Ovivo’s LM™ Mixer Aids in Additional Gas Production and Eliminating Struvite Issues

The City of Stevens Point, Wisconsin has three anaerobic digesters, two 45’ and one 50’. Originally the 50’ digester was a secondary digester. In 2012, the 50’ secondary digester was converted to a primary digester. The spiral guided gas holding cover was retrofitted to allow for the installation of an LM™ Mixer. Prior to the installation of this mixing technology, the plant was approaching their rated digestion capacity and was regularly having issues with struvite settling in the 50’ digester.

With the use of the LM™ Mixer, the plant has seen an increase in biogas production allowing for more energy to be generated. In March of 2015 the digester was taken offline and drawn down as part of a Co-digestion project. During this time the tank was inspected to determine how well the LM™ Mixer was working. The level was drawn down to about 30% of the maximum tank volume and samples of the material being removed were analyzed. The digester was visually inspected at this time as well. The analytical data showed that there was almost no difference in total solids or volatile solids between the material being removed during the drawdown and the material being recirculated during normal operations. The visual inspection showed no signs of the struvite deposition that had occurred prior to the LM™ Mixer being installed. The determination of the facility staff is that the LM™ Mixer is producing a homogenously mixed tank.

Plant Information:
- Size: 4.6 MGD (3.1 Average)
- Digester Volume: 307,000 Gal
- Energy Produced (Ave): 305 kWh/d
- Other: Bio-P facility, Co-digestion facility, Biogas CHP used