

## Vickers Seerdrum Ltd

### Reference List



15 ton per Hour Seerdrum Installed at Synergy Solutions, Crisp  
County, Cordele, GA

### Synergy Solutions Crisp County , GA, USA

Synergy Solutions are an innovative MSW processing company concentrating on maximum recovery of recyclable materials and maximum renewable energy production.

The raw MSW is pre processed using a Seerdrum to extract the raw organic fraction one way and sending the separated and cleaned inerts to a MRF for recovery.

The raw organic fraction from the Seerdrum is dried to 20% moisture content before being used to fuel a gasifier. The waste heat from the gasifier is used to dry the raw organic fraction.

Synergy are licensed for 1700 tons per day MSW and the current installation is sized for 300 tons per day processing.

The syngas from the gasifier is upgraded, cleaned and cooled before be used to fuel steam raising boilers, the steam from which is used to heat ethanol distillation columns, saving Synergy significant overhead in purchasing heating oil for the boilers.

The waste water coming off the distillation columns is used as the process waste water for the Seerdrum feed, creating further water disposal savings for Synergy. Because this waste water is high in COD, the syngas production will be enhanced due to the high calorific value of the raw organic fraction coming off the Seerdrum.



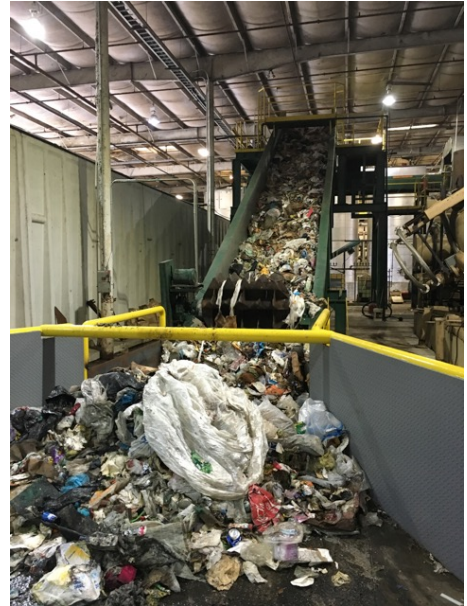
**Fiberight LL, VA, USA**

MSW to industrial sugars. This is what Fiberight do and their proving facility at Lawrenceville is operation a 5 ton per hour capacity Seerdrum as a preliminary treatment of residual black bag waste. The raw organic fraction is extracted from the incoming MSW and sent off for processing, ultimately to make liquid sugar. This sugar has a significant market value as the building blocks of bio-chemical industrial products such as resins, bio-plastics and bio fuels.

The basic process steps from the raw organic fraction from the Seerdrum to the sugars are a deep, hot washing to extract the soluble sugars into solution. The wash water solution is high in COD and is used to feed and anaerobic digester for the production of biogas. This also delivers a highly refined and clean cellulose fibre which is further processed using enzymes to create the sugars leaving a pure organic, lignin-type material as the residue. Both the sugar and the lignin are new products and are considered compliant with end of waste status.

The inert material from the Seerdrum passes to a MRF for recovery of valuable recyclates.

Interestingly, Fiberight use a limited amount of steam in the Seerdrum processing to improve the break down of the organics, which in turn produces an enhanced quantity of bio gas and cellulose fibre.



### Yellowstone National Park Composting Facility, MA, USA

The park attracts millions of visitors every year and with this a mountain of trash. The MSW from the park is delivered to the composting facility where it is processed in a Seerdrum to extract the raw organic material and to collect the inert material for recycling.

The raw organic fraction is blended with animal manure to make a rich organic mix. This is loaded into composting “garages” and after around 21 days the composting is complete and the material is organically stabilised. The composted material is then left to mature in open bays which further stabilises the compost as well as allowing it to dry to around 25% moisture content.

This dried raw compost is further refined and cleaned up using a series of process steps including a 3/8” shaker screen, ballistic separator and an air classifier for lights. The resultant finished compost is free of inert material such as sharps, metals grit and plastics. It makes a useful soil conditioner.

Because MSW is more than 50% organic by weight, this process saves the park on trucking MSW to landfill. The recovered inerts from the Seerdrum are full of valuable recyclable materials such as metals and rigid plastic and have a commercial value.

The park have been using one of the last of the Mk IV Seerdrums made by Vickers Engineering in the mid 1970s. So, it has had a long and productive life.

