

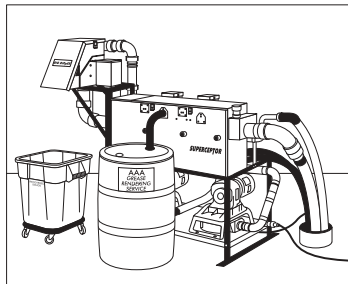
Correctional Facilities

Correctional Facility Controls Kitchen Effluent

Calhoun State Prison is a 1,240 inmate medium security men's prison located 30 miles west of Albany, GA. Although the facility has only been in operation for five years, effluent compliance problems plagued the facility. The prison was serviced by a 2,500 gallon grease trap; however, a large quantity of grease & oils as well as heavy loads of solids were being dispatched into the sewer system. This caused frequent backups in the system as well as clogging of a city-owned lift station located across the street from the prison.

According to a spokesman for the Georgia Department of Corrections, "I'd say 75% of our problems were caused by effluent grease from the kitchen. The effluent emptied into the lift station and clogged it up with grease & oils about once a month. Grease-laden solids from the kitchen & prison wrapped themselves around the pumps, impeding pump operation. The backups also caused occasional grease overflows in nearby ponds."

After enduring heavy fines from the City (around \$30,000 a year) and rising costs associated with pumping out the existing grease trap every 6-8 weeks, corrective action needed to be taken. It was decided that the prison could take charge of the situation by installing both a bar screen



SuperCeptor S-2750

to handle solids in the prison's gray water and a SuperCeptor® S-2750 system to handle kitchen waste flows. Not only would the SuperCeptor remove and collect the fats, oils, and grease from kitchen flows, but would also remove the coarse solids in the kitchen effluent.

Since installation in late 1998, the SuperCeptor removes between 55 and 82 gallons of grease & oil from the kitchen effluent each week. The Big Flipper® Coarse Solids Removal System removes up to three 55-gallon drums of dewatered coarse solids from the kitchen each week. The lift station adjacent to the prison has not clogged up once since the installation, either.

"The City seems to be very happy with what we have done to control our prison trash and kitchen effluent. The fines have stopped, we've only pumped out the grease trap once [this was to see if any solids had accumulated, which they hadn't], and we are glad our relations with the city have improved. Our BOD (Bio-Chemical Oxygen Demand) dropped from an average of 375 to 250 mg/l, and we are consistently below the FOG (fats, oils and grease) limit of 15 mg/l imposed by the City of Morgan. It's good to be back on speaking terms with the city officials."

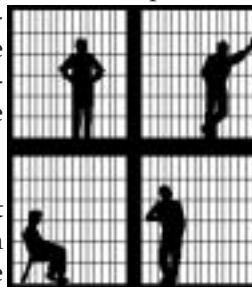
Prison Clears Up Security Clearance Issues

High Desert State Prison in Indian Springs, NV is a brand new, state of the art correctional facility. Opened in 2000, the medium security facility currently has an inmate population of 1,800. The maximum population is 2,100. Servicing these 1,800 guests of the State is a kitchen that generates roughly 6,000 meals per day. The prodigious amount of grease produced by the kitchen and how to deal with it became an issue early on during the planning & design stage of the prison.

The remote location of the prison meant that sewer flows had to be treated on-site using an aerated lagoon and three standing facultative ponds. To prevent grease & oils from reaching the lagoon and fouling up these treatment works was one problem that needed a solution.

One issue standing in the way of pretreatment using conventional methods was that of security. Every time a vehicle enters the prison walls, it must be thoroughly in-

spected as a security measure. If a standard 2,500 gallon grease trap was installed, each time the pump truck needed to pump the trap out it would have to be thoroughly inspected. This time consuming and unpleasant process was deemed important enough to try alternate methods of pretreatment. A Big Dipper® SuperCeptor® S-2750 automatic grease, oils & coarse solids removal system was specified into the plans, and installed.



How well is the system working? According to Patrick Carey, the wastewater treatment operator for the facility, it is working quite well. "The system removes, on average, 40 gallons of grease a week. It also removes roughly one 55-gallon drum full of food solids per day. We'll spend about one hour each day taking care of the system. From my standpoint as the guy who gets water to the prison and cleans it up again when it comes back out, it works great." And the prison guards do not have to inspect any foul smelling pump trucks going in or out of the prison.

Correctional Facility Snakes Out Its Last Pipe

The South Central Correctional Facility in Clifton, TN faced growing pains, literally. The prison, opened in 1992, was originally designed to handle 900 inmates. However, the inmate population rapidly grew to 1,500, nearly doubling its size. With the existing grease trap being only 900 gallons in size, problems developed quickly.

According to Dave McIntosh, Maintenance Manager, these were problems that were not easy to fix. "We prepare on average almost 7,000 meals per day. This includes meals for inmates, a meal for employees, and we also prepare meals for a minimum security annex next door. This produces a prodigious amount of grease and particularly solids."

So much so that they began having to snake out their lines every two to three weeks due to rapid accumulation in the piping. "In one situation, we had to completely shut the kitchen down. This included turning off the water. We wanted to avoid this occurrence again, so we started frequently snaking the lines out. This was an all night task, but we had to do it to keep the kitchen running.

"As for our concrete trap, the pump truck could only pump off the top layer. The bottom was completely choked with solids. On more occasions than I care to remember, we crawled down inside that confined concrete trap to shovel out the bottom just to keep the trap flowing. Once, we had to dig up around the trap because the lines and cleanouts were so clogged we couldn't force the snake through. We also tried injecting enzymes into both the trap and the piping, but that didn't work."



This situation was also beginning to cause discord between the municipal wastewater authority and the prison. Huge grease plugs were being sent down to the city-run treatment lagoons built specially to handle the prison wastewater every time the prison snaked its lines. This greatly disrupted the treatment process. "When we started getting fines and being written up in the paper, we knew it was time to act." A project began to determine the best solution. One involved re-piping the entire kitchen and installing a bigger trap, but this was unfeasible. "We would have had to dig up a lot of the kitchen floor, and any time you have to go through 2 feet of cement, it's tough."

In October of 1998, a solution was found. After finding out about the product through an industry magazine and a little research, a Big Dipper SuperCeptor® S-2750-AST-FP was installed along with a new separator tank. What has been the result after a year of operation?

"We've cut our maintenance time down to almost nothing. It takes fifteen minutes a day to care for the unit. We have not pumped out our trap once since the installation. We no longer get fines from the city. Most importantly, we have not had to pull any all night snaking sessions. We remove on average 30-40 gallons of grease a week and approximately one 55-gallon drum of solids. The unit allows me to spend more time with other kitchen equipment. Besides, it's much nicer just to go out to the shed, wipe down the unit, and be done with it rather than to strap on the boots, protective suits, and ventilators and spend an evening in a grease trap."

Some Fat's O.K.



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