REQUEST FOR PROPOSAL (RFP)

Johnson-Richards

PROJECT OVERVIEW

Name: Chem Shanemouth Capacity Enhancement
Type: Capacity Enhancement
Location: East Shanemouth, AR (Industrial Park)
Industry: Chemical Processing
Value: $1,673,404
Complexity: 1/5
Date: April 09, 2025
Disciplines: Environmental Engineering, Mechanical Engineering
Regulations: NFPA Codes, EPA Requirements

SCOPE OF WORK

Scope of Work: Chemical Processing Capacity Enhancement Project

Project Goal: Increase processing capacity of existing chemical plant within an industrial park by 15%, focusing on improved efficiency and minor infrastructure upgrades. This project is a Level 1 complexity.

I. Environmental Engineering

Task 1: Wastewater Treatment Optimization: Assess the existing wastewater treatment plant's capacity to handle the increased effluent load resulting from the 15% capacity increase. Develop and implement minor modifications to the existing activated sludge system, including the potential addition of a secondary clarifier with dimensions of 10m diameter x 3m depth, to meet EPA discharge limits specified in permit number [Insert Permit Number]. Deliverables include a revised PFD (Process Flow Diagram), updated permit application (if needed), and an operational manual for the modified system.

Task 2: Air Emissions Monitoring and Reporting: Conduct an air emissions inventory to identify potential increases in volatile organic compound (VOC) emissions resulting from the capacity expansion. Install and calibrate a new continuous emission monitoring system (CEMS) for VOCs using a [Specify Type, e.g., FID] analyzer compliant with EPA Method 25A, providing quarterly reports on emissions data and demonstrating compliance with NFPA 68 standards for the handling of VOCs during processing.

II. Mechanical Engineering

Task 3: Pump Capacity Upgrade: Evaluate the existing process pumps and determine if capacity upgrades are needed to accommodate the 15% production increase. Replace two existing centrifugal pumps (Type: [Specify Pump Type], Capacity: [Specify Current Capacity], Head: [Specify Current Head]) with higher capacity models (Capacity increased by 20%, Head maintained, Material: 316 Stainless Steel, meeting ASME B31.1 standards for piping systems). Deliverables include pump specifications, procurement documentation, and installation drawings.

Task 4: Process Piping Modifications: Modify existing process piping in the reaction zone (approximately 50 meters of 4-inch diameter Schedule 40 carbon steel piping) to accommodate the increased flow rate, ensuring the modified system complies with ASME B31.3 standards for process piping. This includes detailed isometric drawings, material specifications, and bill of materials for all modified components.

III. Cross-Disciplinary Tasks

Task 5: Integrated Process Safety Review: The Environmental and Mechanical Engineering teams will jointly review the modified process to identify and mitigate any potential environmental or safety hazards associated with the capacity increase. This review will incorporate HAZOP (Hazard and Operability) principles and generate a comprehensive risk assessment report addressing potential concerns highlighted by the capacity upgrades. The report will comply with NFPA standards, detailing mitigation strategies and updated safety procedures.

Task 6: Permitting and Regulatory Compliance Coordination: The Environmental and Mechanical engineering teams will collaborate to ensure all necessary permits and regulatory approvals (EPA and local) are obtained before project commissioning. This includes preparing and submitting all required documentation to relevant authorities and addressing any feedback received.

Complexity Impact Note: The overall project complexity remains low due to the focus on minor upgrades and well-defined tasks.

REQUEST FOR QUOTATION

Request for Quotation (RFQ): Chem Shanemouth Capacity Enhancement

Project Name: Chem Shanemouth Capacity Enhancement

Location: East Shanemouth Industrial Park, AR

Industry: Chemical Processing

Date: April 09, 2025

1. Introduction:
This RFQ seeks proposals for a capacity enhancement project at a chemical processing plant in East Shanemouth, AR. The project aims to increase processing capacity by 15% through improved efficiency and minor infrastructure upgrades. The project is considered Level 1 complexity.

2. Scope of Work:
The project encompasses environmental and mechanical engineering tasks, detailed below:
I. Environmental Engineering:

*** Task 1: Wastewater Treatment Optimization (activated sludge system modification, including potential secondary clarifier addition (10m diameter x 3m depth), revised PFD, updated permit application (if needed), operational manual). EPA permit number: [Insert Permit Number].**

*** Task 2: Air Emissions Monitoring and Reporting (VOC emissions inventory, CEMS installation & calibration using [Specify Type, e.g., FID] analyzer, quarterly reports, compliance with NFPA 68).**
II. Mechanical Engineering:

*** Task 3: Pump Capacity Upgrade (replacement of two centrifugal pumps (Type: [Specify Pump Type], Capacity: [Specify Current Capacity], Head: [Specify Current Head]) with higher capacity models (20% capacity increase, same head, 316 Stainless Steel, ASME B31.1 compliant)).**

*** Task 4: Process Piping Modifications (modification of ~50 meters of 4-inch diameter Schedule 40 carbon steel piping in the reaction zone, ASME B31.3 compliant; isometric drawings, material specifications, bill of materials).**
III. Cross-Disciplinary Tasks:

*** Task 5: Integrated Process Safety Review (HAZOP analysis, risk assessment report, NFPA compliant mitigation strategies & updated safety procedures).**

*** Task 6: Permitting and Regulatory Compliance Coordination (EPA and local approvals).**

3. Qualifications:
Bidders must demonstrate 3+ years of experience in chemical processing and proven regulatory compliance (EPA, NFPA).
4. Proposal Requirements:
Proposals should include:
* Technical designs (1-2 pages)
* Detailed cost breakdown
5. Evaluation Criteria:
Proposals will be evaluated based on: Technical merit (50%), Cost (30%), and Experience (20%).

6. Timeline:

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

*** Questions Due: May 02, 2025**

*** Proposals Due: May 07, 2025**

*** Project Start: May 16, 2025**

*** Project Duration: 5 months**

7. Contract Type: Fixed Price

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

CONTACT

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TIMELINE

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