



POTASH PLANT EXPANSION

Industrial

WILCOX ROLE

Wilcox has been involved with the IMC Kalium plant since its initial development in 1984 and served as the Prime Consultant for this project.

PROJECT DESCRIPTION

Wilcox was involved with the initial site development, and design and construction for a potash pilot plant and continued to provide support for plant expansion of the salt refinery building, salt storage dome, and salt compaction and handling facilities.

Aspects of the 200 acre Kalium facility that Wilcox was involved with included:

- Salt refinery buildings—20,200 sq. ft. x 208' tall, with 6 working levels of production
- Salt dome—increased capacity of 176' diameter dome from 30,000 ton to 50,000 ton capacity
- Salt compaction buildings—15,000 sq. ft. x 191' tall, with 6 working levels of production
- Salt bagging and shipping warehouse addition—100'x165' (16,500 sq. ft.)
- Salt conveyor building—1,024 sq. ft. x 42' tall, two working levels of production
- Office building—5,200 sq. ft., single story
- Brine collection cluster building—1,500 sq. ft. with two levels of production
- Pipe racks and supports—over one mile above ground.

Civil design and site development for many of the facilities listed consisted of :

- Site grading
- Design of underground utilities
- Stormwater runoff and collection
- Detention basins
- Road and parking lot layout & design
- Surveying
- Construction staking
- Geotechnical investigation
- Construction management
- Digital terrain
 - Modeling
 - Contouring
 - Volume calculations

Structural foundation design for several of the buildings consisted of 16-inch diameter augercast piles and pile caps; slab-on-grade, spread footings and equipment foundations. Other structural design included bulk storage facilities, structural steel for buildings, pipe support foundations, concrete containment pads, and office and maintenance buildings.

Construction management activities included construction inspection, in-place soil density testing, concrete testing, structural steel inspection and materials testing.

The IMC Kalium, Ltd. Expansion project also required new transportation access involving a new 3-span bridge and 4.3 km roadway realignment.

