

Case History: Water Reuse - Charlotte, NC

The Study of Innovative Treatments for Reclaimed Water, funded by the Water Reuse Foundation and others, was conducted the week of November 5th, 2007 by personnel from Carollo Engineers & Duke University. A full report is scheduled for release in Q1, 2008. The test location, Charlotte-Mecklenburg Utilities Sugar Creek WWTP, was selected for its proximity to several hospitals and contaminants of interest, in particular pharmaceuticals and EDC's.

Phase 1 of the test program measured the destruction of total coliform and indigenous trace organics (i.e., Estrone, 17-b-Estradiol, Estriol, 17-a-Ethylestradiol, 4-nonylphenol, 4-octylphenol, Bisphenol-a, N, N-diethyl-3-methylbenamide and Triclosan). In addition the trial protocol called for the water to be seeded with NDMA and MS2 in Phase 2 and adenovirus in Phase 3 of the test program. The preliminary results from those involved indicate "massive destruction" of biological contaminants, averaging >5.28 log removal (the detection limit) over Phase 1 and 2 of the test program. In addition, the influent UVT was 66% and the effluent after Photo-Cat treatment had a UVT increase of 5-20% over the test range, indicating substantial oxidation.



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