

Practical Application of Green Chemistry to Identify and Implement Safer Products

This work has identified effective alternatives to current hazardous air pollutants (HAP) and volatile organic compounds (VOC) used in degreasing applications in maintenance operations at industrial, manufacturing, and automotive service businesses in Minnesota.

Over the course of this work a protocol was developed to conduct comparative risk assessments of incumbent and alternative products as well as procedures for assessing technical performance. Companies were informed on the hazards of their current degreasing products, given samples of less hazardous alternative products and received hands on assistance in comparing product performance to ensure cleaning requirements and functionality were met. Vendors were given feedback about the hazards and relative performance of products they carry.

Through this work more than 70 companies, some in environmental justice neighborhoods, have received technical assistance on less hazardous alternatives to degreasing solvents. Many of these companies have made changes in the products they use leading to a reduction of over 7,000 lb of hazardous material releases to the air.

This work will serve as a template for ongoing efforts within Minnesota to reduce area source HAP and VOC emissions as part of an effort to improve the state's air quality through hazardous substance reduction using environmentally sustainable tools, processes, practices, and programs. This methodology can be easily replicated in other areas.



MnTAP's Degreasing Team