

## **COMPLIANCE PLANNING, POLLUTION PREVENTION and OPERATIONAL IMPROVEMENTS**

Because of our industrial background and experience, Leaf Environmental & Engineering, P.C. is able to integrate our evaluations of environmental compliance with operational requirements and other business needs of our clients. When working on an environmental issue for a client, we approach it as a business and operational issue, not as simply finding a solution to only a regulatory requirement. As a result, we often identify operational improvements, cost savings and other benefits to our clients as part of our basic support. Such improvements can lead to reduced compliance workload, such as less frequent monitoring, reduced regulatory requirements, such as reducing emissions below applicability thresholds, tax savings because of specialized tax credits, or reduced waste with attendant cost savings. Several representative examples are described as follows.

**CLIENT: Wood Furniture Manufacturer**  
**PROJECT: Optimized MACT Compliance**

This client's facility is a major source, subject to the wood furniture MACT regulation. One of our engineers worked closely with the client to evaluate the overall facility production, and recommend a comprehensive compliance approach. By evaluating production requirements, we were able to recommend changes that kept the plant's HAP emissions below the 50-ton threshold in 1996, and allowed the plant to have until December of 1998, rather than the early November, 1997 date for full compliance with the MACT. This later compliance date also enables the client to evaluate valuable industry experience before having to make final capital commitments. LEAF recommended production changes that are expected to have an economic payback of less than two years, in addition to assuring compliance. LEAF is also coordinating the final compliance approach with the client's future business needs to take advantage of emission netting and other options to reduce the impact of state air toxics regulatory requirements.

**CLIENT: Manufacturer of Wood Furniture Components**  
**PROJECT: HAP and Business Cost Reductions**

This new client contacted LEAF for assistance with an air permit application. Because of large quantities of HAP emissions, the facility was classified as a Title V source. Our engineers evaluated emissions from the plant in conjunction with evaluating plant operations. We determined that a minor process change would significantly reduce emissions of one HAP, while allowing the plant to triple production without exceeding the 10 ton threshold for potential emissions of that HAP. We also determined that if use of a second HAP, methylene chloride could be reduced, the plant could be reclassified as a non-Title V source. LEAF evaluated and recommended an acceptable alternative for methylene chloride, and the plant is now permitted as a synthetic minor facility, with the ability to expand production by a factor of three, if ever needed, without exceeding Title V thresholds.

**CLIENT: Textile Dyeing & Finishing Facility**  
**PROJECT: Reduction of Annual Emission Fees**

While reviewing an emission inventory prepared for this facility by another source, LEAF engineers noticed that VOC emissions were inconsistent with plant manufacturing operations. LEAF developed an emission inventory for the facility using accurate emission estimation methods, allowing the facility to claim a large reduction in reported VOC emissions from the facility. As a result, the annual air permit fee was reduced by approximately \$40,000 per year. In addition, previously submitted emission inventories were reviewed by LEAF and resubmitted on LEAF's recommendation using the alternative emission estimation method. Air permit fee refunds of approximately \$70,000 were provided to the facility by the state agency for prior reporting years.

**CLIENT: Industrial Equipment Manufacturer**  
**PROJECT: Integrated MACT and Business Plan**

This client's plant was classified as a Title V facility due to large emissions of methylene chloride from its degreasing operations. In addition, the degreasing operations were subject to the halogenated solvent MACT regulation. Our engineers evaluated the facility's operations and made recommendations to reduce the usage of methylene chloride significantly by implementing low-cost housekeeping and other low-cost options. These measures enabled the plant to comply with the MACT by meeting emission limit standards, rather than making expensive equipment modifications. We also advised our client of pending OSHA regulations that would significantly reduce allowable exposure levels for methylene chloride. When the OSHA regulations were finalized, we provided a detailed compliance assessment for our client, and recommended that an alternative solvent be considered due to the extensive cost of monitoring and other OSHA requirements. Our assessment identified for our client the potential savings in OSHA compliance costs and the ability to be reclassified from Title V to a small classification for the air permit.