



Huber's SRT Solar Dryer at Tooele WRF effectively uses the sun to reliably produce biosolids.

"Biosolids becomes one of the biggest parts of wastewater treatment. Often it is the where you spend the most of your time." Dan Olson, Plant Superintendent

Tooele City Water Reclamation Facility wanted to improve their biosolids handling process in their planned expansion. They were disappointed with the lime stabilization process that they were utilizing at the time. Tooele was hoping to produce a reusable product from the lime process. It just was not performing like they needed it to, forcing the City to go solely to land application or land fill.

Because of the odor, hazardous nature, and limited disposal options with the liming process, Tooele was faced with carefully evaluating, selecting and implementing a new solution. They knew volume reduction

would lower disposal costs and by creating a biosolid product that could be effectively reused, would open up new possibilities for distribution.

The City of Tooele chose Huber Technology's SRT Solar Dryer because of its:

- Simple design
- Automated process
- Use of the sun provided predictable energy costs
- Track record of quality
- Reliable service and knowledgeable support



Dan Olson, Plant Superintendent

Challenge

The solution for Tooele needed to reduce sludge volume, produce reusable material, be simple to maintain, and provide cost effective operation. In the evaluation of drying processes Tooele considered:

- Composting
- Thermal Drying
- Solar Drying

Composting was ruled out because it was land and labor intensive as well as a potential source for odor. Thermal drying was attractive because it produced the product they were looking for. However, because Tooele was a smaller entity with a modest budget and subsequently leanly staffed, the cost and complexity of the operation of a Thermal Dryer put that option out of reach.

“We needed something that was going to be stable in operational costs over the next 20 years. Also something that was simple enough that your current operators can maintain and repair (for the most part), and operate without bringing in high dollar electricians and SCADA people”

Solution

The Huber Technology SRT Solar Dryer was determined to be a technology fit to achieve Tooele’s goals of simple and cost effective volume reduction while producing a reusable biosolid product. The linear feed design of the SRT Solar Dryer provided the ability to feed dewatered sludge to the dryer as it was produced. This provided more functional operational flexibility than batch feed solar technologies that were evaluated. The traveling bridge shovel design allowed for the transport of material anywhere in the process providing maximum flexibility in the feed, mixing, and extraction of the product from the dryer. The feature of the automatic moving bridge turning device on the SRT provided a uniformly mixed sludge as it entered the head of the dryer and incrementally moved the sludge along the length of the drying bed. As a result of this mixing the odor from the sludge would be virtually nonexistent.





Ease of Operation

Once the SRT Solar Dryer was put into operation it was quickly realized by the staff that the automation of the SRT freed up time for personnel to attend to other duties around the plant. Previously, time was consumed by spreading, hauling, and monitoring the liming equipment.

The SRT unit is simple in construction. Tooele is able to use existing plant personnel to attend to maintenance on the SRT unit. This has eliminated the need for specialized process and control personnel. Also, resulting in reduced labor costs overall.

“One big impact to the operation is that employees now enjoy working in the biosolids area. It is clean with very low odor”

Savings Realized

The operation of the dryer has really shown the SRT to provide tangible return on investment. Reduction in operations requirements were realized by eliminating the whole labor intensive liming process, reducing hauling to land fill or land

applications, and leasing of land. This has resulted in saving Tooele approximately \$110, 000 per year of direct costs. Additional savings were realized in reducing chemical fertilizer costs used through the City’s parks and golf courses.

“I’m amazed, with the technical aspect; you have people that know exactly what they are talking about, exactly what they’re doing. When you’re asking questions you get good information. That has been wonderful.”

Partners in Success

Through close cooperation, Tooele City and Huber Technology has demonstrated a formula for success. Beyond the sale and installation of the SRT Solar Dryer, the City has appreciated the level of service and support from Huber’s Service Department. The knowledgeable support of the service staff has proven invaluable throughout the learning curve of the operations staff at Tooele. Ongoing support throughout normal operations has been accurate and immediate.

Appreciative Public

The process of drying sludge and creating reusable biosolids through the use of the sun’s energy is well received by the citizens of Tooele City. The public really enjoys the green aspect of the SRT Solar Drying technology and the low odor. It’s a win-win all the way around. This has really proven to be a benefit to the Tooele City Water Reclamation Facility by the public’s perception being positive and creating a product that is reusable.



“Now with the Huber system we kind of can sit back and relax. We know it’s going to work. We know what product we’re going to have in the end.”



About Huber Technology:

Huber serves the municipal and industrial wastewater treatment market with high quality liquid-solid separation technology. Huber Technology offers the complete chain of screening, grit and sludge handling processes. The company is an original source manufacturer specializing in stainless steel fabrication of technologies for water and wastewater.

Headquartered in 35,640 sq. ft. of office and manufacturing space in Huntersville, N.C., Huber Technology, Inc. is a member of the HUBER Group as a wholly owned subsidiary of Huber SE, based in Bavaria, Germany. Established in 1872, Huber is a solidly established manufacturer with five generations of craftsmanship to its credit. Known as an innovator, Huber SE is the holder of multiple patents. Huber is the inventor and original manufacturer for the renowned ROTAMAT® products and STEPSCREEN® and has proven experience and expertise with over 25,000 installations worldwide.

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