



With the federal government's tightening of the regulatory standards on wastewater discharges, industrial manufacturers are focusing more on waste minimization, environmental stewardship, process optimization, and operational cost reduction. Many facilities are looking at advanced treatment technologies to comply with strict regulatory standards, optimize their process operations, and reduce cost. In addition, corporate downsizing has pushed industrial manufacturing operations toward outsourcing and privatization of their wastewater treatment operations and process engineering support.

Premier Environmental Services, Inc. (Premier) provides wastewater services to food processing, pulp and paper, metal finishing, steel, agricultural, chemical, petrochemical, and pharmaceutical industries. Industrial wastewater management services offered by Premier include:

FEASIBILITY STUDIES/CONCEPTUAL DESIGN

Premier offers feasibility studies to define client need and identify and evaluate available treatment alternatives to determine their technical and economic viability. Feasibility studies are also used to determine the commercial availability of each treatment alternative. In addition, preliminary cost estimates are made during this phase.

WASTE CHARACTERIZATION

Waste stream characterization is a key step in successful design and engineering of any treatment system. When available, historical data are generally used to determine the physical and chemical characteristics of the waste stream (flow rate and constituent concentrations). In the absence of historical data, Premier develops a sampling and analytical program. Waste characterization data is used to establish the hydraulic and mass loading requirements of the treatment system.



PERMITTING SUPPORT

Premier helps industrial and municipal clients obtain reasonable and defensible pretreatment and NPDES discharge permits:

- Regulatory analysis
- Comprehensive permitting
- Permit negotiations and advocacy
- Facility compliance audits
- Compliance monitoring and reporting
- Environmental data management
- Expert testimony in permit appeals and

BENCH AND PILOT SCALE TREATABILITY STUDIES

Bench and pilot scale treatability studies are important tools in designing a new waste treatment system or upgrading an existing one. Premier performs treatability studies to confirm the preliminary design information and develop operational parameter ranges. They are also used to determine the treatment efficiency of a proposed system. This information generally saves the client money and reduces risk in plant design and environmental compliance.

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Expertise: Dr. Darian has more than 25 years of experience in research and development, process and technology development, environmental management, process design and engineering, project management, marketing and business development for industrial clients including steel, metal finishing, chemical, petrochemical, pharmaceutical, and food processing industries. More specifically, Dr. Darian has designed biological and physical/chemical treatment facilities for the above industries to treat COD, BOD, Oil and Grease, ammonia, sulfide, heavy metals, and cyanide contaminants. Dr. Darian has published and presented 12 papers and has filed seven patents in the U.S. and abroad

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Expertise: Mr. Byrd has over 25 years of experience in process design, development and control in the chemical, refining, pharmaceutical, metal finishing, ore beneficiation, steel and general manufacturing industries. He has supervised professional teams and provided lead engineering for testing, design, start-up, optimization, operations, product development, scheduling, cost estimating, site audits, conceptual design, pilot testing, field testing, production run testing, environmental permit applications, regulatory agency interactions, facility environmental compliance audits, pollution prevention program start-up, business plans and business development.

To learn more about any of Premier's services, please contact any of our staff or visit our website at:

www.premiercorp-usa.com



Wastewater Services



PROCESS DESIGN PACKAGE

A Process Design Package defines in detail the recommended treatment system and is generally completed before detailed design and engineering activities begin. Process design packages are normally used as the starting point for detailed design and engineering as well as the basis for more detailed cost estimates and equipment sizing. Premier professionals use the waste characterization data and the treatability study results (if available) to prepare a Process Design Package for the client.

CAPITAL AND OPERATING COST ESTIMATES

Capital and operating cost estimates are made several times in the course of a project to make go/no go decisions by the client on a treatment process. Preliminary cost estimates are prepared during the feasibility study and conceptual design phase to compare the technically-viable treatment alternatives. More accurate cost estimates are only possible after the preparation of the Process Design Package.



DESIGN BASIS DEVELOPMENT

The Design Basis developed by Premier provides the following information:

- Flow and composition of waste streams
- Operating conditions
- Preliminary equipment size and capacity
- Preliminary cost estimate
- Process Flow Diagram
- Process control strategy
- Expected treatment plant performance, etc.

CONSTRUCTION MANAGEMENT

Construction Management can have a significant impact on the project when involvement starts with the preliminary engineering and continues through the completion of the construction and start up of the project. Premier's Construction Manager will provide the following services:

- Monitor and record progress of engineering and procurement tasks
- Communicate with equipment suppliers and facility owner
- Assist in evaluation of construction packages and construction bids
- Expedite delivery of equipment to the job site
- Organize and supervise all field work
- Coordinate construction with plant activities (e.g., control change orders, enforce plant rules and regulations, and monitor progress)
- Premier can provide turnkey design build services where appropriate

OPERATOR TRAINING

Premier's Process Engineers can provide assistance in training client's field operators to conduct their day to day activities successfully. Premier's Process Engineers can also help the field operators set up in-house analytical programs to eliminate high cost and long turn around times associated with commercial laboratories.

START UP AND OPERATIONAL SUPPORT

Successful plant-start up and compliance with regulatory standards is one of the most important steps in implementation of any treatment process. To ensure successful plant start up, process engineers must be involved in all phases of project development from conceptual design through detailed design and engineering. Premier assigns process design and start up specialists to help client's field operators successfully start up and operate the treatment plant. Analytical programs are developed to ensure successful start up, operation and compliance with regulatory standards. Effective communication is established to ensure that field operators have access to Premier's process design specialists during the critical start up and operational phase.