh Minerals                                 | 44                                 |
| IBCs and drums  | Recycle through one of the companies<br>identified in this report | TBD                                |
| Gloves and rags   | Launder through one of the companies<br>identified in this report | TBD                                |
| TOTAL   |   | 544 tons/year                      |





#### Lean & Green Workshop



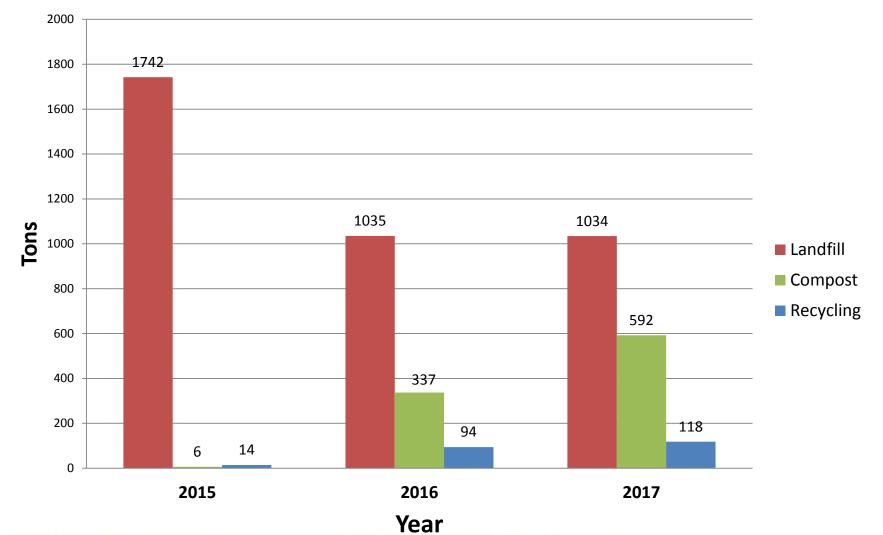
3.75 hour workshop

To improve efficiencies, competitiveness, and environmental performance of SELEE.



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#### **SELEE Solid Waste**





#### Potential Waste Reduction Options

- Alar waste
- IAF saw trimmings
- Mullite rollers
- Setter Tape
- Plastic blue backing
- Micromass trimmings
- SiC plates
- Poly drums

- Mineral powder paper bags
- Large plastic bags
- Used garnet
- Paper towels with slurry
- Gloves





#### Successes

# In 2017, SELEE kept **1,481,828 pounds** out of the landfill through recycling & compost programs.





#### Compost

- Alar Filter cake
- Saw trimmings
- Raw Material Paper bags
- Cotton
- Food
- Other

Savings of ~\$5K/month Over 2 million Ibs since May 2016!









## Silicon Carbide/Alumina

- 73 tons since June 2016.
- Zero cost & savings







#### Gloves

- Began in October 2016
- Over 1 ton recycled







97,900 pairs of gloves in 2017!





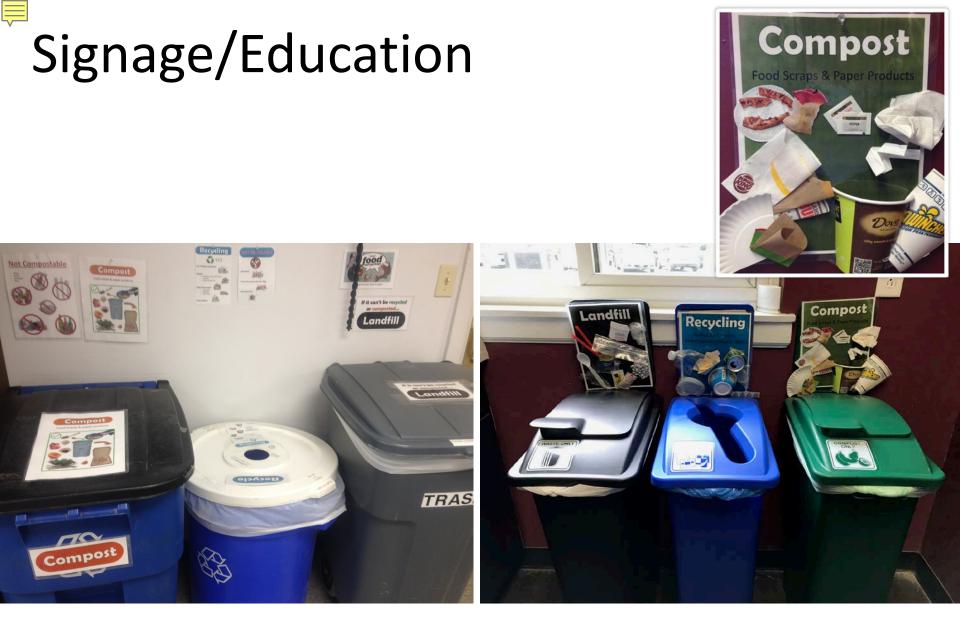
### Cardboard

- Installed February 2017
- Earned \$7K in first year
- No disposal/hauling costs













#### SELEE's Green Team













#### Challenges

- \$\$\$
- Space
- Culture/Mindset





### What's Next

- Updated Waste Matrix
- 2018 Focus: Fired Scrap











