REQUEST FOR PROPOSAL (RFP)

Wilson PLC

PROJECT OVERVIEW

Name: Refine Kellyborough Plant Expansion
Type: Plant Expansion
Location: Kellyborough, PA (Industrial Park)
Industry: Oil & Gas
Value: $14,242,217
Complexity: 3/5
Date: April 09, 2025
Disciplines: Instrumentation & Controls, Process Engineering
Regulations: OSHA Regulations, API Standards

SCOPE OF WORK

Scope of Work: Oil & Gas Production Facility Upgrade ? Instrument & Control and Process System Optimization

Project Goal: Optimize the efficiency and safety of an existing oil & gas production facility by upgrading the instrumentation and control systems and refining key process parameters.

1. Instrumentation & Controls (I&C)

*** Task 1: Replace existing pressure transmitters. Replace 20 outdated pressure transmitters (Rosemount 3051) with new smart pressure transmitters (Emerson Rosemount 3051S) across various process units. This includes detailed instrument selection reports based on application requirements (accuracy, range, material compatibility), cable sizing and routing diagrams, and loop drawings compliant with ISA S5.1 standards.**

*** Task 2: Implement a new distributed control system (DCS) upgrade. Design and implement a partial upgrade to the existing DCS system (Honeywell Experion PKS) to incorporate new field instrumentation and enhanced control algorithms for improved process stability. This involves developing a detailed functional design specification, performing system integration testing with legacy equipment, and providing comprehensive operator training documentation.**

*** Task 3: Update emergency shutdown (ESD) system logic. Redesign the ESD system logic to improve response times and reduce the risk of spurious trips. This task requires performing a HAZOP study of the ESD system, updating the logic diagrams (using a graphic editor compliant with ISA-84.01), and producing updated safety instrumented system (SIS) documentation complying with IEC 61511 standards.**

2. Process Engineering

*** Task 1: Optimize flow rates in the degassing unit. Conduct a process simulation (using Aspen Plus or similar) to optimize the flow rates in the degassing unit to maximize gas recovery and minimize liquid carryover. This will involve refining the control parameters for existing valves (e.g., specifying new valve sizing and characteristics), generating process flow diagrams (PFDs) and piping and instrumentation diagrams (P&IDs).**

*** Task 2: Improve heat exchanger efficiency. Analyze the performance of three existing heat exchangers (shell and tube type, dimensions: 2m x 1m x 0.5m, material: carbon steel) and implement modifications (e.g., cleaning, re-tubing if necessary) to improve their efficiency. This includes performing heat and mass balance calculations, creating detailed design specifications for any replacement components, and generating reports comparing pre and post-modification efficiency.**

*** Task 3: Develop a new crude oil stabilization process. Design a new crude oil stabilization process to reduce the volume of volatile organic compounds (VOCs) emitted from the facility. This will involve developing a process design package, including PFDs, P&IDs, mass and energy balances, and equipment specifications (e.g., specifying dimensions and materials of separation vessels, heat exchangers, and pumps). Compliance with relevant environmental regulations will be paramount.**

Cross-Disciplinary Tasks:

*** Task 1: I&C and Process Engineering Integration: Integrate the new instrumentation and control upgrades with the revised process parameters. This will involve close collaboration between the I&C and Process Engineering teams to ensure seamless operation and data exchange between systems (i.e., DCS data being used to inform process optimization strategies). Specific deliverables will include a data integration plan and testing protocols for verifying successful integration.**

*** Task 2: Safety and Regulatory Compliance: Ensure that all upgrades comply with relevant OSHA regulations and API standards (where applicable). This joint effort will require regular meetings between the I&C and Process Engineering teams to review design documentation and test results for conformity with safety standards. The final deliverable will be a comprehensive safety and regulatory compliance report.**

Complexity Impact Note: The project complexity (3/5) is driven primarily by the required DCS upgrade and optimization of complex process units.

REQUEST FOR QUOTATION

Request for Quotation: Refine Kellyborough Plant Expansion

Project: Refine Kellyborough Plant Expansion ? Oil & Gas Production Facility Upgrade

Location: Kellyborough Industrial Park, Kellyborough, PA

Issued: April 09, 2025

Due: May 09, 2025

Project Overview: This project aims to optimize the efficiency and safety of an existing oil & gas production facility through instrumentation & control system upgrades and process system optimization. The scope includes replacing pressure transmitters, upgrading the Honeywell Experion PKS DCS, updating the ESD system logic, optimizing degassing unit flow rates, improving heat exchanger efficiency, and developing a new crude oil stabilization process. Cross-disciplinary integration of I&C and process engineering is crucial, ensuring compliance with OSHA and API standards. (See attached detailed Scope of Work for complete details).

Scope of Work: Oil & Gas Production Facility Upgrade ? Instrument & Control and Process System Optimization (Attached)
Contractor Qualifications: Minimum 3 years of experience in the Oil & Gas industry with a proven track record of regulatory compliance.
Proposal Requirements:

1. Technical Design: A concise (1-2 page) technical approach outlining your proposed solutions for each task, highlighting key technologies and methodologies.

2. Cost Breakdown: A detailed cost breakdown including all labor, materials, and other expenses.
Evaluation Criteria:

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

Timeline:

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

*** Questions Due: April 19, 2025**

*** Proposals Due: May 09, 2025**

*** Project Start: May 22, 2025**
* Project Duration: 13 months

Contract Type: Time & Materials

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

Complexity: 3/5
(Detailed Scope of Work Attachment ? Refer to provided project description)

CONTACT

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TIMELINE

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