REQUEST FOR PROPOSAL (RFP)

Bennett PLC

PROJECT OVERVIEW

Name: Chem Davidland Modernization
Type: Modernization
Location: East Davidland, LA (Industrial Park)
Industry: Chemical Processing
Value: $15,286,971
Complexity: 3/5
Date: April 09, 2025
Disciplines: Environmental Engineering, Mechanical Engineering
Regulations: EPA Requirements

SCOPE OF WORK

Scope of Work: Industrial Chemical Processing Plant Modernization

Project Goal: Modernize a chemical processing unit within an industrial park to improve efficiency, safety, and environmental compliance.

Disciplines: Environmental Engineering, Mechanical Engineering

Complexity: 3/5

Regulations: Applicable EPA requirements (e.g., air emissions, wastewater discharge) will be adhered to throughout the project.
Environmental Engineering Tasks:
1. Wastewater Treatment Upgrade: Design and implement modifications to the existing wastewater treatment system to reduce Total Suspended Solids (TSS) by 30% and Chemical Oxygen Demand (COD) by 25%, meeting EPA discharge limits for specific pollutants. This will involve specifying and procuring new filtration media (e.g., activated carbon, 1000 kg), upgrading the aeration system, and revising operational procedures with documented calculations demonstrating compliance.
2. Air Emissions Monitoring & Control: Conduct an air emissions inventory to identify key pollutants (e.g., VOCs, NOx) and upgrade the existing stack emission monitoring system with continuous emission monitors (CEMs) compliant with EPA Method 25A. Develop and implement a plan to reduce VOC emissions by 15% through the implementation of vapor recovery techniques, including detailed design specifications for new vapor recovery equipment and updated safety protocols.
Mechanical Engineering Tasks:
1. Pump System Optimization: Replace three existing centrifugal pumps (1000 GPM capacity each, operating at 1500 RPM) with high-efficiency pumps (achieving at least a 10% reduction in energy consumption) for improved efficiency and reduced operational costs. This includes preparing detailed specifications for new pumps, including material selection (e.g., 316 stainless steel for corrosion resistance), pump curves, and integration into the existing piping system, with deliverables including updated P&IDs.
2. Process Piping System Inspection and Repair: Conduct a thorough inspection of the existing process piping system (approx. 500 meters of 4-inch schedule 40 carbon steel pipe) identifying corrosion and degradation. Repair or replace sections as necessary, adhering to ASME B31.3 standards. This involves creating detailed inspection reports, generating detailed repair plans with material specifications (including weld procedure specifications), and ensuring proper pressure testing post-repair.
Cross-Disciplinary Tasks:
1. HAZOP Study & Safety Integration: Conduct a Hazard and Operability (HAZOP) study to identify and mitigate potential hazards across both environmental and mechanical systems, documenting findings and implementing mitigation measures (e.g., improved safety systems, emergency shut-down procedures, worker training). This requires collaborative input and documentation from both Environmental and Mechanical engineering teams, leading to a comprehensive HAZOP report.
2. Permitting & Regulatory Compliance: Prepare and submit all necessary permits and documentation to comply with relevant EPA regulations related to the upgrades implemented by both Environmental and Mechanical engineering teams, ensuring a unified and consistent approach to regulatory compliance. This requires coordinated efforts from both disciplines to prepare required documents and approvals.
Complexity Impact Note: The project complexity is moderate (3/5) due to the scale of upgrades and the need for integration between environmental and mechanical systems.

REQUEST FOR QUOTATION

Request for Quotation (RFQ): Chem Davidland Modernization

Project Name: Chem Davidland Modernization

Location: East Davidland Industrial Park, LA

Industry: Chemical Processing

Date: April 09, 2025

1. Project Overview: This RFQ seeks proposals for the modernization of a chemical processing unit at the East Davidland Industrial Park. The project aims to improve efficiency, safety, and environmental compliance, encompassing both environmental and mechanical engineering disciplines. The project's complexity is rated 3/5.

2. Scope of Work: Detailed scope is attached as Appendix A (see below). This includes wastewater treatment upgrades, air emissions control, pump system optimization, process piping system repair, a HAZOP study, and ensuring full EPA regulatory compliance.

3. Qualifications: Respondents must demonstrate at least 3 years of experience in chemical processing plant modernization, with a proven track record of successful regulatory compliance (EPA).

4. Proposal Requirements: Proposals should include:

* A concise technical design (1-2 pages) detailing proposed solutions for each task.
* A detailed cost breakdown.

5. Evaluation Criteria: Proposals will be evaluated based on:

* Technical Approach (50%)
* Cost (30%)
* Experience (20%)

6. Timeline:

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

*** Questions Due: April 17, 2025**

*** Proposals Due: May 05, 2025**

*** Project Start: June 05, 2025**

*** Project Duration: 13 months**

7. Contract Type: Time & Materials

8. Contact: Submit proposals electronically to procurement@chemicalprocessing.com

Appendix A: Detailed Scope of Work (Summarized ? full details available upon request)

This project involves the modernization of a chemical processing unit focusing on improved efficiency, safety, and environmental compliance. Key tasks include:

* Environmental Engineering: Wastewater treatment system upgrade (TSS reduction by 30%, COD by 25%), air emissions monitoring and control (VOC reduction by 15%).
* Mechanical Engineering: Pump system optimization (10% energy reduction), process piping system inspection and repair (approx. 500 meters of 4-inch pipe).
* Cross-Disciplinary: HAZOP study, permitting & regulatory compliance.

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TIMELINE

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