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IMPLEMENTATION OF THE TAUNTON, MASSACHUSETTS REGIONAL SOLID WASTE MANAGEMENT FACILITY

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1. INTRODUCTION

Taunton, Massachusetts (City) is a city of 55,000 people located in Southeast Massachusetts, approximately 35 miles from Boston. Currently it hosts a regional landfill that will reach capacity in 2013. Beginning in 2005, the City began the process of searching for a solid waste management technology to replace the landfill. The focus for the search has been on conversion technologies capable of recovering materials and producing electricity or fuels, and maximizing diversion of waste from landfilling. Technologies being considered include both traditional and emerging technologies; e.g., composting, co-composting, thermal gasification, aerobic and anaerobic digestion, hydrolysis and mechanical means of waste separation into useful products. Landfilling and traditional waste-to-energy technology are not being considered.

The City has completed a comprehensive siting study and selected and purchased a 36-acre parcel of land for facility use. The site is zoned industrial, is located in an existing industrial park and has direct access from major highway systems. The City has prepared and released a detailed Request for Qualifications and Proposals (RFQP) to seek the services of a company to finance, design, build and operate the solid waste management facility (SWMF), which can be sized up to 1800 tons per day (TPD). The RFQP was released in June 2008. More than 70 participants attended a pre-proposal information meeting in July 2008. Sixteen companies submitted expressions of interest in September 2008. Full technical and price proposals are due in June 2009.

This paper describes the conversion technologies being considered, the status of the proposal process and next steps in project implementation. This paper is not meant to provide

detailed technical information regarding the proposing technologies, but rather to describe the procurement process and the challenges in accomplishing a successful procurement with new technologies, with a daunting regulatory permitting hurdle in Massachusetts, and with high City expectations. Project challenges, including the current State moratorium on incineration, waste aggregation efforts, financing issues and developing a protective contract for the City while using new technology, are included in the discussion.

2. TECHNOLOGY AND SITE CONSIDERATIONS

The SWMF will recycle and/or convert post-recycled, municipal solid waste or other acceptable waste, recover recyclables and produce marketable products, such as electricity, fuel or compost. The facility may have front-end processing to remove or recover recyclables and other materials and prepare the waste for conversion, and/or back-end processing and recovery of recyclables and marketable products. It may include composting, co-composting, aerobic and anaerobic digestion, other biological processes, acid hydrolysis, physical separation and conversion processes, chemical processes and thermal gasification processes. For thermal gasification processes, the system must be capable of pre-cleaning gases produced prior to on-site combustion and/or capturing the gas to make a fuel. As stated above, the SWMF does not include conventional incineration, waste-to-energy or landfill systems.

The size of the SWMF is to be selected by the proposer. The City has stated that a range of facility sizes, from 100 to 1,800 TPD, is acceptable. It was further established that if a proposer chose to build a smaller facility initially, and then expand the facility in stages, that was acceptable, provided that the proposed facility was fully built out within 10 years of