

This Power Plant status update is being sent to the Southern Companies Group Engineers & Associates relating to the Crist Plant FGD project

# Power Plants - Limestone Slurry for FGD

In September 2007, two vans of Southern Company Engineers and other Power Plant design teams traveled to Indiana to visit NIPSCO's Power Plant utilizing the VACUCAM® Ejector Mixer process for slurring pulverized limestone for FGD. The system had been in operation for more than 10 years. The simplicity of the system, the efficiency and dependability of the operation, the minimal maintenance and operational cost, and the quality of slurry convinced management of the long term benefits of using pulverized limestone vs. crushed limestone and ball mills.



#### Process XstreamLining!

Lower your total operating cost including manpower, optimize slurry quality and scrubbing efficiency, lower initial capital costs, lower installation costs, reduce power consumption and more through our Process XstreamLining.

Learn more about how the VACUCAM® Ejector Mixer can provide you the flexibility you need for any power plant needs.

#### **Case Studies**

How have we helped other industrial plants increase their productivity through our Process XstreamLining? Call us about our Case Studies at 800-732-8769 to learn more. Or by e-mail at <u>info@semibulk.com</u>

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## The First Southern Companies Group Installation

The first Southern VACUCAM® limestone slurry process was ordered for installation in the Crist Power Plant and was delivered by Semi-Bulk in November 2008. The installation should be completed in late 2009. Semi-Bulk Systems worked with Black & Veatch, Nol-Tec and the project team to provide the most efficient process to meet all of the plant slurry production requirements.

The Crist plant will certainly have the state-of-the-art limestone storage and slurry process for FGD, incorporating two silos for pulverized limestone storage. To meet the capacity requirements and the logistics of the facility, the process included two silos, each with a dual cone outlet. A modular skidded dual mixer system was selected to be installed below each silo and above the slurry storage tank. Each in-line single pass process will receive **250gpm** process water to the individual mixers and deliver **300gpm** of 30%+ limestone slurry into the top of the slurry storage tanks feeding the scrubber.



### A Smaller Footprint

The modular skidded unit has a small foot print and is installed on the top of the slurry tank. The system is designed to be operated one mixer at a time with a redundant mixer on standby for each silo. Limestone is constantly delivered from the fluidized silo cone into the fluidized surge pot. Water is delivered from the water supply to the Ejector mixer. The Mixer generates a powerful vacuum and conveys the limestone through a convey hose at a rate in excess of **1000#/minute for each mixer**. The 30%+ slurry is delivered from the slurry discharge of the mixer into the top of the slurry storage tank.

During factory acceptance testing, we demonstrated a limestone convey and **mix rate of 1500#/minute per mixer** for a single mixer system. The system also demonstrated total dispersion and slurry quality with zero evidence of dusting in the operating area. We look forward to commissioning and operation of this process in the Crist Power Plant.

# About Semi-Bulk Systems

How can we help you? Call us at 800-732-8769