# Monsanto
## CARONDELET PLANT

DSW 135001

# Plant History

The history of the Carondelet community dates back to 1767, when the first settlement was established by the French. In 1870, the Village of Carondelet was incorporated into the City of St. Louis. During the Centennial Year of the United States, 1876, The Provident Chemical Works was founded on the present Carondelet Plant site by Mr. Rohrer and Mr. Coons.

The first product of the new company was monocalcium phosphate, and production methods were rather primative. Spent bone black from the sugar refining industry was acidulated with sulfuric acid in oblong wooden boxes. Employes worked by hand, using wooden paddles to stir the mixture. The phosphoric acid which was formed in this process was then reacted with lime to product monocalcium phosphate. Mechanical mixing was introduced in the mid-1880's.

At the turn ot the century, Provident Chemical Works was not a big plant in size or capital, but it had established itself as a leader in phosphate production.

In 1917, the first major plant expansion took place. Several new buildings were erected to house an improved method of producing acid from phosphate rock. In 1921, the electric arc furnace process of producing elemental phosphorous made a new supply of high grade phosphoric acid available, and Provident began purchasing acid from the Federal Phosphorous Company. Soon the two companies became affiliated, and later both were purchased by the Swann Chemical Company. Swann operated the plant with little or no changes until 1935, when Swann Chemical Company was purchased by Monsanto Company. A move of the entire operation fo the W. G. Krummrich Plant in Sauget, Illinois was considered but rejected as impractical. Monsanto undertook c program of modernization at Carondelet, and today very little remains of the old Provident Plant.

Like the historic St. Louis community in which it operates, the Carondelet Plant has built up its own sense of tradition blended with progress. The importance of its products to many industries has helped Monsanto to achieve its position as a major producer of elemental phosphorus and phosphate products.

DSW 135002

# Our People

The key to Carondelet's growth and success lies with our many dedicated people. A walk through the plant will quickly assure any visitor . . . are people *ARE* Carondelet!

| | | *Minority* | *Female* |
|---|---|---|---|
| Salaried Personnel | ~~73~~ 81+5 | 10% | 21% |
| Hourly Personnel | ~~212~~ 220 | 18% | 8% |
| Total | ~~285~~ 311 | 16% | 11% |

| | |
|---|---|
| Average Age | 44 Years |
| Average Length of Service | 15 Years |

DSW 135003

STLCOPCB4034962

# Our Products

Starting in 1876 as a facility for the production of monocalcium phosphate, the Carondelet Plant has grown to become a major manufacturer of phosphate chemicals. The end uses of our products are many and varied; Carondelet materials are used as soap builders and water softeners, mineral supplements in food products, polishing agents in toothpaste, and as leaveners in flours and baked products.

A list of our major products, along with some of their end uses, follows:

*MONOCALCIUM PHOSPHATE (MCP & Pyran)*
Uses: Baking powder, prepared mixes, phosphated flour, dough conditioners, mineral supplements, glass manufacture, acid component for leavening agents in self-rising flours.

*DI CALCIUM PHOSPHATE (DCP)*
Uses: Mineral supplement, polishing agent in toothpastes and powders.

*TRI CALCIUM PHOSPHATE (TCP)*
Uses: Non-caking agent, used in porcelains, pottery, enameling, and clarifying sugar syrups.

*CALCIUM PYROPHOSPHATE (SCPP)*
Uses: Polishing agent in toothpastes and powders, mineral supplement in foods and pharmaceutical preparations, glass additive.

*SODIUM ALUMINUM PHOSPHATE (Stabil-9)*
Uses: Leavening agent for mixes, self-rising flours, refrigerated doughs.

*SODIUM TRIPOLYPHOSPHATE (STP)*
Uses: Detergent builder, water softener, dispersant, buffering agent.

*TRISODIUM PHOSPHATE ANHYDROUS (TSP)*
Uses: Heavy duty cleaner, metal cleaning and dishwashing compounds, water softening agent, aklaline emulsifier.

*MONOPOTASSIUM PHOSPHATE (MKP)*
Uses: Water soluble fertilizers.

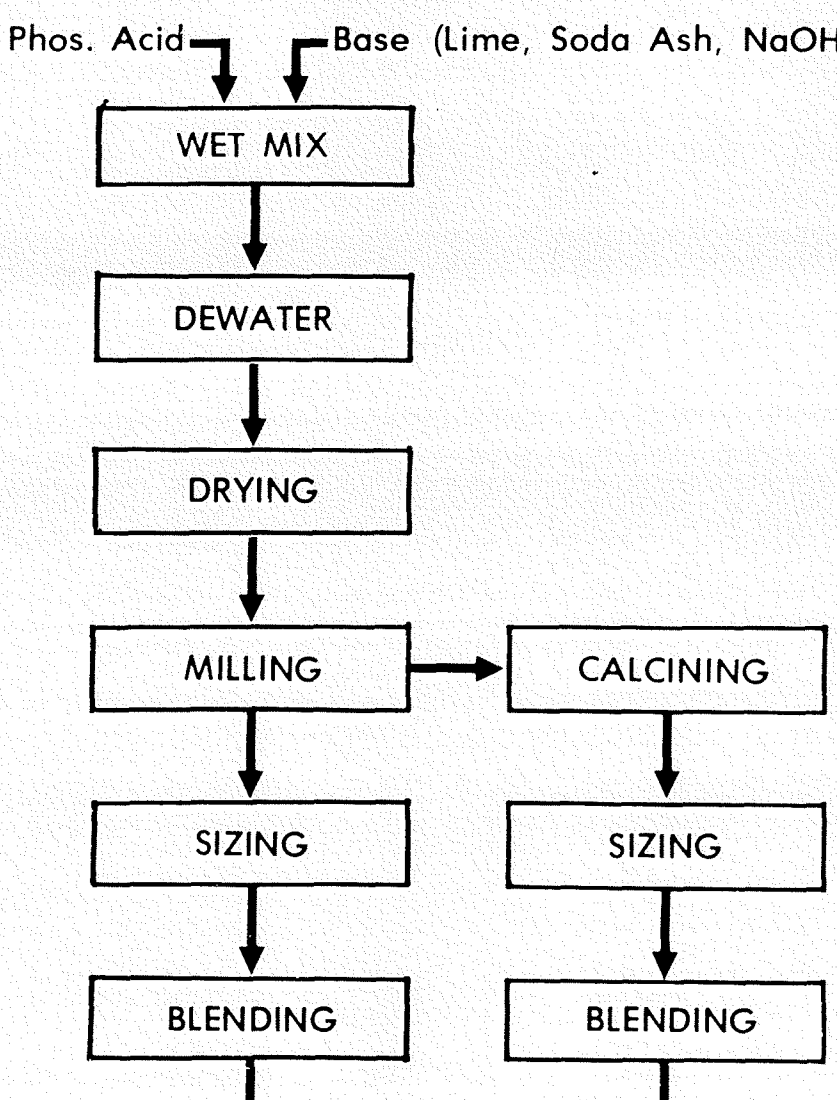
*TRIPOTASSIUM PHOSPHATE (TKP)*
Uses: Synthetic rubber manufacturing, hydrogen sulfide scavenger in petroleum processes, sequestrant, solubilizer, buffering agent.

*TETRA POTASSIUM PYROPHOSPHATE (TKPP)*
Uses: Detergent composition, synthetic rubber manufacture, synthetic emulsion paints.

DSW 135004

STLCOPCB4034963

# Typical Process




# Major Raw Materials

Phosphorus
Quick Lime
Soda Ash
Caustic Soda
Caustic Potash
Tetra Sodium Pyrophosphate
Aluminum Hydrate

DSW 135005

STLCOPCB4034964

# PRODUCT SHIPMENTS

MILLIONS POUNDS

| | 1975 | 1976 | 1977 | 1978 | (EST.) 1979 |
|---|---|---|---|---|---|
| LEAVENING AGENTS | 42.8 | 47.2 | 40.1 | 38.2 | 41.1 |
| DENTIFRICES | 54.4 | 52.7 | 52.3 | 57.7 | 51.5 |
| DETERGENTS | 121.9 | 115.5 | 126.8 | 129.8 | 127.2 |
| MISCELLANEOUS | 13.9 | 19.8 | 28.9 | 29.2 | 26.6 |
| | 233.0 | 235.2 | 248.1 | 254.9 | 246.4 |

9 PRODUCTION DEPARTMENTS

14 BASIC CALCIUM/SODIUM/POTASSIUM PHOSPHATES

61 GRADES - 100 SPECIAL CUSTOMER SPECIFICATIONS

44 DIFFERENT TYPE CONTAINERS

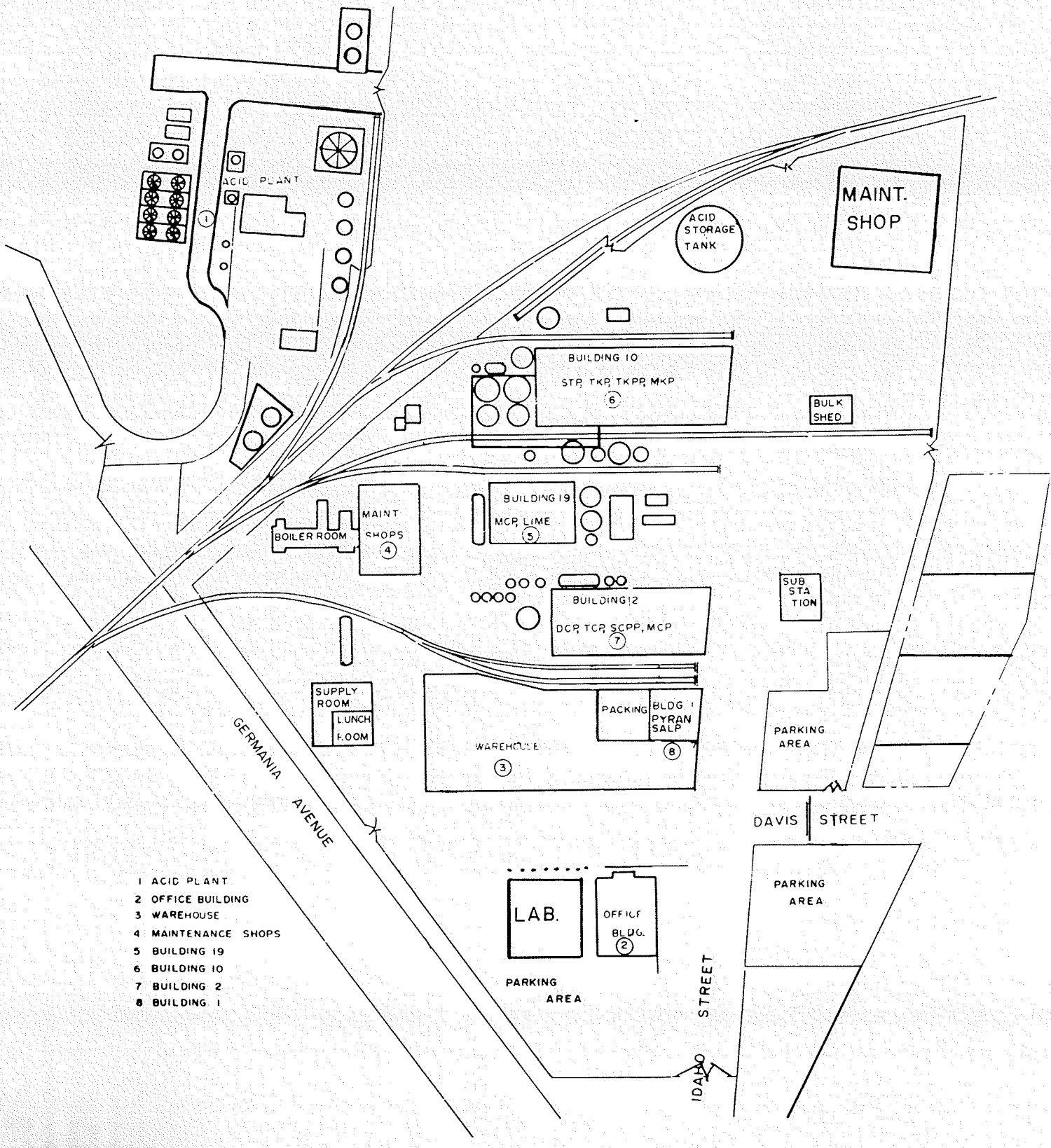
25% F&F CHEMICALS - 75% D&P CHEMICALS

90% DOMESTIC - 10% EXPORT

250 MILLION POUNDS SHIPPED ANNUALLY

DSW 135006

STLCOPCB4034965




DSW 135007

STLCOPCB4034966