REQUEST FOR PROPOSAL (RFP)

Adams and Sons

PROJECT OVERVIEW

Name: Refine Michael Plant Expansion
Type: Plant Expansion
Location: West Michael, TX (Factory Complex)
Industry: Oil & Gas
Value: $12,349,664
Complexity: 3/5
Date: April 09, 2025
Disciplines: Piping & Pipeline, Process Engineering
Regulations: EPA Requirements

SCOPE OF WORK

Scope of Work: Oil & Gas Facility Upgrade - Process & Piping Modifications

Project Goal: Upgrade existing oil processing unit to enhance efficiency and comply with relevant EPA emission standards for reduced VOCs.

Project Complexity: 3/5

Disciplines: Piping & Pipeline, Process Engineering

I. Piping & Pipeline Engineering:

1. **Pipeline Rerouting & Sizing:** Design and detail a new 2 km, 8-inch diameter carbon steel pipeline (API 5L X65) rerouting existing condensate transfer line from Unit A to Unit B. This includes hydraulic calculations, stress analysis using Caesar II software, and development of isometric drawings and material specifications to meet ASME B31.4 and B31.8 standards. The reroute must incorporate a new isolation valve station with API 6D compliant valves.

2. **Pressure Vessel Modification:** Modify an existing 5-meter diameter, 10-meter tall atmospheric storage tank for improved vapor recovery. This involves detailed design of the new vapor recovery system components (including piping, instrumentation, and safety devices), updating the pressure vessel design in accordance with ASME Section VIII, Division 1, and preparation of fabrication and inspection drawings conforming to relevant codes and standards, including API 653.

3. **Flaring System Upgrade:** Design and specify a new flare header system with a capacity of 5,000 scfh, capable of handling a mixture of hydrocarbons based on anticipated flare gas composition. Ensure the design meets all relevant EPA regulations for flaring emissions, specifically regarding visible emissions and air quality permits, including specifications for flare tip design, and noise reduction measures.

II. Process Engineering:

1. **Process Optimization Study:** Conduct a process simulation (using Aspen Plus or similar software) to optimize the existing crude oil distillation unit for improved yield and reduced energy consumption, targeting a 5% increase in throughput while minimizing VOC emissions. The study should include mass and energy balances, process flow diagrams (PFDs), and instrumentation and control (I&C) specifications.

2. **VOC Emission Reduction Strategy:** Develop and document a detailed strategy for reducing VOC emissions from the processing unit in compliance with EPA regulations. This includes identifying VOC sources, quantifying emissions using appropriate methodologies (e.g., EPA Method 21), evaluating emission control technologies (e.g., vapor recovery units, thermal oxidizers), and preparing a preliminary cost estimate for the selected control technologies. The strategy will include emission monitoring and reporting protocols.

III. Cross-Disciplinary Tasks:

1. **3D Model Integration:** The Piping and Process Engineering teams will collaborate to develop a fully integrated 3D model of the modified process unit using a common platform (e.g., AVEVA Plant 3D). This model will encompass the entire process flow, including piping, equipment, and instrumentation, enabling efficient clash detection and design verification.

2. **HAZOP Study Coordination:** Conduct a joint HAZOP (Hazard and Operability) study to identify and mitigate potential hazards associated with the modifications. Both process and piping engineers will participate actively, ensuring comprehensive coverage of potential risks and development of effective mitigation strategies. All identified hazards will be documented in a HAZOP report, which will serve as an input for the final design.

Complexity Impact Note: The complexity level (3/5) is driven by the scale of the modifications, the need for regulatory compliance, and the integration of different engineering disciplines.

REQUEST FOR QUOTATION

Request for Quotation (RFQ): Refine Michael Plant Expansion

Project: Refine Michael Plant Expansion, West Michael, TX

Industry: Oil & Gas

Date: April 09, 2025

1. Project Overview: This RFQ seeks proposals for engineering services to upgrade the existing oil processing unit at our West Michael, TX facility. The project aims to enhance efficiency, reduce VOC emissions, and ensure compliance with EPA regulations. Complexity: 3/5. Scope: Oil & Gas Facility Upgrade - Process & Piping Modifications.

2. Scope of Work: (Detailed scope as provided in the prompt - see attached document for full details) Key elements include pipeline rerouting, pressure vessel modification, flaring system upgrade, process optimization, VOC emission reduction strategy, 3D model integration, and HAZOP study.

3. Required Qualifications: Minimum 3 years of experience in the Oil & Gas industry, with a proven track record of successful project delivery and regulatory compliance (EPA emissions standards).

4. Proposal Requirements: Proposals must include:

* **Technical Designs:** Concise (1-2 pages) outlining the proposed approach for each task, highlighting key design choices and methodology.
* **Cost Breakdown:** Detailed cost estimate, clearly outlining labor, materials, and other expenses. Time & Materials contract.

5. Evaluation Criteria: Proposals will be evaluated based on: Technical Approach (50%), Cost (30%), and Experience (20%).

6. Timeline:

* RFQ Release: April 09, 2025
* Questions Due: April 21, 2025
* Proposals Due: May 12, 2025
* Project Start: May 16, 2025
* Project Duration: 12 Months

7. Contact: Submit proposals electronically to procurement@oil&gas.com.

Attachment: Detailed Scope of Work (attached separately).

CONTACT

[Insert Contact Name and Phone Number Here (Optional)]

TIMELINE

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