

Successful Resolutions to One New Plants Problems

Florence, Indiana has a new plant online. Florence was being served by a Class 1 Lagoon system until the Belterra Resort and Gambling boat arrived to the Florence area. The Lagoon system that served Florence was not going to be adequate to serve the town and the added influent of the Belterra Hotel and Boat. H.N.T.B. Engineers proposed an Oxidation ditch and Mitchell and Stark Construction Company did the work. A .24 M.G.D. plant was built. This plant consists of two grit channels, a bar screen, two oxidation ditches, two clarifiers, two aerobic digesters, a sludge loading station, and the disinfection is done by ultra violet. This plant discharges to the Log Lick Creek. The plant personnel include, Larry Stewart- Vice President of Sewer Board and Maintenance, Shannon Stewart- class II Certified Operator of Record, and Judy Lozier- Operator in training.

The plant start up began on July 7, 2000 under the supervision of Chris Maines, a class IV operator working through R.J. Middleton and Associates. To start the Florence plant, they pumped the remaining sewage from the lagoons and added 50lbs. of rabbit food a day. They also received an average flow of 6000 gallons from a 4" forced main from the town of Florence. On October 23, 2000, Belterra began sending influent to the new plant from an 8" forced main. This included the boat waste of 40,000 gallons plus the waste from Belterra hotel. The boat off loaded it's holding tanks into the Belterra lift station just after midnight and this large slug flow would arrive shortly. This large flow and high B.O.D. strength waste was causing the plant to have operational problems. Filamentous growth began and Effluent quality began to deteriorate. Plant personnel started a night shift to work out the problems this high flow was causing. Florence plant personnel met with the Belterra maintenance personnel and worked out a lengthened pumping schedule from Belterra to the Florence plant. This plan helped eliminate the hydraulic overloads in the middle of the night and allowed the Florence plant to setup a more constant ditch D.O. and smooth out return sludge flows. During the weekends, the Belterra Resort is the major contributor to the Florence plant. Shannon Stewart continues to develop a plan to resolve these problems. She has shut down part of the plant during the week because of low flows and F/M ratios. On the weekend, She is utilizing an empty ring of the oxidation ditch for an interim equalization basin; then she is feeding this influent into the rest of the plant during low flow operations. As with any plant, the operational problems, that an operator has to resolve is unique. Shannon and the plant personnel are doing an outstanding job of resolving the problems of a new plant and new flows.

Until next time.

Tony Taylor

Wastewater Training Director

Alliance of Indiana Rural Water