ABSTRACT

Fine-sized silica can be produced by a variety of processing techniques. A study of the various processing techniques has determined that a process for the production of fine-sized silica by precipitation from sodium silicate would be economically feasible in the Appalachian Area. Ammonium sulfate would be the most economic precipitating agent. A plant to produce fine-sized silica at the rate of 2,400,000 pounds per year would require an initial investment of $1,000,000 and it would provide a return on this investment of 22 percent. The pay-out time for the plant would be three and one-half years.

PROCESS DEVELOPMENT AND PLANT DESIGN FOR THE PRODUCTION OF FINE-SIZED SILICA

A Thesis

Presented to

the Faculty of the Graduate School

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MASTER OF SCIENCE

Chemical Engineering

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by

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CERTIFICATE OF APPROVAL OF THESIS

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