

REQUEST FOR PROPOSAL (RFP)

Pearson PLC

PROJECT OVERVIEW

Name: Synth Matthewton Safety Compliance

Type: Safety Compliance

Location: Matthewton, ND (Factory Complex)

Industry: Chemical Processing

Value: \$4,552,942

Complexity: 1/5

Date: April 09, 2025

Disciplines: Piping & Pipeline, Environmental Engineering, Process Engineering

Regulations: EPA Requirements

SCOPE OF WORK

Scope of Work: Chemical Processing Plant ? Minor Upgrade Project

Project Goal: Upgrade the existing chemical transfer system to improve efficiency and ensure compliance with relevant EPA regulations for wastewater discharge.

Discipline: Piping & Pipeline

1. Upgrade Chemical Transfer Line: Replace 50 meters of existing 4-inch schedule 40 carbon steel piping with 4-inch schedule 80 PVC piping, from the Reactor Vessel #3 to the storage tank. This task includes the preparation of isometric drawings, material specifications compliant with ASTM D1785, and detailed installation procedures to minimize disruption to ongoing operations. Welding will not be required for this specific upgrade.
2. Install New Check Valve: Install a new 4-inch swing check valve (material: 316 stainless steel, conforming to ANSI B16.34 standards) on the discharge line of pump P-101 to prevent backflow. This will involve preparing a detailed valve specification, procuring the valve, and creating installation instructions for seamless integration with the existing piping system. Pressure testing to 150 PSI will be required after installation.

Discipline: Process Engineering

1. Optimize Chemical Feed Rate: Optimize the chemical feed rate to the Reactor Vessel #3 using existing process control instrumentation to improve product yield by 5%. This will involve analyzing historical process data, proposing and implementing minor adjustments to the existing Programmable Logic Controller (PLC) program, and documenting the changes in a revised Process and Instrumentation Diagram (P&ID).
2. Develop Updated Process Safety Information (PSI): Update relevant sections of the Process Safety Information (PSI) document to reflect the piping and process changes. This update will include revising the Process Hazard Analysis (PHA) to account for potential hazards associated with the new piping and valves, and documenting the updated safety procedures.

Discipline: Environmental Engineering

1. Wastewater Discharge Monitoring: Implement enhanced wastewater discharge monitoring system. This includes installation of additional flow meters and pH sensors for continuous monitoring of the wastewater discharge stream from the process. Data will be logged and regularly reported according to EPA regulations for discharge permits.
2. Wastewater Treatment Optimization: Evaluate the existing wastewater treatment system to identify minor adjustments to optimize pH neutralization. This includes analyzing current wastewater composition data and proposing minor modifications to the existing chemical addition system, to ensure compliance with EPA discharge limits for pH. This optimization is projected to reduce chemical consumption by 3%.

Cross-Disciplinary Tasks:

1. Joint Site Walk-Through and HAZOP: Conduct a joint site walk-through with representatives from Piping & Pipeline, Process Engineering, and Environmental Engineering to identify and resolve any potential conflicts or interdependencies between the different upgrade tasks. This walkthrough will be documented and used to create a detailed HAZOP (Hazard and Operability Study) for the entire system.
2. Integrated Testing and Commissioning: Develop a collaborative plan for the testing and commissioning of the upgraded system, encompassing all three disciplines. This plan will include a phased approach, starting with individual component testing followed by integrated system testing, ensuring seamless operation of the entire upgraded chemical transfer system.

Complexity Impact: The project is classified as Level 1 complexity due to the minor nature of the upgrades and limited scope of work.

REQUEST FOR QUOTATION

Request for Quotation (RFQ): Synth Matthewton Safety Compliance

Project Name: Synth Matthewton Safety Compliance

Location: Matthewton, ND Factory Complex

Industry: Chemical Processing

Date Issued: April 9, 2025

Due Date: May 13, 2025

Project Goal: Upgrade chemical transfer system at Reactor Vessel #3 to improve efficiency and ensure EPA wastewater discharge compliance. (Complexity Level: 1/5)

Scope of Work: The project involves minor upgrades encompassing piping, process engineering, and environmental engineering disciplines. Specific tasks include:

- * Piping & Pipeline: Replacing 50m of 4" Schedule 40 carbon steel piping with 4" Schedule 80 PVC piping; installing a 4" 316 stainless steel swing check valve (ANSI B16.34 compliant).
- * Process Engineering: Optimizing chemical feed rate to Reactor Vessel #3 (5% yield improvement); updating Process Safety Information (PSI) including Process Hazard Analysis (PHA).
- * Environmental Engineering: Implementing enhanced wastewater discharge monitoring (flow meters, pH sensors); optimizing wastewater treatment system (3% chemical reduction).
- * Cross-Disciplinary: Joint site walkthrough & HAZOP; integrated testing and commissioning plan.

Deliverables:

1. Detailed technical design (1-2 pages) including isometric drawings, material specifications (ASTM D1785), valve specifications, installation procedures, revised P&ID, updated PSI/PHA, and testing/commissioning plan.
2. Comprehensive cost breakdown.

Qualifications: Minimum 3 years' experience in chemical processing with a proven track record of regulatory compliance.

Evaluation Criteria: Technical Approach (50%), Cost (30%), Experience (20%).

Contract Type: Fixed Price

Timeline:

* RFQ Release: April 9, 2025

* Questions Due: April 22, 2025

* Proposals Due: May 13, 2025

* Project Start: May 4, 2025

* Project Duration: 5 months

Submit Proposals to: procurement@chemicalprocessing.com

CONTACT

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TIMELINE

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