

FACILITY FACT SHEET

Intermodal AD-25-2015-2 Microdigester

Facility Owner	Joint Venture - LCNW/Impact Bioenergy
Facility Contact	P. Agtuca / J. Allen
Facility Address	Auburn, Washington
Telephone Number	253-735-5277 / 206-250-3242
Digester Size	Intermodal, 8' x 20', 15,000 lbs. loaded weight
Annual Feedstock	Foodwaste; preconsumer and postconsumer
Annual Tons Recycled	25 tons per year with gas storage
Site History	Machine no. 2; resides at Impact's Advanced Manufacturing Center

Laser Cutting NW and Impact Bioenergy deployed this intermodal design to provide weather and vandalism protection, as well as improved odor control. The microdigester resides at Laser Cutting NW which is Impact's Fabrication Center. This is an advanced manufacturing center near Seattle, Washington. This digester is currently committed to a research grant for King County to evaluate and document the agronomic qualities of the digestate.

Processing Equipment

mixed using a hand operated mud pump with multiple suction and discharge locations. Digester chambers are partitioned to provide both CSTR and FFR digestion. Heating is automatic using a hydronic heating system. Gas is conditioned for moisture and sulfur removal and then stored in an unpressurized (0.15 psi) storage vessel. Gas is measured, pressure-regulated, and backflow prevented. A manifold is provided to enable a generator, gas lamp, or other devices are installed on the machine. Surplus gas burner with flame arrester and auto-igniter are integrated into the system.

Process and Residence Time

Design is intended to optimize space efficiency and affordability, and to minimize moving parts (complexity and cost). Feedstock is blended, homogenized, and emulsified in a first stage metering tank. Light and heavy contaminants are removable. Dosing cycle and volume are adjustable. Digester hydraulic residence time is 30 days. Digestate discharge is automatic based on displacement method. There are two separate manifolds for gas and liquid. Sampling and condensate valves are provided in a number of locations. Maximum energy output is 15,000 BTU per hour. Maximum digestate production is 130 lbs. per day (16 gallons per day).

