W. G. KRUMMRICH PLANT

LOCATION: Monsanto Krummrich Plant, Sauget, Illinois 62206

GUEST OPERATIONS: Occidental Chemical's ACL-90 pool chemicals and FlexSys' (Monsanto- kzo joint venture) line of Rubber Chemical antioxidants known as *Santoflexes.*

SIZE: The plant is located on 311 acres across the Mississippi River from downtown St. Louis, Missouri, with approximately 100 acres being developed.

PEOPLE: 175 salaried employees and 375 wage employees.

PLANT MANAGER: Russell F. Sackett.

HISTORY: The William G. Krummrich Plant is the second oldest of the U.S. Monsanto plants. In 1917, Monsanto purchased the plant from Commercial Acid Company, which had started the plant in 1907 to manufacture sulfuric, muriatic and nitric acids. Being the second of Monsanto's manufacturing sites, "Plant B," as the new acquisition was called, had 70 employees, 20 acres of land, and a line of products which included the acids as well as zinc chloride, phenol, salt cake and nitric cake.

The plant expanded in both people and products during the '20s and '30s, adding product lines of chlorobenzenes, nitrated organic chemicals, chlorophenols and phosphorus intermediates. World War II brought expansion to a halt with emphasis on maximizing the production of existing products to support the war effort. After the war, Plant B began producing a line of weed and brush killers and detergent ingredients.

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Growth accelerated in the '50s and '60s with new units for producing chlorobenzenes and other products, a nitration facility and a modernized phenol plant. In 1952 the plant was renamed the W. G. Krummrich Plant in honor of a previous plant manager, and in 1964 the "Village of Monsanto" was renamed Sauget after Leo Sauget, the mayor of the village for over 40 years. Growth slowed in the '70s and '80s as product lines focused on fewer, higher value added products. Reorganizing the plant into business units in 1989 improved focus on customers and led to a positive increase in employee ownership and participation. Into the '90s the plant moves along a well defined path as it measures its progress against specific benchmarks defined by our customers and other stakeholders.

RECENT ACCOMPLISHMENTS:

- First Monsanto location worldwide to receive site-wide ISO-9002 registration of its quality systems.
- Monsanto Pledge Award winner for burning tire derived fuel in its powerhouse boilers, as well as several other Pledge Award finalists and entrees.
- Introduction of novel technology to the manufacture of dichlorobenzenes which resulted in a dramatic reduction in emissions; numerous customer recognitions, including Michelin Certified Supplier and Ciba-Geigy Supplier of Choice.
- Monsanto's first facility to form a Community Advisory Committee.

CURRENT INITIATIVES:

- Working on several Business Redesign initiatives.
- Implementing a behavioral-based approach to safety and injury improvement.
- Working toward Voluntary Protection Program (VPP) Star status.
- Delivering on our commitments to customers and stakeholders.

KEY PRODUCTS:

- Complete line of chlorobenzenes (monochlorobenzene, ortho- and para-dichlorobenzene, ortho- and para-nitrochlorobenzene, ortho- and para-nitor aniline) a large family of diverse chemical intermediates used internally and externally for a wide variety of products, ranging from dyes and tinting additives (found in *Saflex*) to agricultural products (*Lasso*) to pain relievers (acetomeniphin) to moth balls (SantoChlor) and rubber chemicals (*Santoflexes*). Monsanto's among the world leaders in the manufacture of these products, many of which also have the distinction of being the world's best quality.
- Muriatic Acid is a heavy duty industrial acid used in metal pickling, food, chemical and a variety of cleaning applications. In actual practice, Vulcan, a chemical company, performs all the marketing, distribution etc. for the muriatic acid produced at Krummrich on an arrangement where we consume their chlorine. Krummrich has recently invested in new technology which has dramatically improved our ability to capture and recover the byproduct HCL gas from the chlorobenzenes unit, which is used in the manufacture of muriatic.
- Phosphorus Penta Sulfide (oil additive and insecticide intermediate); *Santoflexes* (antioxidant rubber chemicals intermediates).
- ACL (swimming pool and water treatment chemical).

Lasso, Saflex and Santoflex is a registered trademark of Monsanto Company.