

COVERED AERATED STATIC PILE COMPOSTING

Harvest composts organic waste to recycle nutrients and organic matter for maintaining healthy soils and to divert waste from landfills. Our proprietary Covered Aerated Static Pile (CASP) technology uses an organic cover, negative aeration, and biofiltration system that maximize odor and process control.



Key Technology Advantages

Efficient, simple, low-cost

- **Smaller footprint** due to high pile construction leads to more processing capacity per acre than other windrow or aerated static pile systems
- **Shorter residence times**, 8 weeks as opposed to 6 months in a windrow system
- **Limited preprocessing requirements**, no grinding, slurring, or filtering
- **Reduced energy costs**, less energy consumption than other covered aerated static pile systems due to elimination of initial grinding

Maximum odor control

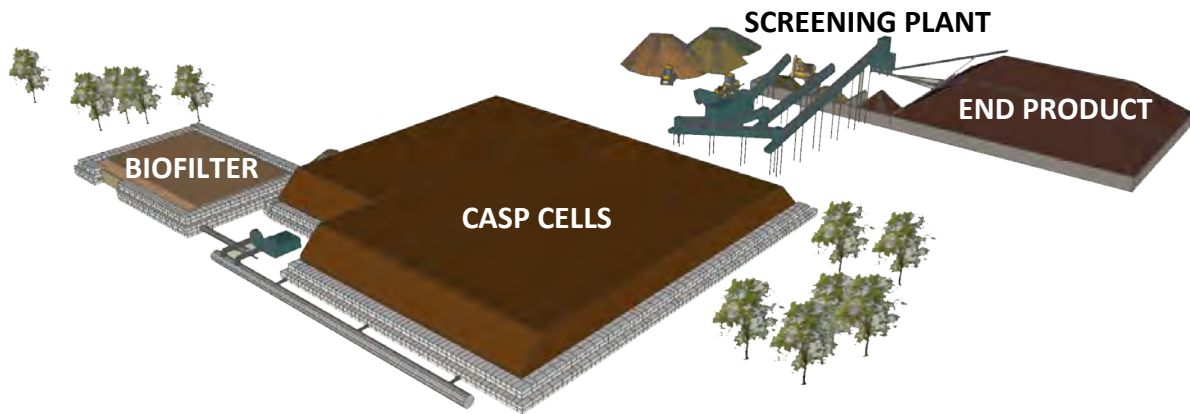
- **Decreased surface area** leads to less exposure to open air
- **Static aeration** reduces the release of odor by pumping air through the pile instead of turning
- **Controlled airflow** allows for effective use of biofilter
- **Organic cover** acts as a natural biofilter to treat odiferous particles

High-quality end product

- **High-value compost** created thanks to extensive process controls



HARVEST'S COVERED AERATED STATIC PILE TECHNOLOGY: THE COMPOSTING PROCESS



1. A new pile is created within a cell of the CASP system by piling the material atop the cell foundation using a loader or excavator. It typically takes one to two weeks to fill a cell depending on the season.



2. Upon completion of construction of the new pile, Harvest's proprietary organic cover is applied to the top of the pile. This cover prevents fugitive odor release caused by convection, heat rise and wind. The cover is removed for reuse before the pile is deconstructed.



3. A vacuum is induced below the pile by a network of perforated pipes and a stainless steel blower which pulls air through the pile to maintain aerobic conditions. The system eliminates labor-intensive turning, allows for proper temperature and moisture maintenance through airflow adjustment and enables excellent odor control.



4. The air that has been pulled through the pile, which typically contains odorous compounds (primarily volatile fatty acids), is ventilated to a biofilter consisting of wood chips and bark before it is released to the atmosphere. The warm, moist air creates a biofilm of organisms around the wood chips that eat the odorous compounds. After two years the biofilter material is replaced and the spent media is composted.



5. Residence time in the CASP is approximately eight weeks. Each batch is restructured periodically using Harvest's proprietary in-situ restructuring method. This method eliminates the need to physically move, transfer, or tear down and rebuild the piles, thus reducing the release of steam, heat and incidental odor and the use for fuel and labor to agitate compost piles.



6. Following the CASP, the product is screened for contaminants and cured for one to two months in windrow-like piles in order to improve quality. The resulting high-quality compost is stable, pathogen-free and smells earthy. The product can be sold wholesale in bulk or bagged for retail markets and used in a variety of applications including agriculture, landscaping and erosion control.

REFERENCE FACILITY: FRASER RICHMOND

Harvest owns and operates one of the largest permitted food waste and yard waste composting facilities in North America, Fraser Richmond Soil & Fibre, located in Richmond, BC near Vancouver. It is also one of the most productive composting facilities in North America, with dramatic efficiency gains over traditional windrow or enclosed systems. We use our proprietary CASP system to process over 200,000 tons of food and yard waste each year and consistently sell out our end products each year.



Harvest Power

ENVISION

Envision a world where valuable resources are harvested rather than wasted. Where communities live in balance with nature. Where companies are key agents of change for the better. Where we work together to make smarter choices.

EMPOWER

We seek to empower your community by empowering your waste. By harnessing the energy and nutrients of organic materials, we enable communities to increase their energy independence, reduce their environmental impact and harvest valuable resources.

EMBOLDEN

Our purpose is to create a new path for organics that transforms waste into valuable resources. We aim to inspire you to take bold action and provide businesses, governments and individuals with a path to thrive sustainably.

Through innovative technologies and unparalleled industry experience, Harvest is ushering in a new era of organics recycling. We develop, build, own and operate state-of-the-art facilities that produce renewable energy and compost from discarded organic materials. We deploy best-in-class technologies for composting, biogas production, and biomass gasification. We provide the capital for our projects and top-tier talent to finance, engineer, construct and operate the facilities. We are taking a superpowered approach to energy independence and organic waste management.

HARVEST. SUPERPOWERED.

info@harvestpower.com
www.harvestpower.com

221 Crescent St. Suite 402
Waltham, MA 02453

1200 Westlake Avenue North Suite 508
Seattle, WA 98109

21320 Gordon Way, Suite 270
Richmond, BC V6W 1J8