

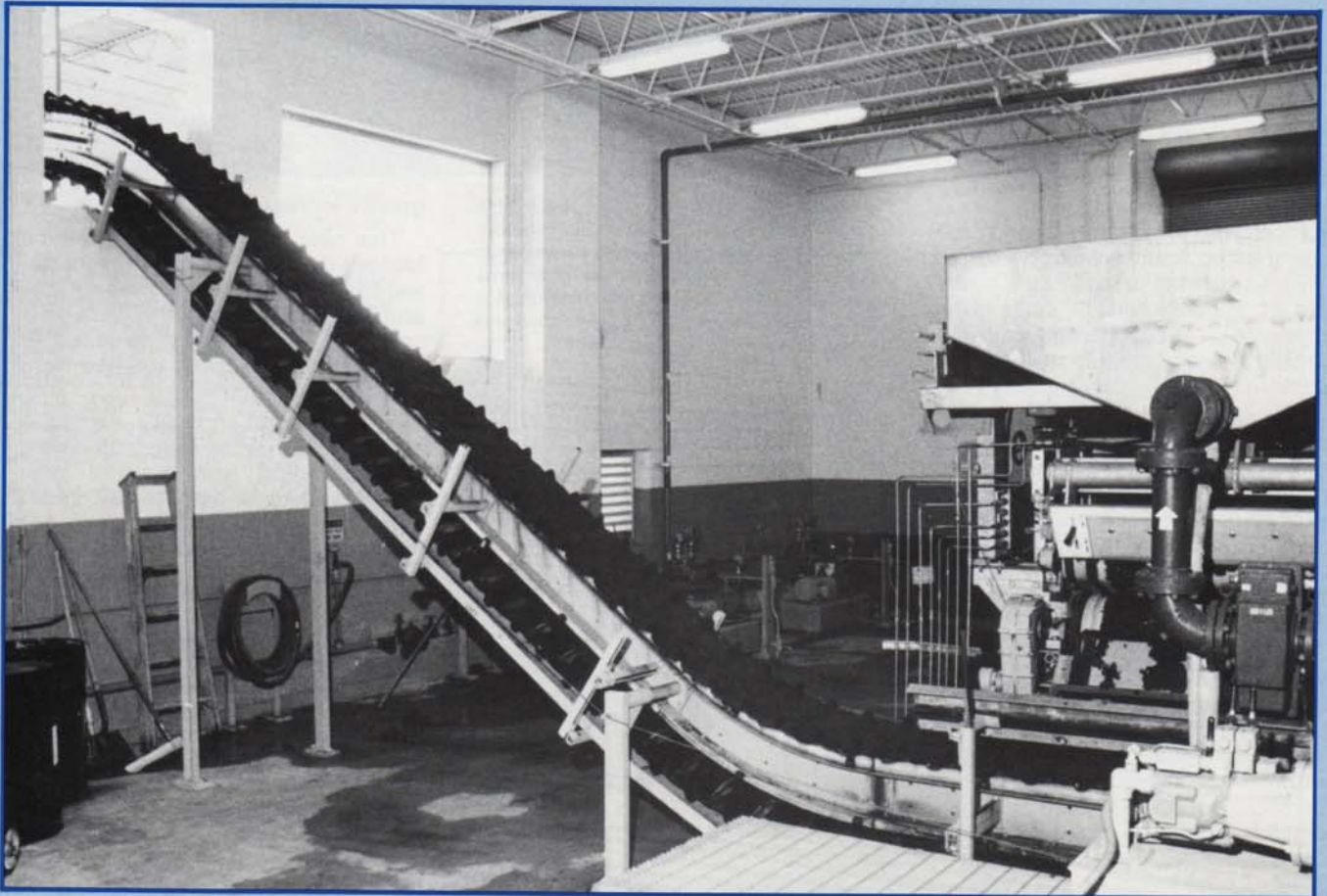
Mirror Image Plants In Louisiana Helping Solve City Treatment Problems

BELT FILTER PRESS SLUDGE IS ELEVATED 12.5 feet from its ground level pickup in the Kenner Plant #2 dewatering facility. Passing through an opening in the wall, the 41 foot long Serpentix conveyor levels out to discharge the sludge into a waiting truck.

An old construction-site shed and a used \$350 ice house conveyor is a constant reminder in Kenner, LA -- for the time being -- that solid planning laced with patience and common sense can do wonders for a community's sewage treatment pro-

gram in a relatively short space of time.

"You can't do it all at once," William L. Brucker of Kenner, pointed out. "You start with a good plan, aim in the future at the point where you want your basic problems to be solved, and



THE RELATIONSHIP OF KENNER'S Treatment Plant #2 to an exclusive housing development bordering Lake Pontchartrain (at top) is shown in this rendering provided by James M. Montgomery, Consulting Engineers, Inc. The consulting firm designed mirror-image sludge dewatering facilities for both Plant #1 and Plant #2. The Plant #2 dewatering facility is the structure in the immediate foreground. The canal at right leading to Lake Pontchartrain is the one formerly used for channelling Plant #2's treated effluent to the lake. The effluent now goes to the Mississippi River.



then you begin."

Four years ago, Brucker was appointed director of wastewater operations for the City of Kenner, Louisiana's fourth largest city. It straddles U.S. Interstate 10 between Lake Pontchartrain and the Mississippi River about 15 minutes west of New Orleans.

When Brucker arrived on the scene in 1983, the community's sewage treatment program "was in hot water with the Environmental Protection Agency (EPA)," Brucker said. It was treating 13 million gallons/day (mgd) with two treatment plants (Kenner #1 and Kenner #2) having a combined treatment capacity of only 9.5 mgd.

Brucker explained that the lack of capacity was compounded by other major problems, one of which was drawing off the sludge. "We just couldn't get enough (sludge) out of the plants, and drying bed space at both facilities was extremely strained -- to the point where we pretty well had to shut down the anaerobic digester at Kenner #1."

In addition, we were faced with growing odor problems, the need to switch our treated effluent discharge from canals going into Lake Pontchartrain to the Mississippi River, and the start of construction on the new 5 mgd Kenner #3 which was designed with drying beds. It was completed in mid-1985.

The first order of business at that time was an intensive appraisal of the overall situation in meetings involving Kenner Mayor Aaron Broussard, Brucker, other community officials, and the city's

engineering consultants, James M. Montgomery, Consulting Engineers, Inc.

As a result, a basic decision was made to use sludge dewatering with belt filter presses at all city treatment facilities and, in most cases,



eliminate drying bed operations.

This brought on an immediate change order for the new Kenner #3 with the drying bed specifications being changed to provide for two, one-half meter belt presses. Also, planning commenced for what would eventually result in renovation and upgrading projects at Kenner #1 and #2 costing \$5.5 million and providing for the construction and equipping of mirror image sludge dewatering facilities at both plants.

Sludge cake from the belt presses -- a one meter press at Kenner #1 and a 1.5 meter unit at Kenner #2 -- feed onto identical 41-foot continuous path conveyors designed for each facility by Serpentix Conveyor Corporation of Westminster, CO. Each conveyor is equipped with 20-inch wide convoluted belts powered by 2-horsepower motors.

After receiving sludge cake at floor

SLURRY IS PROCESSED BY THE Kenner Plant #2 press for dewatering. The cake is then transferred to the Serpentix conveyor. The continuous path conveyor is shown passing through the wall opening, at upper left in the photo, for truck discharge.

THE WAITING TRAILER RECEIVES belt press sludge cake outside of Plant #2. The sludge is transported to an area landfill in Jefferson Parish for disposal.

level from their respective belt presses the Serpentix conveyors begin 35 degree inclines, transporting their sludge loads to a height of 12.5 feet and through a wall opening. Leveling off, the conveyors then discharge into tandem trucks outside each building. The sludge is then transported to a sanitary landfill in Jefferson Parish.

Brucker explained that the new Kenner #3 plant will have --hopefully within the next two or three years -- the same refined type of dewatering facility and equipment as the two older plants.

Prior to the renovations at Kenner #1 and #2 the city had hoped to use the two one-half meter presses ordered originally for Kenner #3 in renovations planned for one of the older plants. Kenner #3 would then be equipped with a 1.5 meter, or larger, belt press.

They were unable to do so, however, since equipment ordered



under EPA grant rules MUST be used in the plant specified in the grant. Brucker explained that the city then approved plans to complete the Kenner #3 plant with a "modified, inexpensive dewatering facility" to be replaced later when funds for the type of facility desired became available.

That led to the purchases of the construction-site shed (to house the two belt presses) and, a used flat belt conveyor (that had formerly been used in an area ice house) to transport sludge from the belt presses.

During the next several years it is hoped that a new sludge dewatering facility can be built for Kenner #3 to replace the present facility. It is

PLANT #2 PRESS OPERATOR LOUIS R. Uhllick, Jr., inspects the sludge cake and its loading characteristics. The point of inspection is at the vertical turn in the Serpentix conveyor where the convoluted belt begins its 35 degree incline to transport the sludge from the building.



possible that the two one-meter presses could be sold to smaller communities desiring to switch to belt filter press dewatering.

Proceeds from such an action would then go into the new operation which would probably be a mirror image of those at Kenner #1 and #2. It would probably require a 1.5 or a two meter belt press and utilize a Serpentix continuous path conveyor for transporting sludge, Brucker said.

All sewage treated at the three Kenner plants is pumped from the respective facilities to a main effluent pump station at Kenner #3. From there it is pumped 6.4 miles for discharge into the Mississippi River.

The three plants now in operation should care for Kenner's sewage treatment needs through the year 2000. Long range planning envisions greatest growth in the area around Kenner #3, with estimates that future treatment requirements will see the need for expansion of Kenner #3.

At that time Kenner #1 and #2 would probably be abandoned with Kenner #3 becoming the city's central sewage treatment facility, Brucker said. ■