

REQUEST FOR PROPOSAL (RFP)

Banks PLC

PROJECT OVERVIEW

Name: Synth Adamfort Safety Compliance

Type: Safety Compliance

Location: Adamfort, CT (Refinery Zone)

Industry: Chemical Processing

Value: \$14,697,365

Complexity: 3/5

Date: April 09, 2025

Disciplines: Environmental Engineering, Process Engineering, Piping & Pipeline

Regulations: ISO 14001

SCOPE OF WORK

Scope of Work: Industrial Chemical Processing Plant Upgrade

Project Goal: Upgrade the existing chemical processing plant's waste treatment and process line to improve efficiency and environmental compliance, adhering to relevant sections of ISO 14001 where applicable.

Disciplines: Environmental Engineering, Process Engineering, Piping & Pipeline

Environmental Engineering:

1. Wastewater Treatment Optimization: Conduct a comprehensive audit of the existing wastewater treatment system, identifying areas for improvement in effluent quality (e.g., BOD, COD reduction). Develop and deliver a detailed report recommending process modifications, including equipment upgrades (specify pumps, filters, etc., with capacity and material requirements) and operational changes to meet discharge permit limits. This report must include a cost-benefit analysis of proposed modifications.

2. Air Emissions Monitoring & Control: Develop and implement a plan for continuous monitoring of air emissions from the process line, focusing on VOCs and particulate matter. This plan must include specification of monitoring equipment (specify type, accuracy, and frequency of measurements), sampling procedures, and reporting protocols complying with relevant environmental regulations. The plan will detail strategies to reduce emissions below permitted limits, including best available technology assessments.

3. Spill Prevention, Control, and Countermeasures (SPCC) Plan Update: Conduct a site-wide assessment to update the existing SPCC plan. This will involve updating the facility map, identifying potential spill sources and vulnerable areas, and developing improved containment and response strategies. This updated plan needs to include detailed procedures, emergency contact lists, and equipment specifications (e.g., size and type of spill containment booms, absorbents).

Process Engineering:

1. Reactor Optimization: Redesign the main reactor's internal components (e.g., baffles, agitators) using computational fluid dynamics (CFD) modeling to improve mixing efficiency by 15%, aiming for a 10% increase in yield. This task includes detailed 3D modeling of the reactor internals, specifying material selection (e.g., 316L stainless steel) based on process conditions and providing detailed fabrication drawings and specifications.

2. Heat Exchanger Upgrade: Replace the existing heat exchanger in the process line with a more efficient plate-and-frame design, increasing heat transfer coefficient by at least 20%. This task will involve detailed thermal calculations, selection of appropriate plate materials (e.g., titanium or Hastelloy, specifying thickness and surface area), and the development of procurement specifications for the new heat exchanger.

Piping & Pipeline:

1. Process Line Rerouting: Design and specify the rerouting of a 50-meter section of 6-inch diameter process piping carrying corrosive chemicals (specify chemical composition). This rerouting will involve the creation of isometric drawings, bill of materials, material specifications (e.g., ASTM A312 TP316L), and a detailed risk assessment. The design must adhere to ASME B31.3 standards.

2. New Chemical Feed Line Installation: Design and install a new 2-inch diameter stainless steel (304L) feed line for a new chemical reactant, incorporating appropriate isolation valves and instrumentation. This will involve the creation of detailed piping and instrumentation diagrams (P&IDs), isometrics, and specifications for all components, ensuring compliance with relevant industry codes and standards (specify codes). Installation will include pressure testing and leak detection procedures.

Cross-Disciplinary Tasks:

1. HAZOP Study: Conduct a Hazard and Operability study (HAZOP) covering the entire scope of the upgrade, including the new piping, process equipment, and revised wastewater treatment system. This study will identify potential hazards and operability issues, resulting in a comprehensive HAZOP report with recommended mitigation strategies and control measures. The report needs to be jointly reviewed and approved by all participating disciplines.

2. Environmental Impact Assessment: Conduct a preliminary environmental impact assessment (EIA) for the upgraded system, considering all aspects of the project, including wastewater discharge, air emissions, and potential impacts on surrounding ecosystems. This assessment will involve collaboration between environmental and process engineers to identify, evaluate, and mitigate potential environmental impacts, resulting in a documented mitigation plan and compliance strategy aligning with ISO 14001 principles where applicable.

Complexity Impact Note: The project complexity is rated as 3/5 due to the combination of process upgrades, environmental compliance requirements, and the need for detailed design and engineering for various systems.

REQUEST FOR QUOTATION

Request for Quotation (RFQ): Synth Adamfort Safety Compliance

Project Name: Synth Adamfort Safety Compliance

Project Location: Adamfort Refinery Zone, CT

Industry: Chemical Processing

RFQ Release Date: April 9, 2025

RFQ Due Date: May 8, 2025

Project Start Date: May 2, 2025

Project Duration: 12 months

Contract Type: Time & Materials

Contact Email: procurement@chemicalprocessing.com

1. Project Overview:

This project involves upgrading the existing chemical processing plant's waste treatment and process line at the Adamfort Refinery Zone to improve efficiency and environmental compliance, adhering to relevant sections of ISO 14001. The work encompasses environmental engineering, process engineering, and piping & pipeline disciplines (detailed scope attached). Complexity level: 3/5.

2. Scope of Work: (See attached detailed scope of work document outlining specific tasks in environmental engineering, process engineering, and piping & pipeline, including a HAZOP study and environmental impact assessment.)

3. Vendor Qualifications:

Minimum 3 years of experience in chemical processing projects, with a proven track record of regulatory compliance in the chemical processing industry.

4. Proposal Requirements:

- * Technical Proposal (1-2 pages): A concise summary of your proposed approach, highlighting key methodologies and technologies to be employed for each task.
- * Cost Breakdown: A detailed cost breakdown outlining labor, materials, and other expenses.

5. Evaluation Criteria:

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

6. Important Dates:

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

* **Questions Due: April 29, 2025**

* **Proposals Due: May 8, 2025**

7. Detailed Scope of Work: (Attached separately)

Please submit your proposals electronically to procurement@chemicalprocessing.com by the due date. Late submissions will not be considered.

CONTACT

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TIMELINE

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