



**Sealander Associates, Inc.**  
*Environmental, Health & Safety Solutions*

**ASSOCIATE RESUME**

**HOWARD J. BOURGEOIS, JR.**

**SUMMARY OF QUALIFICATIONS**

Business and process orientated chemical engineer with more than 30 years experience providing technical, process engineering and environmental technical services. Hands-on process engineer with broad experience debottlenecking and optimizing a variety of hydrocarbon, water, wastewater, hazardous and oily waste, and solids separation processes. Worked extensively with Refinery, Chemical, Pulp & Paper, Gas Treating, Utility, Water and Wastewater, Hazardous Waste Treatment, Boiler, Cooling Water, Biological Wastewater process unit operations, and treatment chemicals.

Accomplishments are deeply rooted in understanding of the fundamentals of process engineering, and ability to identify process improvement opportunities and solve problems, achieve environmental compliance, and optimize operating cost. Utilizes environmental process engineering skills, people skills and business development experience to provide valued-added solutions to difficult process problems.

**EXPERIENCE**

Start-up process engineer for a 140,000 BPD Refinery Crude Unit. Commissioned process equipment. Conducted systematic performance studies on individual unit operations and control loops. Identified process bottlenecks, established operating strategies, and optimized process operations.

Designed and implemented complete revamps on over 30 Crude Unit Desalters. The objective was to achieve NESHAP Benzene compliance and improve performance. Inspected and redesigned vessel internals, installed improved instrumentation, optimized chemical consumption, trained operators, and developed operating strategy to minimize oily undercarry and water carryover.

Designed and implemented complete revamps for refinery oil/water and integrated wastewater treatment systems. Identified refinery point sources. Debottlenecked Separator, Activated Sludge, Slop oil recovery process operations. Provided operating training.

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Coordinated process improvement programs for several LPG and Naphtha Treaters to improve hydrogen sulfide and carbon dioxide removal, and to minimize amine solvent losses to the process sewer. Identified solvent contamination and corrosion dynamics. Optimized process and amine solvent chemistry to control corrosion and minimize solvent losses.

Developed chemical treatment and process operations to treat refinery and oil field slop oils. The objective was to maximize the recovery of free oil minimize oil content of wastewater.

Coordinated and implemented utility operation process improvement programs. Optimized chemical programs, and optimized unit operations for influent clarification, boiler, recirculating cooling water, and biological wastewater treatment processes.

Provided process engineering services for ground water treatment system utilizing a precipitation process for removing arsenic. Identified implemented needed process improvements, optimized individual unit operations, and control loops. Developed and implemented operating, maintenance, and analytical support programs.

Provided technical services to treat surface and ground water, at an abandoned wood treating location, contaminated with creosote and oil & grease. Evaluated several potential processes and recommended process equipment.

Coordinated and implemented process improvement programs. Optimized chemical programs, and optimized unit operations for influent clarification, boiler, recirculating cooling water, and biological wastewater treatment processes.

Provided chemical and process engineering support services for centrifuge, plate & frame, belt press filter operations. These units were dewatering biological sludges and hazardous wastes.

Developed an operating and control strategy for achieving BOD reduction and Nitrification in a single stage Activated Sludge Process. This refinery location had a sour crude slate and was a facing potentially large capital project.

Provided operating training seminars on biological and solids separation process operations.

Provided technical services for a major industrial wastewater treatment plant that utilizes ORP and precipitation processes for removing heavy metals. Identified and recommended needed process improvements, optimized unit operations and control loops. Provided technical service and supervision for maintenance turnarounds and emergency repairs on major process equipment. Developed and recommended operating, maintenance, analytical support strategies.

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Recommended and implemented process improvements and related equipment. Provided operator training.

Provided technical and scientific support for litigation activities of a major superfund case. Processes included; Butadiene, Methanol, Ammonia, Acetylene, EDC, VCM, PVC, Ethylene, MVP, TEL, and Refining. Performed detailed analysis of process operating and maintenance strategies, and wastestream management practices. Developed wastestream characterization data.

Provided technical services for a major industrial wastewater treatment plant membrane filtration system and a water wall paint booth. Identified and recommended needed process improvements, optimized unit operations and control loops. Provided technical service for maintenance turnarounds and emergency repairs on major process equipment. Developed and implemented operating, maintenance, analytical support strategies. Implemented process improvements and related equipment. Provided operator training.

### **EDUCATION & AFFILIATIONS**

Lamar University, Master of Engineering 1973

Lamar University, B.S. Chemical Engineering 1970

American Institute Of chemical Engineers

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