A bioaugmentation solution helped the center meet effluent discharge requirements without additional plant construction or capital expenditure.

meeting CAPACITY challenges

Louisiana parish's unique approach to addressing sewage treatment needs

By Jerry Bidleman

A number of years ago, the Lafourche Parish Sheriff's Department in Louisiana instituted a new program to assist prisoners nearing release to transition back into society. This vehicle requires that inmates pay for their room and board while they learn work skills in industries such as shipbuilding, oil field services, food preparation, kitchen management and municipal water and wastewater treatment operations. Inmates are housed in a facility separate from other correctional institutions, and they are responsible for filling meaningful positions in many phases of the program. The program is fully controlled by the Lafourche Parish Sheriff's Office and the Louisiana Department of Corrections.

When the Work Release Center opened, the facility housed 60 people and prepared 4,000 meals daily, which were provided to the local elderly population and others cared for by nonprofit organizations. The sewage treatment plant servicing the facility consisted of a 17,000-gal-per-day (gpd) package plant that treated the wastewater, disinfected it and then discharged it to the environment. Because of its limited capacity, this plant was immediately under pressure to keep up with the growth of staff, inmates and the number of meals being prepared daily.

Growing Demand

Within less than three years of opening, the number of people at the Work Release Center had risen to 70 and the meals prepared on site each day had doubled to 8,000. During that same year, officials from the state of Louisiana Department of Health and Hospitals (LADHH) visited the center to evaluate the operation of the sewage treatment plant.

The result was a mandate from LADHH to double the capacity of the 17,000-gpd wastewater plant in order to meet state environmental standards while providing the necessary services to the current staff and inmates and for the meals being prepared. This upgrade did not take into account any future growth that the center was contemplating. There was also no budget in place that could pay for the wastewater treatment expansion, so the Work Release Center's commanding officer elected to utilize Sewper Rx to help bring the plant into compliance and increase its capacity to accommodate more people.

Sewper Rx is a polymicrobial blend of specifically selected facultative bacterial species that was selected for its superior ability to rapidly degrade organic solids and noxious odor. Within a period of just a few weeks, the plant responded favorably to the Sewper Rx bioaugmentation process and the effluent began to meet regulatory discharge limits once again. No additional plant construction or capital expenditure was required at the facility.

Operating Performance

Over the next two years, the plant continued its improved operating performance and the LADHH made another visit to the center. In his report, the LADHH engineer said: "The appearance and sample data of the sewage treatment plant discharge were the best I had ever seen."

The center also had improved its operating

procedures regarding the separation and disposal of cooking oil; this contributed to the well being of the sewage plant. Today, almost six years later, the same plant that was cited as significantly under capacity soon after it was built is now servicing more people and meal preparations than ever while staying comfortably below its discharge limits.

Sewper Rx has proven that it can enable the center to save the cost of more steel, brick and mortar by creating more capacity in the same footprint and reduce the solids output of the plant. The center's sewage treatment plant continues to operate well, keeping in regulatory compliance with the assistance of the polymicrobial blend.

Mission Accomplished

By early 2010, the population at the center had reached 185 people—triple the original number—and the center is now preparing 24,000 meals per month for its constituents. All of this activity is being accomplished with the same 17,000-gpd plant that has been in use for almost a decade.

Inmates continue to operate the sewage treatment facility at the center; two have earned their LA-Class I Wastewater Treatment Operators Certificate, and two more have studied for and taken the examination to become certified as LA-Class II Wastewater Treatment Operators. They are presently awaiting the test results. WWD

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