

ANAEROBIC DIGESTER FOR PURPOSE/ENERGY

SOUTH BURLINGTON, VT

THE CHALLENGE

Modify the digester vessel, the primary component for the anaerobic digestion process, mid-way through this design-build project at a Vermont micro-brewery, to accommodate the client's revised schedule and financing delays without impacting the integrity of the process.

THE SOLUTION

PC Construction investigated two material options for the digester vessel: cast-in-place concrete and a glass-lined steel tank.

DESCRIPTION

The process to treat the organic waste products would require a very large and complex vessel with interior features uncommon in standard glass-lined steel tanks. It was determined that using a glass-lined steel tank would be more costly and require more time to install than a cast-in-place concrete tank. The installation of a cast-in-place tank would also provide greater flexibility with the design of the project. After the project was designed with the cast-in-place tank, the project faced delays due to financing and required permits.

With these delays, the project faced a winter construction start. In addition, the world market conditions changed dramatically and the cost of steel had reduced.

Recognizing that placing concrete during the winter months in Vermont is more costly, the design-build team reconsidered the use of a cast-in-place digester. Further investigation and analysis revealed that



the glass-lined steel tank was now less expensive than the cast-in place concrete and could be installed during the winter for far less time and money than the concrete. Our continued diligence, knowledge, and ability to quickly react to changing market conditions allowed the client to move forward with construction.

This project went on to receive an AGC of Vermont 2010 Best Builders Award in the New Green Construction category and was recognized by Power Engineering Magazine with an Honorable Mention in the Renewable/Sustainable category of their 2010 Projects of the Year Awards.



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