

Two of the four treatment tanks. The improvements are under water.

Sewer Plant Tuning For Future

by Bill Lindau

All but some of the lesser of over \$1 million in improvements have been completed at the Raeford waste-water treatment plant off U.S. 401, and the revamped facility has been in use for about two months.

The improvements have upgraded the plant's operation but have not expanded its capacity. Plant Superintendent Jerry Jackson said.

The old plant, without the improvements, was strong enough to handle the domestic waste of a city of about 43,000 people, if no industries were on the city sewer system.

Raeford's population is about 3,600, but the city sewer system also treats industrial waste.

When the treated waste-water system is brought up to state and federal standards, the current moratorium on industrial expansion will be lifted by the State Department of Natural Resources and Community Development (NRCD) and the U.S. Environmental Protection Agency (EPA).

With the waste-water system improvements all but complete and pre-treatment facilities installed at two of the industries, all that remains is for corrections to be made at the House of Raeford.

Adjustments are being made there to handle the problem in hopes that a fullscale pretreatment plant will not be required.

The work on construction and installing the improvements at the

city plant was started about a year ago. The low bids to do the general construction and electrical work totaled \$784,870, and, with other expenses, the total cost has run about \$900,000, Jackson said.

Of the cost the federal government is putting up 75%, and the state and city are splitting the remainder evenly.

Jackson said the most expensive of the improvements can't be seen as they are all under water. He noted four large concrete tanks.

The 1,700 air defusers in the tanks, do the main job of cleaning up the sewer water to the point where it can be discharged into Rockfish Creek, Jackson said.

The defusers push air through the treatment water so bubbles are made which allows bacteria to live. Jackson explained that the bacteria, which break down the pollutants in the water, need oxygen to live.

The older system, before the new equipment was installed, wasn't as efficient, he said.

A new laboratory was also constructed to analyze the waste water to see whether it comes up to state standards before its dumped into the creek.

The lab also distills tap water to make it chemically pure as required for all testing in the laboratory. The distilling removes all chemicals and bacteria from the water, Jackson said.

The old laboratory is now being used as a repair shop, he added.

An addition to the existing lab building was built to house the new

lab, the new control panel for the entire plant and the chlorine tanks with their alarm system.

The alarm sounds when a chlorine leak occurs, Jackson said.

The plant uses about 110 pounds of chlorine a day, Jackson said, adding that the improvements cut the cost to the city to 9.5 cents from 22 cents per pound.

One of the main problems the city has, is treating the oil and grease discharged from the House of Raeford, Jackson said.

At present, Jackson explained, the city sewer plant employees pick up the oil and grease at the plant, then put it in tanks where it is treated with lime, (which reduces the waste material to a harmless substance chemically).

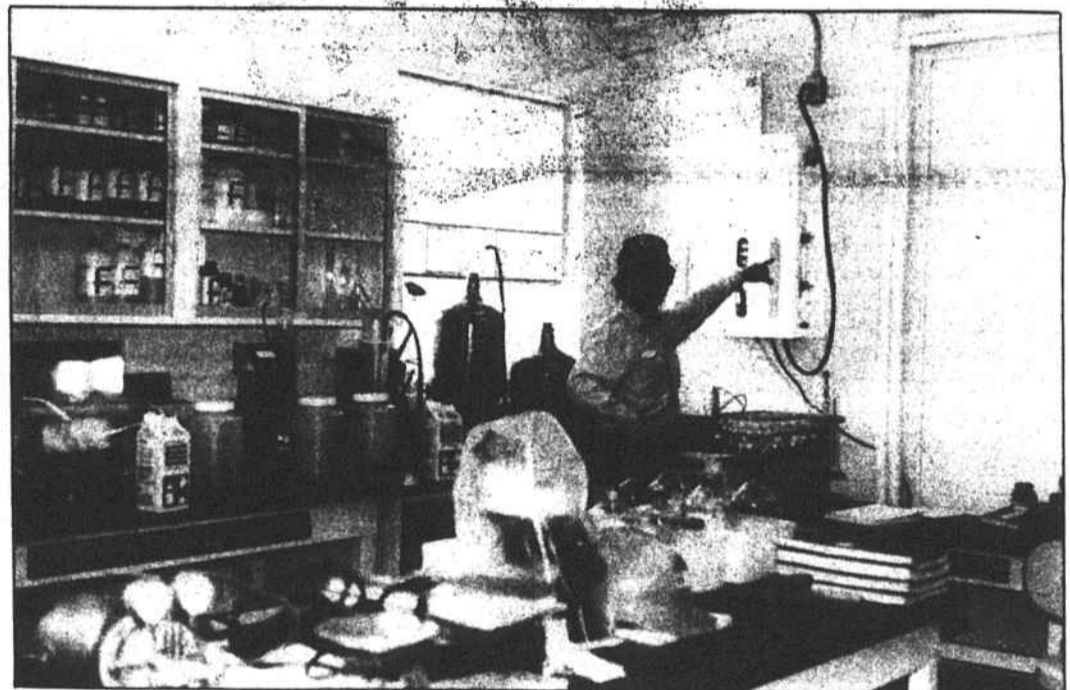
After that the treated material is placed in a drying bed at the plant once the liquid is removed, it is buried at the city-county landfill.

Jackson pointed out that this treatment with lime, incidentally, makes this fat and grease valuable to the soil.

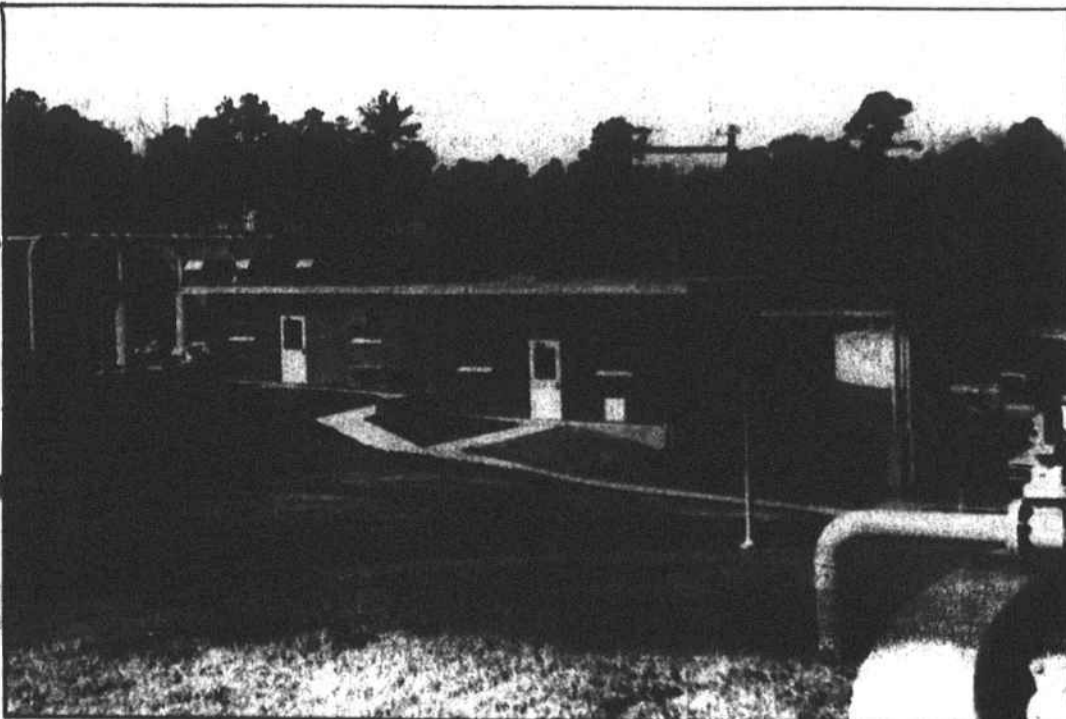
The city plant, of course, will be relieved of this chore once a pretreatment system is operating at the turkey plant.

Another of the improvements made at the plant is the installation of an emergency power generator with its "home." Jackson calls this the largest single expense of the improvement project at \$65,000 for the generator, a Detroit 12-cylinder Diesel model.

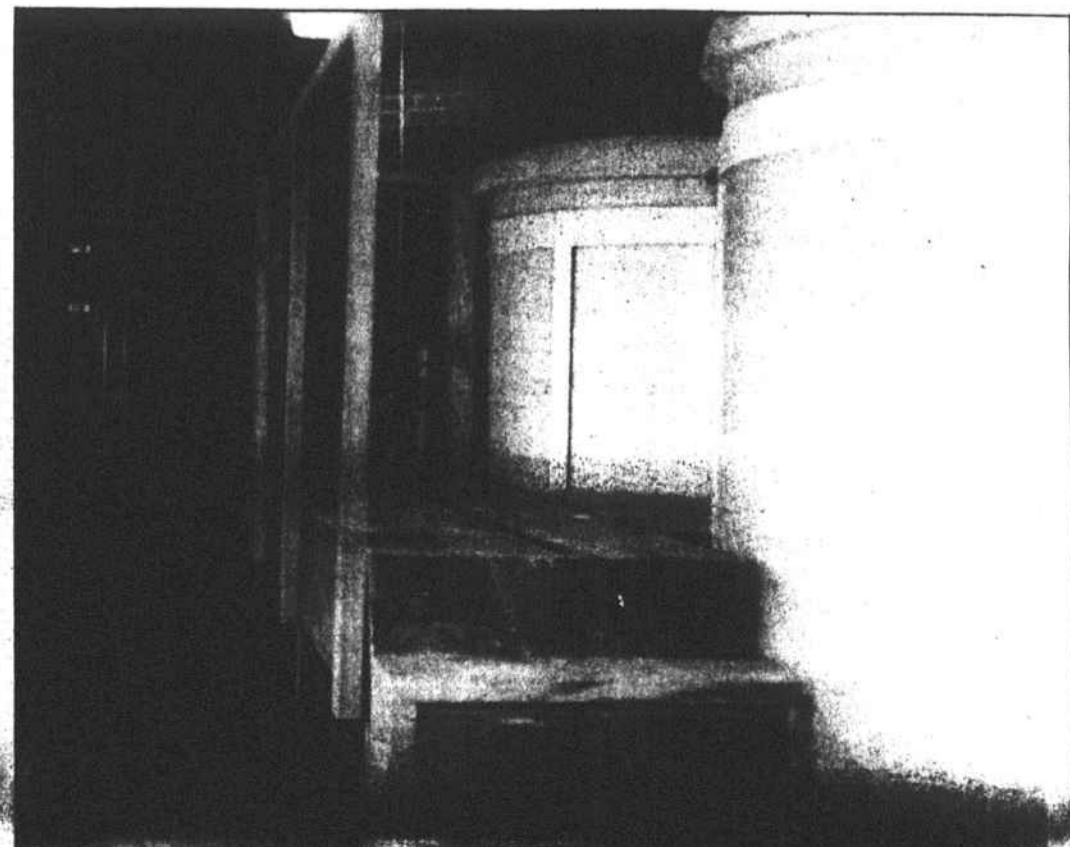
Jackson said the generator would go into action two seconds after the regular power system is knocked out.



The treatment plant's new laboratory. Melvin Pittman, who is in charge of the lab, is standing with the distiller.



The new lab building is the part at right with the low masonry wall. The new storage building.



These tanks hold waste oil and grease being given lime treatment before going to a drying bed at the plant.