

## Chemical Client

# Fire, Data, CCTV and Security Design



Since 2004, SSOE has been providing this chemical manufacturer with design and start-up support for a series of complex facility expansions. SSOE's Data / Fire / Security team provided the complete design of telecommunications, LAN, WAN, and MAN security, access control, CCTV, fire alarm, sound, paging, wireless, and DAS and mass notification systems as well as an extensive fiber optic network. This network, which consists of thousands of strands of single and multi-mode fiber and required installation of more than 30 miles of fiber, serves the client's telecommunications, data, and process communications needs. The design also included an automated CCTV premier detection and alarm system.

SSOE provided the complete design for Tier 3 and Tier 4 data centers. Each tier has attached state-of-the-art control, which monitors all of the key operation processes. The primary control building space is comprised of several server rooms, offices, and a large operator room that houses a 16-foot by 80-foot video wall and 20 high-end operator stations, each equipped with six, 30-inch LCD screens. The facility is equipped with several methods of redundant cooling, communications, and power feeds.

SSOE also designed a 911 quality, two-way radio system with multiple redundant repeaters that exceed 911 and interoperability requirements.

SSOE engineers provided on-site construction support and supervised the entire installation of the system and commissioned its operations. The entire project came in under budget and ahead of schedule.

SSOE ordered all equipment on behalf of the client and negotiated bulk discounts. The team's deep understanding of the client's facility and processes earned the firm "preferred engineering partner" status. It also resulted in SSOE being hired to provide similar services for the client's new facility in the southeast U.S.

### value promise

Negotiated with multiple vendors to reduce material and installation costs, saving the client over \$700,000. Created design and installation standards which assured contractors and integrators installed all systems the same way. This greatly reduced cost overruns and maintained schedules.

**size** 50 buildings

**location** Midwest USA

### highlights

Tier 3 and Tier 4 data centers

More than 5,000 fire alarm monitoring points

More than 700 cameras

More than 200 access control doors and turnstiles

Complete video fence analytic detection system

19,600 SF central control center

911 compliant two-way radio system

Complete wireless network covering entire plant