

**ANNUAL PROJECT REPORT
AS OF DECEMBER 1993**

1. PROJECT SPONSOR:

Babcock & Wilcox
Alliance Research Center
1562 Beeson Street
Alliance, OH 44601-2196

2. PROJECT MANAGER:

William F. Musiol, Jr.
Research Engineer

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3. OCDO GRANT NO#: CDO/R-902-8

4. PROJECT: Final Report

5. PROJECT TITLE: Mangement of Solid Wastes from the Limestone Injection Dry Scrubbing (LIDS) Clean Coal Technology

6. PROJECT TERM: FROM November 1, 1991 **TO** July 31, 1993

7. PROJECT	<u>NAME</u>	<u>COST-SHARE</u>
CO-SPONSORS:	OCDO	\$62,531
	Babcock & Wilcox	<u>32,000</u>
TOTAL PROJECT COST:		\$94,531

I. ABSTRACT

8. OBJECTIVES

LIDS solid waste contains alkaline products in addition to conventional fly ash. Thus, it is uniquely different and its utilization and/or disposal applications would differ accordingly. Evaluation of the physical and chemical characteristics of the LIDS solid waste is critical to the development of this desulfurization technology. This technology will support the use of high sulfur Ohio coal for power generation while improving the quality of the environment.

9. WORK DONE AND CONCLUSIONS:

Because LIDS is a developing Clean Coal technology, a database of chemical and physical characteristics of the by-product was first developed.

During the course of this project, it was found that the waste alone did not form high-strength products sufficient for use in construction and engineering applications. Therefore, the project was redirected to evaluate the by-product as a soil-cement and Portland cement raw material,

agricultural liming agent, backfill/landfill material component, and mine reclamation/neutralizing agent.

Based on these evaluations, the most viable uses for the LIDS by-product include use in mine reclamation or as a neutralization agent. If soluble sulfites can be minimized by avoiding a dolomitic LIDS reagent, use as an agricultural liming agent has promise.

10. PLANS FOR COMING YEAR:

None. The project is complete. The final report was submitted to OCDO in September, 1993.

II. HIGHLIGHTS/ACCOMPLISHMENTS

11. Chemical and physical characteristics of the by-product were determined. The most viable uses were determined to be used in mine reclamation and/or as solid neutralization agents. Sewage sludge stabilization is also a possibility. A stable pellet was also produced from the by-product which would facilitate application for future uses.

III. ARTICLES/PRESENTATIONS

12. None.

