HISTORY OF THE FORT LEWIS
INCINERATOR: LESSONS LEARNED

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ABSTRACT

The U.S. Army installation at Fort Lewis near Tacoma, Washington, completed in 1996 construction of a 163.3 Mg (180 ton) per day mass-burning, steam-generating incinerator. This plant was equipped with acid gas control equipment, but it was unable to consistently control acid gas emissions and flue gas temperatures. Design and equipment deficiencies included lack of independent control of acid gas emissions and flue gas temperature. The plant was also unable to deliver lime slurry at the proper concentration and rate. By retrofitting the acid gas control system with smaller lime slurry pumps and modified controls, The Fort Lewis Waste-to-Energy Plant was then able to consistently meet regulatory requirements for acid gas emissions and flue gas temperature.

INTRODUCTION

Plant Description

The Fort Lewis Waste-to-Energy Plant is located on the Fort Lewis Army installation near Tacoma, Washington. The plant burns solid waste generated from Fort Lewis, McChord Air Force Base, Bangor Submarine Base, Madigan Army Medical Center, and the Veterans Administration Hospital in Lakewood, Washington. It generates steam used for heat and hot water at Fort Lewis. It is owned and operated by the United States Army, Headquarters I Corps and Fort Lewis Public Works Directorate. The plant consists of three 54.4 Mg (60 ton) per day municipal waste, mass burn steam generating incinerator units. Each unit is equipped with a Keeler Dorr Oliver water wall boiler rated at 10,206 kg (22,500 lb) per hour of saturated steam at 7.73 kg/cm2 (110 lb/in2).