



CREDENTIALS

- ◆ PhD Environmental Engineering, University of Pittsburgh, 1999
- ◆ MS Chemical Engineering, University of Pittsburgh, 1995
- ◆ BS Chemical Engineering, Tsinghua University, 1991

PROFESSIONAL EXPERIENCE

- ◆ 2020 – Present: ALL4 LLC, Houston, TX – Managing Consultant
- ◆ 2011 – 2020: Energy Transfer, Houston, TX – Staff Engineer
- ◆ 2006 – 2011: Trinity Consultants, Houston, TX – Sr. Consultant

TECHNICAL EXPERTISE

- ✓ State and Federal air permitting programs including NSR, PSD, Title V
- ✓ Complex dispersion modeling using AERMOD
- ✓ Detailed rule applicability study such as NSPS, NESHAP and MACT
- ✓ Development of Emission inventory
- ✓ Review of Spill Prevention, Control, and Countermeasure (SPCC) plans
- ✓ Audit program for industry
- ✓ Stormwater Pollution Prevention (SWP3) Plans
- ✓ Development of tools for compliance
- ✓ Environmental system implementation such as opsInfo and ACTS
- ✓ Experiences cover different industry sectors including oil and gas, refinery, chemical plants, crude and gasoline terminals, painting operation, shipyards, etc.

PROFESSIONAL OVERVIEW

Dr. Liu has over 15 years of experience in air permitting, dispersion modeling and compliance in states like Texas, Louisiana and Florida. His main focus is to guide and prepare NSR, PSD/NA and Title V permits for various clients. As an integral part of a permit application, he leads the effort to utilize air dispersion models such as SCREEN3, AERSCREEN and AERMOD to satisfy NAAQS and health impact requirements. He performs applicability determination of NSPS, NESHAP and MACT rules for certain industries. He also conducts BACT analysis at various levels. In addition, he has involved in emission inventory and preparation of compliance plans. He has hands-on knowledge of implementing and utilizing environmental systems such as opsInfo and ACTS.

As a professional engineer, Dr. Liu has reviewed and sealed numerous permit applications for large multi-million dollars projects. He has helped a variety of clients such as oil and gas, crude and gasoline terminals, refineries, chemical plants, specialty chemicals, offshore deepwater ports, painting operations, shipyards, and concrete batch plants.