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### UNIQUE ELEMENTS OF THE OLMSTED COUNTY FACILITY EXPANSION

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#### ABSTRACT

Olmsted County is currently expanding their existing waste-to-energy facility in Rochester, Minnesota to add a third mass burn waste combustor. The new unit will have a capacity of 200 TPD, effectively doubling the size of the existing capacity. This paper will discuss some of the unique aspects of this project and review the current status. Some of the interesting and unique features to be discussed include:

1. Environmental Permitting – The county decided to do a voluntary EIS
2. Project approach – The county is using a Construction Manager at Risk approach for construction of the facility
3. Engineering – The engineering scope includes several separate procurements of major equipment packages, balance of plant design and several auxiliary projects related to the 'utility' system.
4. Operator Collaboration – Olmsted County is one of a few public owners that operate their facility. Their knowledge of the existing facility and of operating a mass burn facility has been used extensively in the planning and design of the new unit.

#### INTRODUCTION

The leaders of Olmsted County have consistently demonstrated vision, going back to the inception of the original facility. This vision and leadership has resulted in an integrated system unlike any other for a mid-sized city in the United States. In 2001, leaders in the Solid Waste Division of Olmsted County Public Works recognized that the growth of the solid waste stream would result in quantities greater than the existing Olmsted Waste-to-Energy Facility (OWEF) could process. It is no surprise that when it came to developing an expansion of the OWEF, this leadership and vision has lead to many unique

elements of the project. This project is unique for several reasons:

#### THE OWNER

The unique approach to this project starts with the philosophy of Olmsted County. The County and the region truly are ambassadors of environmentally sound solutions to waste disposal. The county has developed an integrated solid waste system that includes every conventional and sound management technique. This includes recycling, composting, Waste-to-Energy (WTE), and landfilling. In addition, a public education program has been developed and instituted that includes a solid waste education module that is included in many middle school environmental resources curriculums in the County. The curriculum typically includes a tour of the OWEF. This facility is the largest WTE facility operated by a governmental entity. Olmsted County makes WTE a part of the solid waste program because WTE:

1. Reduces greenhouse gas emissions in comparison to landfill emissions by offsetting fossil fuel use;
2. Is a renewable, sustainable clean energy source;
3. Is a preferred solid waste disposal after reduce, reuse, and is compatible with recycling;
4. Supports Olmsted County's energy-efficient Combined Heat and Power (CHP) system; and,
5. Produces cleaner leachate from ash landfilled materials in comparison to solid waste landfilling.

#### THE PERMITTING APPROACH

As the first major facility retrofit in Minnesota in recent years, the county felt a responsibility to take a conservative approach. Decisions don't come fast or easy from the state regulator, the Minnesota Pollution Control Agency (MPCA). As such, the county evaluated whether to complete an Environmental Impact Study (EIS) when an Environmental Assessment was determined to have met regulations. Important factors considered in this decision included: