REQUEST FOR PROPOSAL (RFP)

Thomas-Walker

PROJECT OVERVIEW

Name: Synth Patrick Capacity Enhancement
Type: Capacity Enhancement
Location: East Patrick, TN (Refinery Zone)
Industry: Chemical Processing
Value: $7,572,417
Complexity: 1/5
Date: April 09, 2025
Disciplines: Environmental Engineering, Piping & Pipeline
Regulations: NFPA Codes

SCOPE OF WORK

Scope of Work: Refinery Zone Chemical Processing Capacity Enhancement

Project Goal: Increase processing capacity of existing chemical handling and processing infrastructure within a refinery zone by 15%. This will involve minor upgrades to existing systems.

1. Environmental Engineering

*** Task 1: Wastewater Treatment Optimization: Assess the existing wastewater treatment plant capacity to handle the increased chemical processing volume. Develop a detailed report outlining necessary modifications, including pump upgrades (specify pump type and flow rate capacity, e.g., 1000 GPM centrifugal pumps) and potential addition of a secondary clarifier (dimensioned for 1.15x current plant capacity), ensuring compliance with relevant local and federal discharge permits.**

*** Task 2: Air Emissions Monitoring & Reporting: Conduct a baseline air emissions inventory for the current process. Develop a plan for enhanced monitoring of relevant pollutants (e.g., VOCs, SOx) post-upgrade, including specifications for new monitoring equipment (e.g., infrared gas analyzers) and sampling frequency to ensure ongoing compliance with EPA regulations and NFPA 68 standards where applicable. This plan should include data reporting procedures.**

2. Piping & Pipeline

*** Task 1: Existing Chemical Transfer Line Upgrade: Replace a 6-inch diameter, carbon steel transfer line (currently handling 500 GPM) transporting process chemicals (specify chemical) with a new 8-inch diameter schedule 80 stainless steel line capable of handling 750 GPM. This involves detailed piping design (including isometric drawings), material selection per ASME B31.3, and a hydraulic analysis to confirm pressure drop and flow characteristics.**

*** Task 2: Installation of New Chemical Storage Tank Vent System: Design and install a new vent system for an existing 5000-gallon chemical storage tank (specify chemical), including pressure/vacuum relief valve sizing (per API 2000 guidelines) and flame arrestor selection. This system should comply with NFPA 30 and relevant local fire codes. Deliverables include detailed shop drawings and installation procedures.**

Cross-Disciplinary Tasks:

*** Task 1: HAZOP Study: Conduct a Hazard and Operability (HAZOP) study for the upgraded chemical processing system, involving both Environmental Engineering and Piping & Pipeline teams. This collaborative review will identify potential hazards and operability issues, developing recommendations for mitigating risks and ensuring safe and environmentally sound operations. The study will produce a comprehensive HAZOP report.**

*** Task 2: Integrated Permitting Strategy: Collaborate to develop a consolidated permitting strategy that addresses both air emissions (Environmental Engineering) and process safety (Piping & Pipeline) requirements. This involves integrating permits for the modifications to the wastewater treatment plant, air monitoring systems, and updated piping systems, ensuring compliance across all relevant regulatory frameworks.**

Complexity Impact Note: The project complexity is appropriately rated at Level 1 due to the scope being limited to upgrades of existing systems rather than constructing new facilities.

REQUEST FOR QUOTATION

Request for Quotation (RFQ): Synth Patrick Capacity Enhancement

Project: Synth Patrick Capacity Enhancement ? Refinery Zone Capacity Increase

Location: East Patrick, TN

Industry: Chemical Processing

Issued: April 09, 2025

Due: May 11, 2025

Project Goal: Increase existing chemical processing capacity by 15% through minor upgrades.

Scope of Work: Refinery Zone Chemical Processing Capacity Enhancement (detailed description below)
1. Environmental Engineering:

*** Task 1: Wastewater Treatment Optimization (Pump upgrade ? 1000 GPM centrifugal pumps; secondary clarifier ? 1.15x current capacity). Report including necessary modifications and compliance verification.**

*** Task 2: Air Emissions Monitoring & Reporting (VOCs, SOx). Baseline inventory, monitoring plan (infrared gas analyzers), and data reporting procedures complying with EPA regulations and NFPA 68.**
2. Piping & Pipeline:

*** Task 1: Existing Chemical Transfer Line Upgrade (6? carbon steel to 8? schedule 80 stainless steel, 500 GPM to 750 GPM). Detailed design (isometric drawings), material selection (ASME B31.3), and hydraulic analysis. *Specify chemical*.**

*** Task 2: New Chemical Storage Tank Vent System (5000-gallon tank). Design and installation including pressure/vacuum relief valve sizing (API 2000), flame arrestor selection, and compliance with NFPA 30 and local fire codes. *Specify chemical*. Shop drawings and installation procedures required.**
Cross-Disciplinary Tasks:

*** Task 1: HAZOP Study: Comprehensive report identifying and mitigating hazards and operability issues.**

*** Task 2: Integrated Permitting Strategy: Consolidated permitting strategy addressing air emissions and process safety requirements.**

Qualifications: Minimum 3 years experience in chemical processing, proven regulatory compliance record.
Proposal Requirements: Technical designs (1-2 pages), detailed cost breakdown.
Evaluation Criteria: Technical (50%), Cost (30%), Experience (20%).

Timeline:

*** RFQ Release: April 09, 2025**

*** Questions Due: May 01, 2025**

*** Proposals Due: May 11, 2025**

*** Project Start: June 05, 2025**
* Project Duration: 8 months

Contract Type: Fixed Price

Submission: Submit proposals electronically to procurement@chemicalprocessing.com

Complexity: Level 1 (Minor upgrades to existing systems)

CONTACT

Max Bonilla PhD, RFP Coordinator
Phone: 495.446.0855x357
Email: max@thomas-walker.com

TIMELINE

Include key dates such as submission deadlines, inquiry deadlines, and project start dates.