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Pollution Prevention

**Governor's Pollution Prevention Award
Recipient - Navistar International Transportation
Corp., Springfield Assembly Plant**

Pollution prevention cannot reach its full potential through technical changes alone. Navistar International Transportation Corp., Springfield Assembly Plant's ongoing waste reduction efforts are successful because they also address human factors, through actively educating and encouraging Navistar's more than 3,000 employees.

The Governor's Awards for Outstanding Achievement in Pollution Prevention have been presented since 1986. Navistar International Transportation Corp., Springfield Assembly Plant, received one of five awards given in 1995. Governor George V. Voinovich presented the eighth annual awards on February 7, 1995.

These awards recognize outstanding commitment to improve Ohio's environment through pollution prevention. Evaluation criteria for the awards included: the overall effort to reduce waste at the source, recycle or recover materials, or conserve energy; soundness of approach; cost effectiveness; ability of the program to serve as a model for others; and effectiveness in promoting prevention as the preferred long-term approach.

What is Pollution Prevention?

Pollution prevention is the use of source reduction techniques to reduce risk to public health, safety, welfare and the environment and, as a second preference, the use of environmentally sound recycling to achieve these same goals. Pollution prevention avoids cross-media transfers of wastes and/or pollutants and is multi-media in scope, addressing all waste and environmental releases to the air, water and land.

Navistar International Transportation Corp., Springfield Assembly Plant

Navistar International Transportation Corporation's Springfield Assembly Plant, Springfield, is the site of paint-

ing and final assembly of Navistar's medium and heavy duty trucks and school bus chassis. The Springfield Assembly Plant's comprehensive pollution prevention efforts have resulted in significant reductions in environmental releases.

Pollution Prevention Activities

Many of the pollution prevention activities have taken place in the painting operations. In prime coating, conventional air-atomized, low-solids paint was replaced with waterborne paint, resulting in a 50 percent reduction in volatile organic compound (VOC) emissions. Electrostatic robotic application of paint has increased transfer efficiency of equipment in topcoat operations. For almost all colors of topcoat, Navistar was able to change from

applying two coats of paint to only one coat of paint without lowering product quality. This reduced the amount of paint wasted between color changes by 65,000 gallons and the amount of solvent used between color changes by 138,000 gallons annually, and saves in excess of \$3.5 million annually. Other raw material, process and equipment changes have resulted in annual reductions exceeding 65 tons of VOC emissions, 82 tons of hazardous air pollutants and 27,600 gallons of hazardous waste.

Pollution prevention also has been implemented in other areas of the facility. Excess sealant material used to be removed with 1,1,1 trichloroethane. A newly formulated sealant material can be wiped dry with a cloth. This and several other projects have eliminated the use of this solvent, reducing Toxic Release Inventory



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(TRI) air emissions by 56,750 pounds per year and hazardous waste generation by 11,626 pounds per year.

A change to a waterborne latex sealer resulted in reductions of VOC emissions by 1,990 pounds and hazardous waste by 5,000 pounds per year, and this new material can be cleaned from tools with water instead of solvent. A new material used for cleaning has reduced VOC emissions and TRI releases by 13 tons per year. Non-contact cooling water has been reduced from 1.5 million gallons per day to less than 0.3 million gallons per day, since cooling systems and cooling towers now allow Navistar to recirculate and reuse water.

Trash disposal costs have been reduced by at least \$200,000 per year. The plant has involved 150 vendors in its returnable container program, significantly reducing the amount of packaging material that is landfilled or recycled. Pallets, cardboard, and office waste are recycled, and chemicals are purchased in bulk containers when possible. Plastic protective end caps used by exhaust pipe suppliers are

returned for reuse, and 4.5 million pounds of metal are recycled annually.

Navistar actively promotes pollution prevention, both internally and externally, through employee newsletters, trade magazines and seminars. Navistar participates in the 33/50 Program, WasteWise and the Ohio Prevention First Program.

Looking Ahead

Navistar will continue the Get Reductions of Environmental Emissions at Navistar (GREEN) team efforts to further reduce Hazardous Air Pollutants (HAPs) and TRI emissions by the end of 1996. Navistar plans to reduce HAP emissions from most of the plant by 90 percent before the applicable Maximum Achievable Control Technology air pollution rules are proposed. These reductions will be obtained by switching some of the individual chemical constituents in the paints and paint gun cleaners. Navistar also is working to implement a lead-free electrodeposition coating which would eliminate the D008 (lead contaminated) hazardous waste generated from this process.

The implementation of returnable containers continues to be a major thrust of the pollution prevention program as Navistar attempts to reduce the quantity of cardboard and wood pallets used to deliver parts to the assembly plant.

For More Information

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This is the twenty-seventh in a series of fact sheets Ohio EPA has prepared on pollution prevention. For more information, call the Office of Pollution Prevention at (614) 644-3469.

The Office of Pollution Prevention was created to encourage multi-media pollution prevention activities within the state of Ohio, including source reduction and environmentally sound recycling practices. The office analyzes, develops and publicizes information and data related to pollution prevention. Additionally, the office increases awareness of pollution prevention opportunities through education, outreach and technical assistance programs directed toward business, government and the public.