

## **First Draft of Thesis by**

Water treatment chemicals in the United States generate revenues of approximately \$4 billion. The demand for water treatment chemicals is influenced by various drivers, such as water availability, usage patterns, and presence of pollutants, government policies and economic conditions. The demand for water treatment chemicals in the United States is expected to rise. There are over 300 suppliers of water treatment chemicals, having a mix of large and small, diversified and specialty firms.

The segment of most interest is coagulants. They remove harmful byproducts by clumping together suspended solids so they settle more quickly. Then the settled sludge is separated by physical means and removed from the effluent. It is the third largest category of water treating chemicals. Revenue of this segment is estimated to be above \$900 million annually. The largest end users are municipal water treatment plants and pulp and paper manufacturers, which account for almost 70% of product use. Environmental regulations benefit coagulant demand, as the federal and state governments continue to tighten on both drinking water quality standards and wastewater discharge parameters.

Products are aluminum or iron based sulfates or chlorides. Producers have small regional plants that service local markets, typically up to 300 miles. Competition is very price sensitive – the municipal sector bids and the lowest price wins. Industrial customers, such as pulp and paper, may consider other items, such as service in awarding their business. There is a high degree of fragmentation, two large manufacturers with several smaller regional participants.

Recent consolidations by the two large producers caused less competition in many markets and prices significantly higher than historical levels. This has created significant opportunities, as customers are very unhappy and dissatisfied with their current vendors. Regional producers lack the clout or breathe of market coverage to effectively compete. There is significant pressure on the two large producers to continue to push higher prices and margins. General Chemical was purchased by American Securities at their record-level peak earnings in October 2009. Kemira is part of a global company that has been historically unsuccessful in the US market. They purchased such a large presence that they need to make it highly profitable.

By acquiring several regional companies and forming a third large player in this industry, significant opportunities exist. This can be accomplished without upsetting the higher prices structure in the market. Access to the large paper companies, such as International Paper and Georgia Pacific, will offer opportunities. Economies of scale can be realized through purchasing power and a strong management team that already has access to both municipal and industrial customers in this space.

Once established, continued growth can come from two platforms - additional plants in an uncovered geography and new water treating product lines can be added (coagulants represent only 22% of water treating chemicals market), through acquisition or capital investment. Leveraging the customer relationships and plant network already in place would allow for easy and cost effective expansion.

I have the ability lead this effort. I built General Chemical's water treating division into the largest inorganic coagulant company in North America. Under my leadership, I hired and trained the industry's best management team, grew market share from 44% to 57%, increased revenue 105% while improving EBITDA 320%. My efforts turned the company's worst performing business into the top performing business, which led to the acquisition by American Securities. I successfully managed acquisitions in this area, including all phases and successful integration into the operations.