



**Causey Engineering  
LLC**

Gerald J. Hietpas, PE  
President

## Causey Engineering LLC

*"Forensic and Investigative Services"*

PO Box 341057-0018

Austin, TX 78734

[www.CauseyEngineering.com](http://www.CauseyEngineering.com)

Phone & Fax (512) 261-3930

[jhietpas@austin.rr.com](mailto:jhietpas@austin.rr.com)

## Curriculum Vitae

***B. ALAN PHILLIPS, P.E., MSCE***



***Mr. Phillips is an associate of Causey Engineering LLC. Causey Engineering has for over 18 years been providing forensic and investigative engineering services and litigation support, specializing in industrial and construction regulations and safety issues. Mr. Phillips has extensive expertise in civil and environmental engineering. His experience includes municipal water and wastewater facility design, as well as environmental consulting in the manufacturing industry. He has extensive experience in air emissions quantification, emissions inventories, air sampling and monitoring, air dispersion modeling, quality permitting and planning, as well as air pollution control system selection and design.***

### ***Education***

#### **Louisiana Tech University**

B.S. Petroleum Engineering, 1984

#### **Foreign Languages**

Fluent in Spanish

#### **University of Tennessee at Knoxville**

M.S. Civil and Environmental  
Engineering, 1995

### ***Registrations:***

**Professional Engineer:** Texas, Louisiana

### ***Work Experience:***

**Causey Engineering LLC, Austin, TX 2005 to Present**

***Forensic Expert:*** Provide Forensic Engineering and investigative work related to the water and wastewater industry. Causey Engineering LLC provides engineering and operations analysis, governmental regulation investigation and interpretation, accident reconstruction and litigation support primarily related to utilities, water and wastewater, food manufacturing, material handling, pulp and paper mills, lumber manufacturing, chemical plants, central power stations, gas and oil production, refineries, railroads, construction, and warehousing.

**Balcones Engineering, LLC, Austin, TX 2005 to Present**

*Principal:* Designed sodium hypochlorination facility to replace gas chlorine disinfection for WWTP. System consisted of bulk storage tank facility, transfer pumps, day tank, metering pumps, injector vault and all process piping. Facility is in construction phase.

Designed water transmission to extend an upper pressure plane. Modeled concept using WaterCAD. Project expected to bid first quarter 2006.

**Carter & Burgess, Inc., Austin, TX 2003 - 2005**

*Lead Design Engineer:* Designed membrane water treatment plant. Facility included chemical facilities for pH adjustment, upflow clarification, chloramination, and fluorination. Facility also included new clarifiers, complete membrane treatment package, membrane feed and high-service pump station, and two ground storage clearwells.

*Lead Design Engineer:* Designed high service pump station. Prepared preliminary and final plans and specifications. Provided construction administration through facility startup.

Developed water master plan for a County. Analyzed costs of various water supply alternatives to provide long-term water resources to major and remote communities.

Performed preliminary design a water intake station and transmission pipeline. Evaluated intake configurations including conventional tower intake, sloped barrel, dredged channel and floating intake. Developed preliminary alignment report, and detailed cost opinions of intake options.

**Camp Dresser & McKee, Austin, TX 1997-2003**

*Lead Design Engineer:* Designed expansion of Waste Water Treatment Plant (WWTP). Designed new headworks facility with bar screens, traveling bridge grit removal, screenings washer/conveyors, and grit washing/classification equipment. Lead author on publication presented at Texas Water 2003 highlighting project.

Designed major elements of a WWTP. Facilities included headworks, screening, degritting, grease removal, odor control, as well as solids handling and dewatering.

Designed major elements of a WWTP. Facilities included headworks, screening, "bulls eye" treatment structure, sludge holding, aeration and disinfection.

Designed upgrades for a WWTP. Facilities included rehabilitation of aeration basins, air bridges, clarifier equipment and odor control equipment.

Designed sewage lift stations and pipelines for a municipality

Designed pumping station improvements for a Utility District to realize energy efficiencies. Used creative construction financing to save money.

Designed sludge pumping stations at three WWTPs for a large city. Project scope involved long-range transfer of blended primary and secondary sludge for dewatering at a central plant. Evaluated alternative pumping systems for the project.

Assisted industrial client with odor problems developing at wastewater treatment plant. Implemented upstream manufacturing process modifications, along with an improved waste treatment unit process to eliminate downstream odors.

*Project Engineer:* Evaluated and designed improvements to water and wastewater facilities at approximately 133 State Parks and Wildlife sites. Performed on-site evaluation and analysis of wastewater treatment systems, as well as drinking water treatment systems at several state parks. Prepared recommendations with estimated costs for those facilities.

Prepared plans and specifications for a dewatering facility at a WWTP. Designed installations for a sludge dewatering belt press, a sludge pump, and a polymer dosing system.

*Project and Construction Manager:* Developed a soil remediation project for an overseas industrial client. Project involved deep excavation and treatment of contaminated soils at a chemical process plant. Managed subcontracts, regulatory issues and provided resident engineering services. Provided final reports in English and Spanish.

*Lead Engineer:* Designed upgrade to a solid waste landfill facility. Highlights included capture, pumping and treatment of landfill leachate.

Prepared Risk Management Programs for several Cities. These projects involved a total of 4 wastewater treatment plants, a water treatment plant and three pumping stations. Hazardous substances included chlorine and sulfur dioxide. Conducted air dispersion modeling to analyze offsite impacts of the toxic gases. Developed piping and instrument diagrams, and conducted detailed hazard reviews for each system. Developed operating and maintenance procedures, incident investigation, compliance audit, and emergency response programs for each facility to complete the project.

*Project Manager:* Evaluate environmental management procedures at international manufacturing plants in three countries. Worked with non-English speaking personnel and managers. Prepared project deliverables in both English and Spanish.

## **CH2M HILL, San Antonio, TX 1995 – 1997**

Designed and managed construction of large industrial wastewater treatment plant upgrade. Redesigned process to handle increased load of high-strength industrial wastewater. Project included process modifications, new technologies, clarifier rehabilitation, pressure filter instrumentation and controls upgrade, and a chemical system renovation. Effluent reused for grounds irrigation.

*Project Manager:* Conducted a process water treatment pilot plant study at large industrial facility. Evaluated various process water treatment technologies as alternatives to conventional chemical treatment.

*Project Manager:* Conducted an innovative remedial technology demonstration associated with groundwater contamination at a large industrial site. Managed all subcontracts associated with the task. Responsible for the final results of the technology evaluation.

*Project Lead:* Developed Risk Management Programs under CAAA Accidental Release Rules at two wastewater treatment plants for a major city Water Utilities. Developed operating and maintenance procedures, and piping and instrument diagrams for chlorine, sulfur

dioxide, and digester gas systems. Led Hazard and Operability Studies (HAZOPs) to investigate release risks, consequences, and mitigation measures. Recommended design modifications for code compliance and/or enhanced safety.

**University of Tennessee**, Knoxville, TN 1993 - 1995

*Graduate Research Assistant:* Designed and fabricated two Heating, Ventilating, and Air Conditioning (HVAC) pilot plants, including instrumentation and controls at the University Operated filtration test units to investigate the efficacy of experimental anti-microbial and high inertia indoor air quality filtration media. This research yielded three technical publications.

**Waste Reduction Technologies, Inc.**, Nashville, TN 1991 - 1993

*Environmental Engineer:* Prior to pursuing a Masters Degree in Civil and Environmental Engineering, worked as an Environmental Engineer on numerous industrial projects. These projects covered issues including air quality, solid and hazardous waste, as well as stormwater and wastewater management. Solely responsible for contracting and conducting a Bilingual Workshop on Pollution Prevention with EPA & Mexico's SEDESOL.

### ***Publications:***

**"State of the Art Headworks Rises in Austin"**. *Proceedings, Texas Water 2003*, Corpus Christi, Texas. Phillips, B.A. and Clyde Burnett.

**"Energy Conservation Measures for a Large Metropolitan Groundwater Utility"**. *Proceedings, AWWA National Convention*. Washington, DC. Phillips, B. A., C. H Burnett, and J. James, 2001.

**"Risk Management Planning for the Water and Wastewater Treatment Industry: Case Study with Lessons Learned"**. *Proceedings, 90th Annual Meeting & Exhibition of the Air & Waste Management Association*. Toronto, Canada. Phillips, B.A., J. Witherspoon, and J. Taylor, 1997.

**"Investigation of the Particle Collection Efficiency of Melt-Blown Media at high Air Velocity"**. *Advances in Filtration and Separation Technology*. Kyung-Ju Choi, Ed., American Filtration and Separation Society. 9, 224-239. Phillips, B.A., W.T. Davis, and M. Dever, 1995.

**"Evaluation of the Filtration Performance of Biocide-Loaded Filter Media"**. *Proceedings, A&WMA Conference on Engineering Solutions to Indoor Air Quality Problems*. Research Triangle Park, NC, July 24-26. Davis, W.T., M. Dever, A. Phillips, and J.E. Armstrong, 1995.

**"Investigation of the Effect of a Topically-Applied Tackifier in Reducing Particle Bounce in a Melt-Blown Air Filter"**. *Filtration and Separation*. 33(10), 933-939. Phillips, B.A., W.T. Davis, and M. Dever, 1996.

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