

University of Dayton Research Institute NANO Technology Lab

Kettering, OH

Construction Completion: 2014
Construction Cost: \$300,00
Size: 4,200 SF
Tri-Tech Services: ME Engineering



Project Description

The University of Dayton Research Institute implemented a process to utilize NANO-fiber Technology. Due to the cutting-edge nature of the technology, the process involved a potential for undefined environmental aspects. Special design considerations were required to minimize exposure. Tri-Tech evaluated the process and developed a control scheme for the unknown and undefined hazards associated with the research process.

In order to complete the design, Tri-Tech worked with UDRI to conceptualize the process constraints, which allowed for appropriate modifications to be made to the initial concepts provided by UDRI. Tri-Tech provided mechanical and electrical engineering for the project, which included replacement of air handling systems, modification of existing electrical distribution, and connection to new lab equipment as necessary. Throughout the process, Tri-Tech was instrumental in coordinating the layouts of equipment and process flow.

In addition to the containment concerns, the process utilized hazardous and combustible materials. The process area required classification as dictated by NFPA and the Ohio Fire Code. Tri-Tech also worked closely with the local and state fire marshals, providing supporting documentation, code research, and design information as necessary to satisfy code requirements.