

## PROCESS - AUTOCLAVE

### Standard system

2 autoclaves

**Annual processing capacity**  
(Black bag household waste)

160,000 tons per year (150,000 tons)  
 460 tons per day (440 tons per day)  
 350 days per year (340 days per year)  
 23 hours per day (22 hours per day)

**Individual Autoclave load capacity**  
(Load capacity per cycle)

10 tons per vessel (20 tons 2 vessel system)

**Cycle time per one load**  
(Varies with moisture content, ambient temperature, and composition)

Design basis: 5 min load, 5 min unload  
 45 min +/- variable processing cycle

**Maximum process temperature**

347°F (variable)

**Steam requirement per cycle: one vessel**  
**two vessels**

10,000 lbs/hour @ 115 PSIA  
 20,000 lbs/hour @ 115 PSIA

## PROCESS - ENERGY

**Electrical, plant maximum consumption**  
**Stand-by generator**  
**Back up from grid**

500Kw  
 500kW, 480V, 3ph  
 500kW, 480V, 3ph

**Electricity generation** (maximum capacity)  
using gasifier direct-coupled with gas turbine generator

From recovered <b>fiber</b>	Up to 10Mw
From recovered <b>plastics</b>	Up to 10Mw

**Steam, plant generation** (depending on selection of electricity generation technology)

20,000 lbs/hour to approx. 30,000 lbs/hour

## PROCESS - ENVIRONMENTAL

### Air emissions

Baghouse preferred for particulate capture  
Wet ESP in sensitive areas  
(Possibly other equipment if required for capture of selected emissions)

### Water discharges

Access water is treated by evaporation, precipitation, cooling prior to discharge to approved locations

### Access water

Access water can be treated to desired level of purity

### Hazards

#### Pre-process

Monitoring for hazardous contaminants. Isolation followed by treatment and/or proper disposal.

#### In-process

Each batch (10 tons) is in-process analyzed for hazardous contaminants of concern. Therefore, 100% of the MSW processed by the plant is tested. When a “hazardous” contaminant levels are detected, the batch is isolated and handled in accordance with the applicable regulations.

### Permitting - Air

Standard plant is considered *de minimis* for air emissions. It is permitted in accordance with the state rules.

### Permitting – Solid waste

Some states regulate MOD-3 process as a recycle/recovery facility not subject to landfill permits. In other states the MOD-3 facility can be located on existing, permitted landfill or transfer station sites.