

NAWTEC16-1907

Latent Defects in a 24-Year Old Waste-to-Energy Facility – Fact or Fiction? Pinellas County Case Study

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Introduction

This paper presents the preliminary results of one of the key financial liability issues raised by the operating companies during the competitive procurement process for the long-term operation and maintenance of the 24-year old Pinellas County 3,000 tpd waste-to-energy facility.

Pinellas County (County), through the Pinellas County Utilities-Department of Solid Waste Operations, manages over one million tons of municipal solid waste generated by residential and commercial sources within the County each year. One of the primary components of the County's integrated waste management system is its waste-to-energy facility (WTE Facility).

The WTE Facility is used to reduce the volume and weight of non-recyclable solid wastes by approximately 90 and 70 percent, respectively, and to generate up to 75 megawatts (MW) of electrical power. The WTE Facility is located at the County's 705-acre Bridgeway Acres site off of 28th Street North in St. Petersburg, FL.

Two of the three units in the WTE Facility was designed and constructed under a Construction Agreement with the County

dated July 17, 1980 and began commercial operations in 1983, with a nominal processing capacity of 2,000 tons per day (tpd). A third combustion unit was brought on line in 1986 increasing the nominal capacity to its current nominal processing capacity of 3,000 tpd. The WTE Facility consists of three similar, mass burn type combustion units designed to process municipal solid waste. Each unit has a nominal processing capacity of 1,000 tpd based on a refuse higher heating value of 4,800 British thermal units per pound (Btu/lb). The WTE Facility recovers heat in the form of steam and produces approximately 75 MW of electrical power using two steam turbines and electrical generators. Approximately 15 percent of the gross electrical power generated is used to operate the WTE Facility and the remainder is sold to Progress Energy Florida.

Since 1983, the WTE Facility had been operated and maintained by a contractor under an operating agreement with the County and the CMA was set to expire in May, 2007. In 2004 the County initiated a process to competitively procure a contract operator to operate and maintain the WTE Facility on a long term basis upon expiration of the existing operating