

## Fort Worth Defends Their Digester with Scum Screening Using the STRAINPRESS®



*“Even though we couldn’t find another facility that screened its scum separately from its sludge, we thought the technology would be a good fit. As it turned out, the scum screening system has worked very well, and it has eliminated an operating headache and a major cost for the plant.”*  
*-Dr. Leonard Ripley, Ph.D., P.E., BCEE, Senior Environmental Engineer,  
Freese and Nichols, Inc.*

Scum is not a substance that anyone in a wastewater treatment plants wants to deal with. Scum, the greasy substance that floats to the surface of a clarifier, gets nastier as it accumulates, and worse when it combines with debris. The City of Fort Worth takes a unique approach in managing its scum and now turns what was once a liability into an asset.

## Inspired by Catastrophe

The City of Fort Worth needed to deal with some significant issues:

- Scum containing excessive trash/paper/plastics
- Potential trash accumulation in digesters and impacts to biosolids quality
- Incineration process opposing environmental stewardship and sustainability goals

Fort Worth Village Creek's incineration process wasn't very energy efficient and equipment was aging, but it enabled the plant to manage this challenging side stream waste. Consequently, there was no compelling reason to replace it. Two events coincided to drive transformational change: a fire inside the incinerator building seriously damaged equipment, and federal air permitting rules were going to necessitate upgrades to emission controls. Cost estimates to implement needed process improvements exceeded \$10 million.

## Less Than Palatable Interim Solution

The City of Fort Worth thought it might be challenging to improve the plant's process since no proven scum screening solution was on the market. With the incineration facility out of commission, the City initiated a temporary process to take care of the scum until a permanent one could be configured. The process required the City to accumulate scum and solids into tanks 8-10 feet deep, hire contractors to pump and scoop scum out of the tanks and then truck the scum to a facility for dewatering and stabilization prior to final disposal in a landfill.

There were several issues that made this an extremely unpalatable interim solution:

- Added operational costs of \$400K per year
- Difficulty finding contractors for the removal job
- Horrendous odor of collected and fermenting scum in the plant

The City, realizing that there had to be a better way to do this, hired Freese and Nichols, Inc. to help them design a solution.

## Seeing was Believing

A team from the City of Fort Worth visited the wastewater treatment plant at Wichita Falls where Freese and Nichols, Inc. designed a screen system using HUBER screens to treat sludge. While it wasn't screening scum, the screens were performing in a way that showed that the technology could be applied to the City's situation at Fort Worth's Village Creek facility.

## More Than Solving the Scum Problem

Fort Worth Village Creek has gone far beyond managing its scum. The plant has implemented an efficient way to continuously skim the scum out of the channel flow and to effectively process it through anaerobic co-digestion so that its resulting methane gas is useable. In short, the scum liability was turned into an asset, and keeping trash out of the digester was a key component of the project's success.



Fort Worth Village Creek's new scum screening system met high expectations set for it because it:

- Reduced putrid odors produced by fermenting scum.
- Optimized run times with flexible use of automated and manual modes.
- Eliminated the \$400K annual cost for scum collection and haul-off.
- Produced methane gas in controlled capture for reuse to supply the plant's energy.
- Provided the plant with a platform for redundancy and expandability.

With HUBER's STRAINPRESS® in place, the City of Fort Worth ensures that the plant's post-screening scum is virtually free of trash solids and can be used efficiently.

### Seeking Sustainability

The impact of the new scum screening system on energy generation is nominal when compared to the contribution from the high-strength waste. However, the project is anticipated to recover its cost in a mere two years even if you only consider that it will eliminate off-site scum disposal costs.



The implementation of the STRAINPRESS® was a foundational requirement in the City of Fort Worth's new scum management system and has allowed the treatment plant to move closer to its efficiency goals and save money in the process.

### Working with Experts

The Fort Worth Village Creek Wastewater Treatment Plant has used HUBER's equipment in other treatment applications and has first-hand experience with the quality, durability and performance for which HUBER is known. Their experience with the STRAINPRESS® has been no different. The "scum management" team is very pleased with the performance of the STRAINPRESS®. More strategically, the City of Fort Worth's decision makers are excited about the catalyst that their new scum management system has been to their progress toward 100% sustainability.

"The HUBER STRAINPRESS has allowed Village Creek to tap into an energy reserve once treated as a waste product that was disposed of at a considerable expense and with a high degree of difficulty. The incinerators were dinosaurs from a bygone era, but the accumulation, haul-off, and landfilling wasn't much better. The process developed by Dr. Ripley, which includes the HUBER STRAINPRESS, has allowed Village Creek to convert scum into a raw material for increased methane production that, in turn, has improved and stabilized our onsite energy generation."

- Jerry Pressley, Operations and Maintenance Superintendent, Fort Worth Village Creek Water Reclamation Facility

### Ready to get started?

HUBER can provide ready-built STRAINPRESS® units to defend your digester, in stock today. All you need is FOG and an electrical power supply. Get in touch with us at 704-949-1010 for more information.