TECHNOLOGY APPLICATION AND DEMONSTRATION (TAD) AWARD

FUNDED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
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SYRACUSE CENTER OF EXCELLENCE
in ENVIRONMENTAL and ENERGY SYSTEMS
OFFICE FOR INDUSTRY COLLABORATION

HAP CONTROL

PROJECT TITLE	Develop EPA/ETV Verification Protocol Draft for Cartridge-Based Biofiltration Systems
AWARD RECIPIENT	**HAPcontrol LLC** 105 Spencer St. Syracuse, NY 13204 www.hapcontrol.com
PROJECT DIRECTOR	Lew Daly, President
GRANT AMOUNT AWARDED	$150,000
PROJECT TERM	2007 - 2008

COLLABORATING PARTNERS

RTI INTERNATIONAL

ACMA American Composites Manufacturers Association

NYSERDA

TRIAD TRIAD TECHNOLOGIES, INC.

Cornell University Department of Microbiology

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PROJECT SUMMARY

The large picture illustrates two of the larger Bio-Furniture tables in line as a room divider/work table unit, with one cartridge removed. In the left lower picture, a single table in use on the Triad production floor is illustrated. The right lower picture illustrates a removable cartridge that contains preferential microbes.

HAPcontrol Inc. and its collaborating partners will develop a draft of a verification protocol to add HAPcontrol LLC's Cartridge-Based Biofiltration System and Bio-Furniture to the Environmental Protection Agency's (EPA) list of available approaches and equipment. The project also includes the design and construction of a test cell capable of verifying the complete line of products, construction of bio-furniture and verification of bio-furniture performance.

HAPcontrol's approach is to redefine natural biofiltration into a patented fully controllable and engineered system using preferential microbes tailored to efficiently degrade the specific target pollutant. This is united with the concept of combining source capture with control wherein the offending pollutant is captured at the source and then controlled or remediated and recirculated adjacent to the source and within the building. As part of the company's line of engineered Bio-Furniture, microbial activity is housed in cartridges mounted within table height airflow control modules that also serve as industrial furniture such as tables, walls, etc. to conserve valuable floor space and put the remediation close to the pollutant source point. All the design, tooling and prototyping have been completed and production floor use and verification is in process, being conducted by Cornell University under a Syracuse Metropolitan Development Association (MDA) Grants for Growth (GfG) matching funds program.

Goals are to improve the workplace air quality in industries releasing a HAP or VOC; eliminate the adverse environmental impact inherent to current systems and reduce the economic burden of mandatory industrial emissions compliance. HAPcontrol's objective is to supply versatile, low cost, rapid startup, high removal efficiency, low tech Bio-Furniture Systems with complete and transparent bio-activity control, and therefore provide the end user with a repeatable and long-lived HAP/VOC removal system.

Production-level Bio-Furniture will be constructed by July. The TTE test cell will be implemented and instrumented by August. The EPA/ETV Verification Protocol will be developed by September. Bio-Furniture performance results will be available prior to conclusion of the project in March 2008.