

# Pollution Prevention Improves Air Quality at Fort Campbell

By Ms. Crystal Longdon

Sound environmental practices are part of what a soldier does and part of daily operations on a military installation. That means that every day is Earth Day for the Army. At Fort Campbell, Kentucky, personnel from the Directorate of Public Works Environmental Division's Air Quality Program work with the installation's everyday "air quality heroes" to continuously protect and improve air quality and to meet the standards set by state, federal, and Army regulations. Fort Campbell's everyday air quality heroes include the personnel who work on a daily basis with various air contaminant sources, such as large boilers and fuel burning equipment, spray paint operations, above- and underground storage tanks, the dry cleaning facility, roads and grounds operations, parts washers and degreasers, and refrigerant units.

Air Quality Program personnel work closely with the management and personnel of these operations to ensure that regulatory requirements are always met, workers are properly trained in air quality requirements, and ideas for reducing the sources of air pollutants are developed further and implemented when feasible. That's where pollution prevention comes in. The program personnel are continually looking for ways to reduce air pollutants at their source, rather than waiting to treat and capture pollutants once they are emitted. Pollution prevention projects are designed to reduce air contaminants and stratospheric ozone depleting compounds. Air Quality Program personnel are currently pursuing nine pollution prevention projects, with the goal of continuing to reduce total air contaminant emissions each year.

One of Fort Campbell's most successful ongoing pollution prevention projects was undertaken by the spray paint operations. This project replaces traditional solvent-based coatings with water-based coatings, which are much less hazardous. These specialty coatings, known as chemical agent resistant coatings (CARC), are used for the repair coating of military vehicles and aircraft. The use of water-based CARC has already been approved for most military applications of these specialty coatings, and work is underway to gain approval for the application of compatible water-based CARC to military aircraft.

Fort Campbell began using the water-based CARC on its tactical vehicles in 2001 and has since increased its usage every year. Use of the new paint results in a significant reduction of air contaminants. In 2003, implementation of the project reduced the volatile organic compound and hazardous air pollutant emissions from the painting operations by 48 and 52 percent, respectively. Volatile organic compounds contribute to the formation of unwanted ground-level ozone. Hazardous air pollutants are substances known or suspected of causing



**The use of water-based chemical agent resistant coatings has greatly reduced volatile organic compound and hazardous air pollutant emissions on Fort Campbell.**

adverse health and environmental effects. Pollution prevention projects, such as the switch to water-based coatings, not only benefit the environment but often also improve worker safety. In this case, both the workers and the environment are now exposed to fewer air contaminants, and the material wastes that are produced are less hazardous.

However, pollution prevention does require operational changes. In the case of the spray paint operators, there's been great success with the changeover—that's why we call them air quality heroes. The people who are directly responsible for the work are the key to project success and often play the greatest role in protecting our environment. They're our first line of defense.

The painters are proud of the program's accomplishments and their contributions to its success. They are now gearing up for the return of about 13,000 pieces of equipment (tactical vehicles), all of which will be spray painted with the new water-based CARC.

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