

PROJECT PROFILE

CHEMICAL PLANT NETWORK

SECURITY SOLUTIONS



Client: MAJOR CHEMICAL MANUFACTURER | Location: DEER PARK, TX

Objective

Modernize outdated, high-risk [operational technology](#) (OT) systems with industry-leading network segmentation practices, isolating third-party devices.

Results

Fortified chemical plant's OT environment with state-of-the-art protection systems, resulting in enhanced security, improved network traffic visibility, and strengthened firewalls to protect the facility from cyber threats.

Project summary

For a large [chemical manufacturing](#) plant with an aging network infrastructure, its operator sought to modernize systems to achieve higher levels of performance and security. Specialized engineering for network security solutions was key to a successful project outcome. The Deer Park, Texas chemical manufacturer turned to the experienced OT team at Audubon to upgrade its network infrastructure and optimize its security posture.

Audubon first assessed the existing network and identified risks threatening the plant's digital security, including legacy segmentation practices, obsolete equipment, and no official L2.5 network layer. Our comprehensive assessment found the facility lacked a modern security architecture, with suboptimal routing, concerning network loops, low redundancy for critical connections, and general inefficiencies.

With a custom-engineered security solution, we transformed this insecure, flat network into a robust, secure [industrial control](#) network. The Audubon team designed and implemented advanced segmentation and firewall protections for third-party assets, rectified multi-homed device connections, and increased visibility into network traffic for the highest level of integrity. These elements enhanced the facility's security measures to mitigate potential external supply-chain attacks and prevent the possibility of network propagation. With Audubon spearheading the network upgrades as well as delivering continuous support for configuration and patching, the onsite OT team was able to focus on its core priorities without any distractions.

Project overview

- Wireless network upgrade for chemical plant
- Replacement of obsolete equipment
- Traffic visibility & control
- Fully redundant connections
- Zero Trust architecture & L2.5 network layer
- Third-party zones & dedicated firewalls

Scope of work

- Network assessment
- [Engineering & design](#)
- Equipment selection
- [Automation & control](#) implementation
- Ongoing configuration support