REQUEST FOR PROPOSAL (RFP)

Cole, Gomez and Morrison

PROJECT OVERVIEW

Name: Drill Douglaston Safety Compliance
Type: Safety Compliance
Location: Douglaston, NV (Factory Complex)
Industry: Oil & Gas
Value: $19,622,658
Complexity: 3/5
Date: April 09, 2025
Disciplines: Process Engineering, Instrumentation & Controls, Structural Engineering
Regulations: OSHA Regulations, API Standards

SCOPE OF WORK

Scope of Work: Oil & Gas Processing Facility Upgrade

Project Goal: Upgrade an existing oil & gas processing facility to increase throughput by 15% and improve safety compliance.
Project Complexity: 3/5
Applicable Regulations & Standards: OSHA Regulations, Relevant API Standards (e.g., API 650, API 510)
I. Process Engineering:
1. Process Simulation & Optimization: Develop a steady-state and dynamic process simulation model of the upgraded facility using Aspen Plus or similar software, incorporating the increased throughput target. This model will be used to optimize equipment sizing, pressure drops, and flow rates, delivering a validated process flow diagram (PFD) and piping and instrumentation diagram (P&ID).
2. Heat Exchanger Design & Specification: Design two new shell and tube heat exchangers (one 2m diameter, 5m long; one 1.5m diameter, 3m long) for preheating feedstock, specifying materials (e.g., 316L stainless steel) based on process fluid compatibility and API standards, and creating detailed specifications for procurement.
3. Relief System Sizing & Analysis: Perform a relief system sizing and analysis for the upgraded process units using appropriate software (e.g., Relief Calc). Ensure compliance with API 521, providing detailed calculations, equipment specifications (relief valves, rupture discs), and a revised Process Safety Information (PSI) document.
II. Instrumentation & Controls:
1. PLC Programming & HMI Development: Develop a new PLC program and HMI interface for the upgraded process units to manage the increased throughput and enhanced safety features. This will include programming for automated control loops, safety interlocks, and alarm systems, delivering complete PLC code and HMI screens along with testing protocols.
2. Instrument Selection & Specification: Select and specify all necessary field instruments (flow meters, pressure transmitters, temperature sensors) for the upgraded process units, including datasheets and specifications compliant with relevant industry standards (e.g., ISA). Justify the selection based on accuracy, reliability, and maintainability requirements.
3. Control System Validation: Conduct a Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) of the upgraded control system, documenting results and ensuring compliance with industry best practices (e.g., ISA-84). This includes thorough testing of safety instrumented systems (SIS).
III. Structural Engineering:
1. Platform Reinforcement Design: Design and detail the reinforcement of existing process platforms to accommodate the increased weight of the upgraded equipment. This involves structural calculations, material specifications (e.g., A36 steel), and detailed shop drawings complying with local building codes and relevant API standards.
2. Pipe Support Design: Design and detail the pipe support structures for the new piping added during the upgrade, including detailed calculations and drawings to ensure that the new piping complies with ASME B31.1 or B31.3 standards. This will consider the weight and operating conditions of the pipes and associated stress analysis.
3. Seismic Analysis: Perform a seismic analysis of critical structural components to ensure compliance with relevant building codes and industry best practices. The analysis should consider the updated equipment weights and potential seismic loads, providing a detailed report documenting findings and recommendations for mitigation.
IV. Cross-Disciplinary Tasks:

1. HAZOP Study: Conduct a Hazard and Operability (HAZOP) study involving all three disciplines to identify and mitigate potential hazards associated with the upgrade. This will involve the creation of a HAZOP study matrix, documenting potential hazards, consequences, causes, and recommended safeguards.
2. P&ID Review & Integration: Conduct a thorough review and integration of the P&ID across all disciplines to ensure consistency and prevent conflicts between process design, instrumentation, and structural requirements. This ensures all disciplines are using a shared understanding of the facility layout and functionality.
Complexity Impact Note: The complexity level (3/5) reflects the need for significant modifications and upgrades, requiring detailed engineering calculations and design work across multiple disciplines, but does not involve highly specialized or novel technologies.

REQUEST FOR QUOTATION

Request for Quotation (RFQ): Drill Douglaston Safety Compliance

Project: Upgrade of Oil & Gas Processing Facility at Douglaston, NV

Issued: April 9, 2025 Due: May 1, 2025

Project Goal: Increase throughput by 15% and improve safety compliance. Complexity: 3/5

Scope of Work: Detailed in the attached Appendix (see below). This includes Process Engineering, Instrumentation & Controls, Structural Engineering, and cross-disciplinary HAZOP study and P&ID integration. Applicable regulations include OSHA and relevant API standards (e.g., API 650, API 510, API 521, ASME B31.1/B31.3).

Qualifications: Minimum 3 years of experience in Oil & Gas processing facility upgrades, with a proven track record of regulatory compliance.

Proposal Requirements:

1. Technical Approach (1-2 pages): Summarizing your proposed methodology for each scope item.

2. Detailed Cost Breakdown: Clearly outlining all labor, materials, and other costs.

Evaluation Criteria:

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

Schedule:

*** RFQ Release: April 9, 2025**

*** Questions Due: April 16, 2025**

*** Proposals Due: May 1, 2025**

*** Project Start: May 10, 2025**

*** Project Duration: 9 months**

Contract Type: Time & Materials

Submit Proposals to: procurement@oil&gas.com

Appendix: Detailed Scope of Work (Summary)

The detailed scope of work is attached separately and includes: Process Simulation & Optimization, Heat Exchanger Design, Relief System Sizing, PLC Programming & HMI Development, Instrument Selection, Control System Validation, Platform Reinforcement, Pipe Support Design, Seismic Analysis, HAZOP Study, and P&ID Review & Integration.

CONTACT

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TIMELINE

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