

# **Novel Process for Removal and Recovery of Vapor-Phase Mercury**

Monthly Technical Progress Report  
Covering August 1 through August 31, 1997  
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# Table of Contents

**Overview of Progress** ..... 3

**Task I-1: Screen Sorbent Configurations** ..... 3

**Task I-2: Design and Build Bench-Scale Equipment** ..... 3

**Task I-3: Test Bench-Scale Equipment on Pilot Combustor** ..... 3

**Task I-4: Evaluate Economics** ..... 4

**Task I-5: Reporting** ..... 4

**Project Plan for Next Month** ..... 4

## **Novel Process for Removal and Recovery of Vapor-Phase Mercury**

The purpose of this project is to investigate the application of a sorbent-based process for removing and recovering mercury in the flue gas of coal-fired power plants. The process is based on the sorption of mercury by noble metals and the regeneration of the sorbent by thermal means, recovering the desorbed mercury as liquid, elemental mercury. ADA Technologies holds a patent on this process (US 5,409,522, April 25, 1995) and has tested it under conditions typical of municipal waste incinerators. In this process, the noble metal sorbent is regenerated thermally, and the mercury is recovered for commercial recycle. Consequently, ADA has adopted the name "Mercur-RE" to describe its process.

In the current project, ADA has been testing its process under conditions typical of coal-fired power plants where the mercury concentration is low (below  $10 \mu\text{g}/\text{m}^3$ ) and little pressure drop can be tolerated. Methods of accommodating the Mercur-RE process to the circumstances and conditions of coal-fired power plants comprise the core of the program.

### **Overview of Progress**

In August, we performed no technical work on the program because we submitted a draft final report and a downselection proposal on July 30, 1997.

#### **Task I-1: Screen Sorbent Configurations**

There were no activities on this task during August.

#### **Task I-2: Design and Fabricate Bench-Scale Equipment**

There were no activities on this task during August.

#### **Task I-3: Test Bench-Scale Equipment on Pilot Combustor**

There were no activities on this task during August.

## **Task I-4: Evaluate Economics**

There were no activities on this task during August.

## **Task I-5: Reporting**

We prepared and submitted the monthly reports covering July, 1997.

## **Project Plan for Next Month**

In September, we plan no further activities on the program, pending comments on our draft final report.