Gas Engineering and Design Relevant Experience

ENTRUST
SOLUTIONS GROUP

Gas Handling Plan Development for SDG&E
Client: SDG&E

Location: San Diego, California

ENTRUST was tasked with creating preliminary gas handling plans for SDG&E on an as-needed basis. This process involved developing a construction plan or initial design into a detailed procedure document, outlining the required gas handling steps. These plans, created in Word and supported by CAD schematic visualizations, adhered to SDG&E's templates and gas standards. They underwent review and approval by various SDG&E stakeholders. ENTRUST worked on gas handling plans for both high-pressure and medium-pressure projects.

Challenges and Solutions

Some construction designs contained errors or were un-constructable as initially provided. ENTRUST identified these issues and worked proactively by communicating with SDG&E engineers. The team not only highlighted problems but also offered practical solutions, ensuring that designs could be implemented effectively.

Results

Over 400 gas handling plans were successfully completed for SDG&E over a span of three years, demonstrating ENTRUST's reliability and technical expertise. The SDG&E Engineering Manager and Team Leads expressed high praise for the quality of work and the support provided during the project.

Key Achievements

- While most deliverables were not time-critical, ENTRUST expanded its workforce and provided training to meet the project demands, ensuring consistent availability. Monthly meetings with the SDG&E Team Lead allowed for workload planning and addressing challenges. Occasional rush projects were prioritized to meet required timelines.
- ENTRUST's thorough gas handling plans consistently adhered to SDG&E standards. The team's ability to identify and resolve design errors further reinforced ENTRUST's value to the SDG&E engineering team.

SoCal Gas, Blythe Compressor Station Integration
Client: SoCal Gas

Location: California

The Blythe Compressor Station in California required the integration of its Plant 2 and Plant 3 systems into the new Plant 4 FactoryTalk SE Network Distributed System. ENTRUST undertook a comprehensive scope of work to modernize the station's control systems, enhance data collection, and ensure operational efficiency across all facilities.

Key deliverables for the project included:

- System Integration: Seamless integration of existing Plant 2 and Plant 3 systems into the Plant 4 control framework.
- Electrical Monitoring System: Implemented a centralized system to collect and process IntelliCenter MCC data for improved monitoring capabilities.
- PLC Logic and HMI Development: Designed new logic and HMI screens for Plant 1 and Plant 3 Cooling Towers, while updating systems across other facilities.
- Hardware Configuration: Configured new ControlLogix processors, chassis components, and FactoryTalk Pi Buffer nodes to enhance system functionality.
- Equipment Testing: Installed and tested EEC PLC systems for data gathering and historization.

Challenges and Solutions

- Challenge: Integrating legacy systems from Plants 2 and 3 into a modernized control system.
  - Solution: Leveraged existing code and standards from the Blythe Compressor Replacement project to streamline the integration process.
- Challenge: Ensuring consistent data collection and communication across varied equipment.
  - Solution: Centralized monitoring and historization through robust hardware upgrades and configuration of virtual machines.
- Challenge: Developing new PLC logic and HMI screens for additional equipment while maintaining operational continuity.
  - Solution: Customized HMI and PLC logic to seamlessly incorporate new and existing processes.

Key Achievements

The project yielded several significant outcomes:

- Successful integration of Plants 2 and 3 with the advanced Plant 4 system.
- Enhanced data collection and monitoring capabilities for improved decision-making.
- Increased operational efficiency and reliability at Blythe Compressor Station.
- Cost-effective integration processes minimized project expenditures.
- Centralized systems ensured consistent availability of critical data and operations.
- Demonstrated mastery in control system modernization and commissioning.