

Doing the EU on \$150 Per Ton

I've just returned from Europe where I visited a number of waste facilities, walked the floors of Entsorga (surely the world's largest waste management exposition), and rounded off the trip at the International Solid Waste Association (ISWA) annual conference in Paris. It was all very interesting, but I'd be less than candid to suggest that I sensed much applicability of European approaches and practices to North American systems...at least for the present. Let me give you my appraisal, cautioning you at the outset with the grave disclaimer, "What do I know?"

Waste Exposition on a Grand Scale

Let me start with Entsorga, which took place in Cologne, Germany, but after several hours at a forced-march pace, I began to believe the show floor extended to the outskirts of Moscow. While there was a small representation of North American products and services, the majority of the exhibitors were headquartered in France, Germany, Austria, Switzerland, and the UK, which makes sense. The most vivid impression I had of the exhibits was the general level of technology, which featured WTE and digester systems along with a fantastic array of water quality related equipment. Nearly as impressive was the decidedly European sales demonstration approach that involved mysterious amber liquids provided in generous amounts to prospective customers prior to the sales pitch. Maybe it was treated leachate.

A Whopping Good Site

Of the sites that I visited--principally along or near the Rhine--an anaerobic digester in Freiberg, Germany caught my attention as much for its location as its activity. The facility, which snuggles right up to a Burger King restaurant, treats 36,000 tpy of kitchen and yardwaste, yielding sufficient biogas (280 Nm³/ton of waste) to produce 700 kW/ton of heat and electrical energy. The bulk of the residual material is then matured aerobically for a period of two weeks, achieving the German Rottgrad V designation for compost suitable for agricultural use.

My first thought on seeing the proximity of the facility to an eatery and other urban activities was that the siting was suicidal, but the only odor I could detect when I got out of my car at the site was the meat and potatoes next door. I began to wonder whether the digester was working until the chief engineer led me inside the containment area where the nitrate-laden atmosphere not only took my breath away but infused my clothes with a stench that was still staggering after two thorough washings.

Afterwards, as I wolfed down my first fast-food meal in over two weeks, I considered how rapidly anaerobic digestion technology had matured over the past decade. True, the economics still make siting such a facility in the US iffy, but the gap--especially given the performance--is narrowing.

The Wide Wide World of Waste

No place on the planet is more suited to an international conference on waste than Paris. Face it, the food is terrific, the surroundings grand, and the trappings of civility without parallel. Being by-and-large Eurocentric in its vision, ISWA slips seamlessly into these surroundings, content to maintain a network of well-entrenched waste management institutions through funding measures quite foreign to those of us on this side of the Atlantic. Tax levies on less-favored practices and/or subsidies encouraging politically correct solutions are accepted tactics throughout the emerging European Union (EU). Consider for example: a \$30/ton landfill tax in Denmark, \$0.12/kWh electrical subsidy in Italy, and \$0.03/lb. fee for glass in Germany. As a result, the market prices for landfilling range from \$12/ton (in Spain) to \$150/ton in Germany.

Conventional wisdom says that countries such as Germany, France, Sweden, and Belgium will continue to deal with waste in their accustomed ways, but I found myself questioning just how bulletproof these authoritarian systems will prove to be as the EU movement progresses. How eager, I wonder, will Dutch citizens be to subsidize the improvements required by EU directives to Spanish or Portuguese waste systems, much less those of Greece, Turkey, and the handful of former Eastern Bloc countries waiting at the gates. What happens when an enterprising German finds he can pocket a quick \$120/ton by sneaking waste into Poland? Meanwhile, at \$150/ton to handle the waste, I have to believe that even I could do a fairly respectable job, with enough left over to serve world-class wines, cheese, and a little paté at my newly acquired castle overlooking the Rhine.