



## The Georgia Center of Innovation for Manufacturing Helps the Jeneer Group Revolutionize the Landfill Industry

### OVERVIEW

The nation's 2,200 landfills do much more than provide a place to deposit the refuse of our cities and towns. They also provide a source of green energy by producing methane that is used as fuel for gas-to-energy plants, reducing greenhouse-gas emissions. This methane is captured from wells that dot the landfills, which simultaneously produce liquid waste that must be removed. Currently, excess liquid is siphoned by mechanical pumps that are outdated, inefficient and costly to maintain. Bob Beyer, President of Atlanta's Jeneer Group, and the Georgia Center of Innovation for Manufacturing, developed an advanced and energy efficient pump for a technologically stagnant industry.

### CHALLENGE

"Our goal was to come up with a product that was light years ahead of what everyone else was using," explained Beyer. This new product is an alternative to the approximately 43,000 pumps currently in use in America's landfills, which can become fouled in as little as three months - resulting in the pumps' total failure. Therefore, maintenance and safety concerns are paramount due to the regular, labor-intensive task of removing and/or replacing the pumps.

Pump maintenance on a small landfill alone can require 12 to 16 man-hours each week. Currently, technicians must drive from well to well, adding the cost of fuel and repairs to an uneconomical process. However, this process is necessary to ensure the vital removal of liquid waste from the wells.

Knowing the hassle of current processes, the Jeneer Group sought to create a more efficient system to improve landfill and pump management. One of the key challenges was developing a remote communications system for the pumps - this required sufficient funding, the best research partners and suppliers. That's where The Center of Innovation for Manufacturing came into play.

### Company:

Jeneer Group

### Facility Type:

Manufacturing

### Number of Jobs Added:

3 to date, 10 total are projected at beginning of year three.

### Top-line Requirements:

Proximity to suppliers and customers with outstanding transportation infrastructure

### Economic Impact for Georgia:

- To date, several positions at supplier companies have been created.
- One full-time and three part-time positions at the Jeneer Group have been created.
- Ten total Jeneer Group employees are projected at beginning of year three.

### What the Center of Innovation for Manufacturing Offers Businesses within the Industry:

- Access to university-level research and development
- Expedited product commercialization
- Manufacturing process and systems development
- Industry-specific business intelligence
- Access to technical college workforce training programs



## SOLUTION

The Center provided funding for one-third of the \$60,000 price tag on the project through a grant made to the Georgia Institute of Technology and the Georgia Tech Manufacturing Institute (GTMI) for development of the systems. The remainder of the cost was sourced through the Jeneer Group, and a grant from the Georgia Manufacturing Extension Partnership (GMEP) - a strategic connection made by The Center.

The Center was able to identify and connect Jeneer with engineers and students at Georgia Tech who helped solve the challenges of the pump design and communications system. "The Center was a vital resource when it came to connecting us with local business and technology partners," said Beyer. "The biggest hurdle they helped us with, was integrating the ability to transmit pump data via the web."

The end result is a revolutionary machine for the waste management industry. A design that communicates pump vitals through a cost saving monitoring system made with fewer working parts and materials that resist corrosion. Beyer explained, "A client can log on to a website, and monitor the operation status of up to 150 pumps. This ability saves man hours and valuable resources it takes to have a technician drive around and check each individual pump."

## RESULTS

Born in Bob Beyer's basement, and fostered by the Center of Innovation, the unique Jeneer Group design resists fouling, and offers groundbreaking communications capabilities. The pumps' solar-powered electronic sensors capture pump data and provide real-time web-based pump monitoring. Notification alarms identify problems, reducing unnecessary well visits. "We believe the pumps will reduce the maintenance costs of a landfill by at least 50 percent, and the Center was an important component to our success" said Beyer.

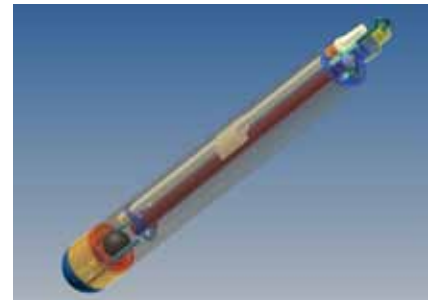
One of The Center's prime considerations in awarding any grant, is the rapid return on investment for the taxpayers of the state. The Jeneer Group's project met that criterion, as sales by year two are projected to be \$1.7 million. The entire investment made in the pumps' communication systems will be completely paid for within 14 months.

In addition, the Jeneer Group is making every effort to rely on Georgia companies for supplies and fabrication. The companies that the Jeneer Group relies on are already adding quality jobs, further strengthening the economic impact of the endeavor. With the exception of a few parts sourced from overseas, the pumps are all fabricated in Georgia.

"Current sales are staggering. We've had to hire additional employees, and move to a larger facility to keep up with demand," said Beyer. With the potential to find eager customers at landfills around the world, the future is bright for the Jeneer Group and its industry changing pumps.

“The Center of Innovation for Manufacturing gave us access to knowledge, resources and networking opportunities that were of tremendous benefit. The technology is going to open the doors to a lot of changes in the landfill industry.”

- **Bob Beyer, President,  
The Jeneer Group**



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