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COMPLYING WITH EPA'S SMALL MWC UNITS EMISSION GUIDELINES IN DUTCHESS COUNTY, N.Y.

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Dutchess County is located in New York State on the east side of the Hudson River about halfway between New York City and Albany, with a population of about 250,000. County residents are a mix of exurbanites, who commute to jobs in Westchester County or New York City; high techs, who work at one of the county's two large IBM complexes, and farmers and gentleman farmers who live in the eastern half of the county.

Garbage collection methods vary. The two cities, Poughkeepsie and Beacon, and three of the smaller communities, have municipal collection systems, but in most of the county, residents either contract directly with a private carter, or take their garbage to a town operated transfer station. A significant number practice backyard self-disposal.

The county got involved in solid wastes in the 1970's when it took over operation of a landfill. About the same time, it entered into discussions with Union Carbide to construct a plant that would convert solid waste into a fuel oil type product by means of a process called PUROX, a form of pyrolysis. These discussions collapsed when Union Carbide, who had never built a commercial sized purox plant, refused to provide adequate guarantees that the process would work.

About this time, Westchester County, just south of Dutchess County, was building a waste-to-energy plant at Peekskill based on the Von Roll mass bum technology, and Dutchess County decided to follow in its footsteps. In 1981, HDR was hired as consultant and project managers, for the procurement financing and permitting process. In 1983, the Dutchess County Resource Recovery Agency was formed as an independent public benefit corporation to assume all responsibilities for Solid Waste Management (SWM) in the County. In response to a request (RFP) issued by the Agency, six proposals were received, and a proposal from Pennsylvania Engineering Corp. (PEC) for a plant based on the O'Connor Rotary Combustor system was selected and a design-build-operate service agreement was negotiated. Permits were received in 1983, financing was completed on Dec. 20, 1984 and construction started on January 2, 1985.

The original PEC proposals provided for two combustion lines with a total annual capacity of 120,000 tons MSW and an electrostatic percipitator (ESP) based air pollution control (APC) system, with a guarantee to produce particulate emissions not to exceed 0.030 gr/dscrf. The only other significant permit condition was that, in order to comply with federal prevention of significant deterioration (PSD) rules, the plant would not emit more than 210 tons of sulfur dioxide per year.

During the design process, PEC came to the Agency with two propositions, both on a no extra cost basis- PEC would supply basic combustion systems capable of processing 140,000 tons municipal solid waste (MSW) per year and would provide a dry lime and sorbent injection and fabric filter APC system instead of the ESP system originally proposed. The reasons given for the size change were that PEC was building two other O'Connor plants at about the same time of the 140,000 tpy size and that it was cheaper for them to build