

# PISCATAWAY BIOENERGY PROJECT UPDATE

SPRING 2023 NEWSLETTER



Site Progress: April 2023



## Functional Testing Paves the Way Toward System Startup

In addition to finalizing some of the major construction activities at the Piscataway Bioenergy site, functional testing has started in several areas, primarily in the Solids Handling Building. Other highlights include the construction of the digested sludge storage tank cover and the delivery of the boiler auxiliary container.

For the past couple of months, crews have been building the digested sludge storage tank cover. The cover is approximately 50 feet in diameter and consists of 24 pie-shaped steel wedges that have been welded together. Now the team is sand blasting and painting the cover. Once completed, the nearly 20-ton cover will be lowered into place by crane onto a rehabilitated gravity thickener that will serve as the storage tank. The purpose of the digested sludge storage tank is to serve as a buffer in the treatment process to separate the digestion operations from final dewatering. Once operational, solids will need to be pumped out of the digesters on a regular basis to the post-dewatering belt filter presses. If there is a maintenance issue at the presses, the digested sludge storage tank will store the overflow.

The auxiliary container that will support the three 5,000 lb/hr steam boilers has been delivered and installed. The auxiliary container houses a water softening system for the boilers, which provide the steam for the thermal hydrolysis process. Water must be softened to prevent corrosion and scaling in the boiler.

The Solids Handling Building houses all the equipment, pumps, tanks and electrical and Instrumentation & Control systems for pre- and post-dewatering processes. For the past several months crews have been performing functional testing, which is the first step in starting up the new systems. Functional testing ensures that the equipment has been properly installed and verified by the equipment vendor, the electrical systems are active and properly connected and that all of the instrumentation is operational and signals and alarms are verified. Functional testing also includes performance capacity testing which verifies that equipment is performing within the expected parameters. After functional testing is completed, the next step is operational demonstration testing, which involves testing entire systems together, not individual pieces of equipment.



## Progress Since Last Update (Winter 2022)



Digesters have been filled with water for leak testing



Boiler auxiliary container delivered



Virgin sidestream media delivered



UV reactors and piping set



Belts installed on belt filter presses



Natural gas turned on



Functional Testing



### Upcoming Work

- Install three 5,000 lb/hr steam boilers
- Complete installation of the Gas Treatment System
- Install Gas Storage

### PROJECT TIMELINE



#### PLANNING

Completed June 2018



#### DESIGN

Completed February 2020



#### DEMOLITION AND UTILITY RELOCATION

Completed December 2020



#### CONSTRUCTION

Underway  
Began June 2020



#### TESTING

Spring 2022



#### COMPLETION

Late 2024

## The Piscataway Bioenergy Team

Your WSSC Water Piscataway Bioenergy Team includes:



#### OWNER

[www.wsscwater.com](http://www.wsscwater.com)



#### DESIGN-BUILDER

[www.pcconstruction.com](http://www.pcconstruction.com)



#### LEAD ENGINEER

[www.stantec.com](http://www.stantec.com)  
[www.hazenandsawyer.com](http://www.hazenandsawyer.com)



#### PROGRAM MANAGER

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