



Tank Farm Storage Facility Management

Client

Petroleum Storage Terminal in Louisiana

Industry

Petroleum Storage Terminal Operations

Solution

Tank Farm Management Safety Monitoring Platform

Challenge

Petroleum storage terminal managing large tank farm faced manual tank monitoring processes requiring daily personnel inspections, difficulty tracking product inventory levels and tank conditions across multiple storage tanks, limited early warning capabilities for tank integrity issues, challenges maintaining environmental compliance and leak detection systems, and complex coordination of product receipts, storage, and deliveries.

AI Consulting Approach

- Tank Farm Assessment: Asset integrity consultants analyzed existing tank monitoring processes, safety systems, and operational procedures to identify automation opportunities using tank farm management and monitoring technologies.
- Comprehensive Management Platform: System integrating tank monitoring, inventory management, and safety systems to optimize storage operations and ensure environmental compliance.

AI Solution

- Tank Monitoring Automation: Platform collecting real-time data on tank levels, temperatures, and pressure conditions with automated inventory tracking and leak detection
- Safety System Integration: System monitoring tank farm safety equipment including fire suppression, vapor detection, and emergency shutdown systems with automated testing schedules
- Environmental Compliance Management: Platform tracking environmental monitoring data, emissions reporting, and regulatory compliance requirements with automated documentation



- Operations Coordination: System managing product receipts, storage allocation, and delivery scheduling with inventory optimization and capacity planning

Implementation (22 weeks total)

- Tank Farm Analysis (4 weeks)
- Platform Development (9 weeks)
- Safety Integration (7 weeks)
- Testing Launch (2 weeks)

Key Results

Tank Management:

- 80% reduction in manual monitoring time, improved inventory accuracy and tracking, enhanced tank condition visibility

Safety Enhancement:

- 75% improvement in safety system monitoring effectiveness, better environmental compliance tracking, reduced regulatory inspection findings

Business Impact:

- Substantial operational cost savings, improved safety and environmental performance, 165% consulting ROI, enhanced storage capacity utilization

Technologies:

- Tank monitoring systems
- inventory management platforms
- safety system integration
- environmental compliance tracking
- operations coordination tools

