

Hickory Regional Compost Facility

As the new 'Organic Recycling Specialist' for DPPEA one of my tasks is to do onsite visits to composting facilities and other organic recycling projects.

I had the opportunity to visit the Hickory Regional Compost facility in Newton, N.C. At the regional compost facility, which is operated by U.S. Filter, I met with Wayne Carroll, facility project manager. Wayne outlined the facility's history and daily operations.

Due to environmental concerns and tremendous growth in the area four local governments (Hickory, Newton, Catawba County and Conover) formed a regional sludge consortium. The consortium's task was to consider and recommend future disposal options for municipal sludge and septage being generated in the county. A 20-ton per day in-vessel system was deemed best suited for the area. In 1986 the consortium received \$ 5.4 million in EPA and state grants. The local communities contributed an additional \$ 2.3 million to build the facility.

The facility consists of six distinct operations: receiving, dewatering, amendment, composting, odor control and curing. Receiving accepts 1.4 million gallons of wastewater sludge per month (17.4 gallons in 2002, down from 21.7 million gallons in 2000).

The sludge is collected in four – 50,000-gallon tanks then pumped into a 10,000-gallon blending tank. The sludge is then blended with sawdust as a bulking agent, which also acts to absorb some of the moisture. The sawdust comes from the Catawba County landfill and a local furniture



manufacturer. It is stored in a 26,500 cu. ft. silo and the facility recently upgraded and installed a centrifugal separator and kept the two old belt presses as backup. After separating out the solids (approx. 9.8 tons per day) at 3.5 percent solids, the sludge/sawdust mixture is then fed into one of four reactors. Each reactor is 63' long, 18' wide and 12' high (13,608 cu ft) with a capacity of 20 tons per day. The system is designed to provide a 14

– 28 day retention time.

The system has blowers that supply air to feed the compost process and additional blowers to discharge the gases and odors into the exhaust scrubbing system. Odor control is a primary concern. The chemical scrubbing technology used at the facility works well. Odor complaints have dropped from 148 complaints in 1995 to 0 in 2003 (as of July 2003).

Following discharge from the reactor, the compost is windrowed on a concrete curing pad. The windrows are covered with a compost blanket to keep out excess moisture to reduce leaching and to retain heat and moisture.

The compost facility is producing about 1000 cubic yards of compost per month. The facility sells all the compost that it produces at \$ 3 per cu yd to the local community Department of Public Works, parks, landscapers and golf courses.

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