REQUEST FOR PROPOSAL (RFP)

Anderson, Hartman and Hancock

PROJECT OVERVIEW

Name: React Tannerside Modernization
Type: Modernization
Location: North Tannerside, GA (Industrial Park)
Industry: Chemical Processing
Value: $5,725,161
Complexity: 2/5
Date: April 09, 2025
Disciplines: Process Engineering, Environmental Engineering, Mechanical Engineering
Regulations: EPA Requirements

SCOPE OF WORK

Scope of Work: Industrial Chemical Processing Modernization Project

Project Goal: Modernize the existing chemical processing unit within the industrial park to improve efficiency, safety, and environmental compliance, while adhering to EPA regulations where applicable.

Discipline: Process Engineering
1. Process Optimization: Evaluate the existing chemical processing unit's flowsheet (PFD and P&ID) to identify bottlenecks and inefficiencies. Develop and document a revised flowsheet incorporating at least a 10% improvement in throughput or energy efficiency, including detailed mass and energy balances, and recommend modifications to the process equipment (e.g., pumps, reactors, heat exchangers) with specifications for capacity, materials of construction (e.g., 316L stainless steel), and operating parameters.
2. Control System Upgrade: Design and specify a modernized distributed control system (DCS) for the chemical processing unit, including the selection of appropriate hardware (PLCs, HMIs) and software (SCADA). The system should meet ISA 84.01 standards and include functional specifications for automated process control, data logging, and alarm management, with deliverables including functional design specifications, procurement specifications, and a preliminary control narrative.

Discipline: Environmental Engineering
1. Wastewater Treatment Enhancement: Assess the existing wastewater treatment system for compliance with EPA discharge permits. Design and specify modifications to improve treatment efficiency for key pollutants (e.g., COD, BOD, pH), such as upgrading existing filtration systems with a media filter (e.g., 0.5 micron filter) or adding advanced oxidation processes (AOPs) if necessary. Deliverables should include detailed engineering drawings, equipment specifications, and an updated discharge permit application.
2. Air Emissions Control: Analyze current air emissions from the processing unit to identify potential non-compliance areas with EPA regulations (e.g., VOC emissions). Propose and detail design modifications to control emissions, such as adding a thermal oxidizer (specify size and efficiency) or upgrading existing scrubbers. Deliverables will include emission calculations, equipment specifications, and permit modification documentation.

Discipline: Mechanical Engineering
1. Equipment Replacement: Design and specify the replacement of three (3) existing pumps (specify flow rate, pressure, and material of construction requirements, e.g., 100 GPM, 100 PSI, Carbon Steel) with higher-efficiency models, minimizing maintenance requirements. Deliverables include detailed engineering drawings, equipment specifications, and installation procedures.
2. Piping System Modifications: Modify existing process piping (e.g., 6-inch schedule 40 carbon steel piping) to improve flow and reduce pressure drop by optimizing piping layouts and replacing sections of corroded piping, ensuring adherence to ASME B31.3 standards. Deliverables include isometric drawings, material specifications, and a detailed bill of materials.
Cross-Disciplinary Tasks:

1. HAZOP Study: Conduct a Hazard and Operability (HAZOP) study of the modernized chemical processing unit involving process, environmental, and mechanical engineers to identify and mitigate potential hazards and operational issues. The study will result in a HAZOP report detailing identified hazards, risk assessments, and recommended mitigation strategies.
2. 3D Model Integration: Develop a fully integrated 3D model of the modernized unit, incorporating all process equipment, piping, structural elements, and environmental control systems, using the models from each discipline. This model will serve as a basis for constructability review and will be delivered as a fully coordinated 3D model in a common industry standard format (e.g., Navisworks).

Complexity Impact: The project complexity is appropriate for the assigned complexity level (2/5).

REQUEST FOR QUOTATION

Request for Quotation: React Tannerside Modernization

Project: React Tannerside Modernization ? Chemical Processing Unit Modernization at North Tannerside Industrial Park, GA.

RFQ Release Date: April 9, 2025

Questions Due: May 13, 2025

Proposals Due: May 18, 2025
Project Start Date: May 4, 2025

Project Duration: 5 Months

Contract Type: Fixed Price

Scope of Work: Modernize the existing chemical processing unit to improve efficiency, safety, and environmental compliance (EPA regulations). Work encompasses process, environmental, and mechanical engineering disciplines, including:
* Process Engineering: Process optimization (10% improvement target), DCS upgrade (ISA 84.01 compliant).
* Environmental Engineering: Wastewater treatment enhancement (COD, BOD, pH), air emissions control (VOC compliance).
* Mechanical Engineering: Replacement of 3 pumps (100 GPM, 100 PSI, Carbon Steel), piping system modifications (6? sch 40 carbon steel).
* Cross-Disciplinary: HAZOP study, integrated 3D model (Navisworks).

Deliverables: Detailed engineering drawings, specifications, calculations, reports (HAZOP, mass & energy balances), permit applications, 3D model, and bill of materials.

Qualifications: Minimum 3 years? experience in chemical processing, proven regulatory compliance (EPA).
Proposal Requirements: A concise technical proposal (1-2 pages) outlining your approach and a detailed cost breakdown.
Evaluation Criteria: Technical Approach (50%), Cost (30%), Experience (20%).

Contact: Submit proposals to procurement@chemicalprocessing.com

CONTACT

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TIMELINE

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