Overall process comparison of the V-III™ and typical municipal waste incineration systems

Item	Typical municipal waste incinerator	Firebird V-III™
Emissions	Although current technologies that are used for municipal waste incineration must meet stringent EPA air quality standards, they still produce odors, small amounts of harmless fly ash, and smoke. They require expensive and complex scrubber systems, and yet they still produce these emissions.	The V-III™ system uses a unique and patented process to destroy the waste material, including microscopic particles, as well as not producing fumes, odors, fly ash, or even smoke. Since the potentially harmful emissions are not produced in the first place, this system does not require any costly exhaust or flue cleaning scrubber equipment.
Size	Municipal waste incinerators are typically massive, ugly, complexes that are generally considered to be eyesores. This creates one of the biggest issues for critics, especially because of NIMBY – Not In My Back Yard.	Because of the extreme efficiency based on this technology, these systems offer a very small footprint. Because of the fact that they do not produce emissions, they can be placed closer to populated areas than current incinerator designs.
Maintenance	Due to their size, complex design and process, current incinerators require an extensive amount of down time and maintenance. Typical problems arise with the grates, the walls of the primary chamber, and the exhaust systems that need to be cleaned or even replaced on a regular basis.	With the high speed vortex working in combination with the high chamber temperatures, and with the use of steel for the inner chamber walls, there is very little maintenance required. It's like comparing a new self-cleaning convection oven to a very old wood-burning oven.
Cost (including energy recapture)	Because current incinerator designs are not very small or efficient, and due to the fact that they require expensive and complex air scrubber systems, the cost to build these are several times higher than the V-III™. One such behemoth south of Chicago cost over $730 per person served just to build, not including high maintenance and operating costs.	Due to the technological efficiency of the V-III™ system, and without the need for expensive air pollution control equipment, the cost to build a complete energy recovery system is only $150 per person served. In addition, because of the design and process, there is very little maintenance required, and the ongoing operating costs are very low as well.
3rd Party involvement	Virtually every municipal incinerator that has been built in the U.S. over the past few decades is owned and operated by a third party private company. Many of the issues that have arisen with these installations relate to problems that these owner/operators have.	The V-III™ will be owned by the municipality or customer, and can easily be operated with municipal workers with some basic training. Communities may decide to outsource the day to day operations, but they will be able to maintain complete ownership and control.
Transportation	Because current municipal waste incineration programs are designed for very large populations, they usually serve several communities in the surrounding area. This means that collection vehicles must drive for many miles to be able to offload their trash, wasting fuel as well as adding huge amounts of carbon emissions into the environment.	Since the V-III™ is smaller and can be easily installed closer to populated areas, collection vehicles have very short trips to the incinerator location. This saves not only the fuel costs of the vehicles, but greatly reduces the harmful emissions from these trucks, and even overall time, making the collection process much more efficient.