

# Waste-To-Energy News™

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## *Installation of Special Grinder Unit Ends Shutdowns of Feedstock Delivery System at Waste-To-Energy Plant*

Milford, UT --- Management at a new waste-to-energy plant now in startup phase here reports that installation of special grinder units has eliminated a significant maintenance burden caused by recurrent blockages in two manure pipelines that connect concentrators with digesters.

Selection of the Muffin Monster® grinder units, manufactured by JWC Environmental of Costa Mesa, CA, was finalized after a side-by-side comparison test against an alternative unit.

“During the startup phase, we want to do everything we can to decrease the amount of maintenance that’s going to be needed to keep the plant running effectively,” said B.J. Moore, general manager for Smithfield Foods’ BEST Biofuel, LLC subsidiary. The plant is designed to convert swine waste from 257,000 animals into 25 tons of methanol per day.



Each grinder, installed upstream of the concentrator in an 8 in. line, sees 400 gal/min of raw manure, for total of 0.5 mgd.



Installation of special grinder units eliminated recurrent pipeline blockages in new waste-to-energy plant.

“We were very concerned about blockages taking down our manure delivery system for an hour and a half every other day,” he continued. “Two guys were needed to remove a blending unit from each of two lines, backflush it, and replace it---a very unpleasant task that we didn’t want to have to tell them was going to be an ongoing part of their job when the plant was past the startup phase.”

“In a 60 day, side-by-side, two pipeline test against an alternative unit, the Muffin Monster’s line never had to be taken down. But the line with the other unit went down three times during the trial, so we are going with the Muffin Monster in both lines.”

Moore said each grinder, installed upstream of the concentrator in an 8 in. line, sees 400 gal/min of raw manure--- a total of 0.5 mgd. Concentrated manure is now moved by progressive cavity underflow pumps at 200 gal/min from the concentrators through 4 in. lines to the digesters without interruptions for cleaning blockages. He added he was also seeing some benefit in the concentrators.

“There’s less need to clean out floating debris there now,” he reported. “Not as much as we hoped, but still an aesthetic benefit.”

JWC Environmental says that its dual-shafted Muffin Monster Model 30004 deployed here offers grinding of a wider variety of solids than single-shafted machines, while low-speed operation results in higher torque and less interrupts. Design flow rate is 800 gpm, while pressure drop is 1.60 psi. Flow rates ranging from 400 to 1200 gpm are available for this model.

Various cutter combinations are available in all its grinders to allow for particle size as fine as 1/4 in. for 95% of the ground material. Cutter elements are engineered in many variations to accommodate specific needs, and are provided for both in-line and channel configurations.

The units are commonly deployed in municipal wastewater service, as well as for chemical, petrochemical, pulp & paper, food processing, and other industrial applications, and for a wide variety of recycling and remediation uses.

They have effectively reduced particle size for wood, plastics, rocks, nuts, bolts, wire, sludge, and other foreign material that could otherwise foul or damage waste stream and process equipment, and typically provided for reduced handling costs associated with solids removal.

The company adds that the units adapt to most applications with little or no modification to piping, channel, or power, and offer high-pressure (90 psi) capability, with no seal flush required and no packing gland to adjust.

*Sales and service offices are located throughout the U.S. and in Europe. For further information, contact JWC Environmental, 290 Paularino Ave., Costa Mesa, CA 92626, Tel. 800/331-2277 Fax 949/833-8858, [www.jwce.com](http://www.jwce.com), [jwce@jwce.com](mailto:jwce@jwce.com).*



Dual-shafted Muffin Monster Model 30004 installed here has design flow rate of 800 gpm, and pressure drop of 1.60 psi. Model is available in flow rates ranging from 400-1200 gpm.