

Governor's Pollution Prevention Award, 1999 Recipient

121st Air Refueling Wing of the Ohio Air National Guard

The Governor's Awards for Outstanding Achievement in Pollution Prevention have been presented since 1986. The 121st Air Refueling Wing was one of nine recipients to receive the award in 1999. These awards recognize outstanding commitments to improve Ohio's environment through pollution prevention. Evaluation criteria for the awards include: the reduction of waste at the source, recycling or recovery of materials, cost-effectiveness, ability of the program to serve as a model for others, and effectiveness in promoting pollution prevention as the preferred long-term approach for environmental management.

121st Air Refueling Wing



The 121st Air Refueling Wing (ARW) of the Ohio Air National Guard fly and maintain KC-135 fixed wing aircraft. The 121st ARW is located at Richenbacker International Airport in Columbus. The major support operations performed include aircraft maintenance, aerospace ground equipment maintenance, ground vehicle maintenance and facility maintenance.

The 121st Air Refueling Wing, Ohio Air National Guard, is recognized for:



- eliminating ozone-depleting chemicals purchases;
- minimizing the use of toxic chemicals;
- reducing the amount of hazardous waste generated from a baseline of 108,603 pounds in 1993 to 10,064 pounds in 1998; and
- recycling more than 346,000 pounds in 1998, up from less than 20,000 pounds in 1993.

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The mission of the 121st ARW is to provide highly trained professionals in support of federal, state and community interests by:

- providing timely worldwide air refueling, airlift and support forces - **federal role**;
- protecting life and property, and preserving peace, order and public safety - **state role**; and
- participating in local, state and national programs that add value to America - **community role**.

Commitment to Pollution Prevention

The 121st ARW formalized its statement of commitment to pollution prevention on March 13, 1997. Its policy is to maximize pollution prevention efforts through eliminating ozone-depleting chemicals purchases, minimizing the use of toxic chemicals, and minimizing the generation of hazardous and solid wastes. The Air Force and the Air National Guard have established hazardous waste, solid waste, and toxic release reduction goals of 50

percent by 1999 from a baseline year of 1993. The 121st ARW's pollution prevention plan outlines the actions to be undertaken by the base to meet this challenge. All organizations at the 121st ARW are committed to integrating pollution prevention ethics into their day-to-day activities to meet these goals.

Pollution Prevention Activities

The 121st ARW has developed and implemented a pollution prevention plan. To help implement the plan and seek other pollution prevention opportunities, 11 personnel from the 121st ARW attended a week-long pollution prevention training course. Some of these opportunities were identified through pollution prevention opportunity assessments conducted by the 121st ARW.

The 121st ARW has reduced the amount of hazardous waste generation from a baseline of 108,603 pounds to 10,064 in 1998. The 1999 generation is projected to be less than 6,000 pounds, saving the 121st

ARW more than \$4,000 in disposal costs.

In addition to the hazardous waste reductions, the 121st ARW has eliminated the use/purchase of all class 1 ozone-depleting chemicals.

The 121st ARW also is active in and committed to storm water pollution prevention, co-chairing the Walnut Creek Watershed Group. The 121st ARW has developed and implemented a storm water pollution prevention plan.

Replacement of Solvent Parts Washers

Through a service contract, the 121st ARW used a total of 12-36 gallon solvent parts washers. The solvent was replaced every five to nine weeks. This generated approximately 11,000 pounds of hazardous waste per year, at a cost of \$12,492.

The 121st ARW purchased new solvent parts washers, manufactured by ZEP Manufacturing Company, which allows for closed-loop recycling of the solvent and a less hazardous solvent.

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The solvent has not had to be replaced in any of the tanks with almost two years of use. The only waste that has been generated is replacing filters, at less than 500 pounds per year. The filters extend the life of the solvent. The purchase of the systems, solvent and filters was \$12,000. Annual operating costs are less than \$1,000. This new system for parts cleaning had an immediate payback.

In addition, personnel are using a less hazardous solvent.

Paint-Related Projects

The 121st ARW previously spray painted all stencils and decals required on the KC-135s. Parts were chemically stripped before painting. Operating costs were \$3,000 - 5,000 per year. Paint-related hazardous waste was generated at approximately 5,000 pounds per year.

The 121st ARW purchased a vinyl stencil machine for all stencils and decals, eliminating the use of paint. The operating costs are approximately \$1,500 per year. Less than 500 pounds of hazardous waste are

generated per year. Plastic media blasting is used for paint stripping in place of chemical stripping. Spent plastic beads are sent off-site to be reused in making counter tops.

In addition, personnel are no longer exposed to the paint and paint stripper during these operations.

Hazardous Material Pharmacy

Before implementing the hazardous material pharmacy at the 121st ARW, if a workplace needed three gallons of paint, it would buy a five-gallon container. The workplace would use what they needed and the rest of the paint would end up being disposed as hazardous waste. If a shop needed two cans of spray paint, the supply system issued a box of 12 cans to the shop. Several personnel in the same work area would use a different can for small jobs and half-full cans would become hazardous waste. These examples were happening throughout the installation.

The 121st ARW designed, organized and implemented a hazardous material pharmacy concept, which centrally

controls all hazardous materials bought and used in the installation. The use of all hazardous materials is tracked with a database from cradle to grave. In addition, any unused or unneeded hazardous materials are returned to the pharmacy for use by another workplace. It is estimated that through the hazardous material pharmacy and only issuing the amount of material needed for a job, the 121st ARW reduced the amount of hazardous waste generated by more than 20,000 pounds per year.

Through this program, they have been able to identify less toxic materials to be used and have eliminated all class 1 ozone depleting chemical (ODC) purchases and greatly reduced the use of class 2 ODC's.

Additionally, 121st ARW greatly reduced use of the 17 chemicals targeted by the Toxic Release Inventory (TRI) as part of U.S. EPA's 33/50 Program and hazardous air pollutants (HAPs) under the Clean Air Act.

The hazardous materials pharmacy reduced the number of line item hazardous material usage

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from a baseline of more than 2,000 separate hazardous materials to 681 and from 3,000 manufacturers/suppliers to 1,572. This has saved the 121st ARW thousands of dollars and reduced chemical exposures to the personnel.

Other

The 121st ARW purchased closed-loop antifreeze recycling units. All antifreeze is now recycled and reused. This eliminated 1,500 - 2,000 pounds of waste antifreeze generated annually.

Other pollution prevention equipment in use at the 121st ARW include:

- aqueous parts washer;
- high volume low pressure (HVLP) spray paint guns;

- paint gun washers;
- two vehicle and equipment cleaning wastewater recycling systems; and
- power/pressure washers (for washing aircraft, uses up to 60 percent less water).

The 121st ARW has increased the amount of materials being recycled from a baseline of less than 20,000 pounds in 1993 to more than 346,000 pounds in 1998. Materials currently recycled include all batteries, paper, cardboard, metal, wood, tires, fluorescent bulbs, plastic bead blasting media, used oil, plastic compact diskettes, toner cartridges and antifreeze.

For more information

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The Office of Pollution Prevention was created to encourage multi-media pollution prevention activities in Ohio to reduce risk to public health, safety, welfare and the environment. Pollution prevention stresses source reduction and, as a second choice, environmentally sound recycling while avoiding cross media transfers. The Office develops information related to pollution prevention, increases awareness of pollution prevention opportunities, and can offer technical assistance to business, government, and the public.



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