

THE WINNEBAGO COUNTY, WISCONSIN STORY ...

PAPERMILL SLUDGE RECYCLING AND ENERGY PRODUCTION SYSTEM

by

Robert H. Brickner – Gershman, Brickner & Bratton, Inc. (“GBB”)

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Terrence W. Carroll, P.E. – Minergy Corporation

PROJECT IMPLEMENTATION BACKGROUND

Introduction

Winnebago County, Wisconsin (County), has long been aware of the need to protect the environment and also the need to provide a comprehensive, cost-effective solid waste management program for County residents, businesses, and industries. Winnebago County has a population of 146,000. The County population is forecasted to increase to 151,000 by the Year 2000 and to 157,000 by the Year 2010. Most of the Solid Waste in Winnebago County is disposed of in the County Landfill.

The County has continually sponsored efforts to minimize landfill use by considering the implementation of alternative waste management techniques to handle industrial nonhazardous wastes, papermill sludge, and/or municipal solid waste (MSW) generated in the County. Historically, most of the County's MSW was disposed in the County operated landfill. The actual quantity of Solid Waste generated in Winnebago County and being disposed at the Landfill (including MSW and papermill sludge but excluding foundry sand and auto shredder fluff) was approximately 300,000 tons annually. Residential recyclables and yard waste are managed at the County's Materials Recovery Facility (MRF) and yard waste processing equipment, respectively.

In 1987, the Winnebago County Solid Waste Management Board (Board) retained the services of Gershman, Brickner & Bratton, Inc. (GBB), a solid waste management consultant, to assist with solid waste planning activities. Working for several years in association with Mr. Leonard Leverence, Solid Waste Director for the County, the efforts-to-date have included a series of planning level workshop reports identifying and quantifying waste streams and technology options, as well as the implementation of a 3 Megawatt landfill gas (LFG) turbine project, MRF expansion, and the Minergy Project discussed herein.

Project Implementation Background

In 1992, the landfill received approximately 146,000 wet tons of papermill sludge (approximately 68,000 dry tons) in addition to receiving approximately 147,000 tons of residential, commercial, and nonhazardous industrial waste. Of the total papermill sludge delivered, approximately 25,200 wet tons (26 percent) were co-disposed with Solid Waste at a ratio of four parts Solid Waste to one part papermill sludge. In 1992, the remaining papermill sludge (approximately 100,000 wet tons) was landfilled in dedicated sludge cells. However, there are certain problems with landfilling papermill sludge, which include instability (because of the high