

New Facility Air Permit Applications

CLIENT: Manufacturer of Synthetic Resin Components

PROJECT: Rapid Permitting for Business Expansion

Due to a significant increase in business, this company needed to rapidly expand and was planning a Greenfield plant. Production rates for the new plant were such that the plant's HAP emissions dictated it be a Title V facility. In addition, the plant's industry classification meant that case-by-case MACT would be required. The time delays and cost associated with these regulatory requirements were such that the client would not be able to meet its production demands in time. LEAF worked with the client to develop an alternate production scenario where production could be increased at another plant which would go from small to synthetic minor, and the Greenfield plant could be a synthetic minor source, thereby eliminating the need for case-by-case MACT, as well as eliminating the need for a Title V permit. LEAF prepared air permit applications, and the existing facility expanded production while the new facility was able to begin production as scheduled to meet new business demands.

CLIENT: Plastics Components Manufacturer

PROJECT: Modeling and Fast Permitting of New Plant

This client contacted us after being awarded a major contract that required rapid expansion of production. The facility needed to be in operation in less than six months, and required an air permit in about 4 months from the time our engineers were first contacted. Our engineers and scientists worked with the client to develop an application for a non-Title V permit to construct and operate that would accommodate maximum design and production. Because of large air toxics emissions, the plant triggered the North Carolina air toxics regulations, and air quality modeling was required to demonstrate compliance with the toxics ambient standards. Our engineers worked with the client, spray booth manufacturer and coatings vendor to ensure an overall compliance approach. We also worked closely with the air quality agency to ensure that all information needed for an expedited review was provided with the initial submittal, and to avoid any delays. The facility received an air permit in sufficient time to avoid any delays in start up testing or production.

CLIENT: Cigarette Manufacturer
PROJECT: Comprehensive Permits for New Facility

To reduce production costs, this cigarette manufacturer and ongoing client of LEAF made a decision to move from a multi-building, multi-floor manufacturing operation to a more efficient, single story manufacturing plant approximately 40 miles away. The new plant location would have the same manufacturing capacity.

LEAF became an integral part of the relocation project, providing all environmental permitting for the new facility, assisting with the design of environmentally sensitive installations, and tracking environmental issues at the old facilities to ensure continued compliance and minimize ongoing expense.

The project was completed ahead of schedule, within budget, and without any significant delay due to permitting or resolution of environmental issues. Some of the more significant tasks completed by LEAF included the following:

- New Synthetic Minor Air Permit
- Local POTW Significant Industrial User Determination
- Recommendations for design of underground flammable liquid storage
- Notification of Hazardous Waste Activity
- New Stormwater Permit
- New SPCC Plan
- New SWP³ Plan

CLIENT: Rubber Products Recycling Plant
PROJECT: Permit for Control Equipment

This new facility processes used automotive and trucking tires, and has particulate emissions associated with the basic operational process. The client learned at a late date that its facility would require an air permit, and we were approached with less than 45 days before scheduled operation of the plant. Our staff prepared the application for an air permit to construct and operate, including the associated pollution control equipment, and worked with the state air quality agency to ensure permit issuance in time to meet the client's scheduled operation date.

CLIENT: Cement Supplier
PROJECT: New Terminal

The client contacted LEAF after another engineering firm failed to obtain the proper air permit required for operation of the facility. Construction of the facility had already commenced and expeditious submittal of an application was paramount in order to obtain a permit. LEAF consulted with the plant design team and prepared an application within two weeks. A permit was issued for the facility prior to beginning operation.

Modifications to Existing Facilities

CLIENT: Nonwoven Textile Manufacturing Group
PROJECT: Merging of Air Permits

These two adjacently located nonwoven textile manufacturers were previously under separate management and each facility held an air permit. After both companies were brought under the same parent company, both air permits were merged into a single air permit. Our client requested that LEAF prepare an application to merge all air emission units, both significant and insignificant, at both facilities into one air permit. The permit merger application maintained the manufacturer's small status and operational flexibility, while establishing a new identification system and requesting several previously permitted insignificant emission units be excluded from the new air permit.

CLIENT: Nonwoven Textile Manufacturing
PROJECT: Permitting of New Production Line

This small nonwoven textile manufacturer was expanding operations to include two new production lines. An air permit modification application was prepared to first add the coating production line. As a coating operation LEAF was able to base potential emissions on projected actual emissions as per North Carolina Air Regulation 15A NCAC 2Q .0803, which resulted in maintaining the small source status. Completion of emission calculations based on the projected production rate, coating recipes and available emissions data, indicated the addition of the automotive coating line would result in an increase in hazardous air pollutants (HAPs), toxic air pollutants (TAPs), and VOC emissions. An evaluation of the projected actual emissions with respect to the Toxic Permitting Exemption Rate (TPER) showed projected actual formaldehyde emissions were greater than its TPER. Therefore modeling was required to demonstrate compliance with the formaldehyde Acceptable Ambient Level (AAL). LEAF conducted modeling using the highest hourly emission rate from the coating line that would still demonstrate compliance and keep VOC and HAP emissions below their respective major source thresholds. By conducting modeling and preparing the permit application in this manner, the facility has significant expansion room for production without additional permit modification.

CLIENT: Concrete Pipe Manufacturer
PROJECT: Air Permit for Plant Expansion

An existing facility was installing an additional production line that included several pieces of air pollution control equipment in addition to process equipment. LEAF prepared the air permit application, including assessing all emissions and potential future business requirements to ensure the permit allowed for future expansion. The facility's emission sources included the pipe manufacturing line, fugitive site sources, combustion and transportation sources.

CLIENT: Cigarette Manufacturer
PROJECT: Permit Audit and Compliance

After interpreting the requirements of the Clean Air Act Amendments for a cigarette manufacturer, our engineers advised the client concerning compliance with permitting, NESHAPS, and early reduction provisions, and assisted in developing long-range plans for BACT compliance. All processes were reviewed which resulted in the discovery of several unpermitted processes. We prepared an application for modification of the air permit and worked with the regulatory agency to correct the permit and bring the facility into compliance.

CLIENT: Aluminum Foundry
PROJECT: Toxics Reduction and Air Permit for Plant Expansion

The owner of the facility wanted to expand the existing facility by adding a number of additional aluminum melt furnaces to increase production. The expansion triggered the state air toxics regulations, as well as requiring an air permit modification prior to the expansion. LEAF was retained to develop the air permit modification. Emission factors which had been used for previous emission inventories were reviewed by LEAF and would have required that dispersion modeling be performed as part of the permit application. As part of our work on this project we researched the previous emission factors and determined that more appropriate emission factors should be used. This resulted in lower emissions that no longer required dispersion modeling for air toxics. LEAF then developed the necessary air permit application for the expansion.

CLIENT: Specialty Woven Fabric Manufacturer
PROJECT: Air Toxics Compliance

Our engineers inspected 8 textile manufacturing facilities and collected information relative to chemical usage, fuel usage, and finished product totals. The emissions of toxic air chemicals were determined by applying emission factors and were compared to state regulatory limits. We also advised the client of future requirements to comply with air toxics emissions regulations. Reports of all emission estimates with calculations were provided for planning of Title V compliance.

CLIENT: Cigarette Manufacturer
PROJECT: Control Equipment Selection and Permitting

Several control device technologies were evaluated to determine the most cost effective and efficient technology for removing odor, condensable organics, and particulates from a tobacco drying process. Two systems were selected for field testing based upon cost and applicability. Permits were obtained and a pilot cyclonic, counter current, wet scrubber and a pilot biofilter were evaluated separately and in conjunction to determine odor removal and particulate removal efficiency. The pilot biofilter setup, operating procedures and matrix were developed by one of our engineers. The pilot wet scrubber was tested for efficiency by performing EPA Method 5 particulate testing on the inlet and outlet ducts of the unit and determining VOC removal efficiency.

CLIENT: Knit Fabric Manufacturer
PROJECT: Modeling for Air Permit

A client with an existing facility needed to add a tenter frame and had less than 45 days from notification until scheduled startup. Due to large emissions of a state air toxic, the facility triggered the state regulation and modeling was required to demonstrate compliance with the ambient standards for that air toxic. LEAF's staff prepared a complete air permit modification, including the modeling protocol, modeling demonstration and report, and worked closely with the state air quality agency to obtain the permit modification in time to meet the client's critical startup schedule.