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Governor's Pollution Prevention Award, 1998 Recipient

The Lubrizol Corporation

The Lubrizol Corporation is being recognized for:

◆ reduction of Toxic Release Inventory (TRI) air releases by 78 percent, and elimination of land and water TRI releases,

◆ reduction of hazardous waste generation by 50 percent,

◆ elimination of disposable paper rags, and

◆ the increase of the amount of paper and cardboard recycled from 105 tons in 1990 to 280 tons in 1996.

The Governor's Awards for Outstanding Achievement in Pollution Prevention have  been presented since 1986. The Lubrizol Corporation, Wickliffe Facility was one of seven recipients to receive the Award in 1998. 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.

The Lubrizol Corporation, Wickliffe Facility

Lubrizol is a recognized leader of specialty additive systems for lubrication oils used in gasoline and diesel engines, automatic transmissions, gear drives, marine engines and tractors. The company also supplies specialty products for industrial fluids, fuel additives, process chemicals and coating additives.

The Wickliffe facility covers almost 90 acres and employs approximately 1,400 people. Lubrizol Wickliffe is the world headquarters, the base for administrative and corporate offices and also the site of Lubrizol's primary technical center.

A major part of the operations at Lubrizol Wickliffe involves research and development. The facility works on developing new products and improving existing ones. The facility tests additives to ensure that the products meet customer specifications as well as their own standards. Lubrizol Wickliffe is not a production facility.

Lubrizol Wickliffe had to adapt their pollution prevention program to respond to the unique characteristics of a research and development (R&D) facility. Unlike a manufacturing



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facility, the product of R&D is knowledge and information, not product shipped off-site. However, all material shipped to the facility could potentially leave as waste. Other factors that complicate pollution prevention efforts at an R&D facility are the diversity and variability of projects. Lubrizol Wickliffe has implemented a pollution prevention program that recognizes and effectively resolves these characteristics.

Pollution Prevention Activities

Lubrizol believes that the greatest benefit is achieved when pollution prevention is integrated into R&D. The corporation continues to focus its efforts on "doing it right the first time." As the corporation's primary R&D center, awareness and integration of pollution prevention processes throughout the Wickliffe facility's research organization is a key objective to achieving success. This heightened awareness of pollution prevention both benefits the facility and results in more efficient processes in Lubrizol's worldwide manufacturing facilities.

Responsible Care Initiative

As a member of the Chemical Manufacturers Association, Lubrizol is committed to full implementation of the Responsible Care Initiative and the associated codes of management practice. A primary objective of this

initiative is to improve Lubrizol's environmental performance through the integration of pollution prevention into the business. Management commitment, employee understanding, and acceptance of the Guiding Principles and Codes of Practice of Responsible Care are the driving forces to achieving the goal of operational excellence.

Lubrizol believes that when Responsible Care Codes of Practice become a part of daily work, improved performance naturally follows. To help make this happen, in 1997 they established a team of facility code stewards who meet regularly to clearly define practice gaps, guide implementation strategies, and communicate with employees and the community through a community advisory panel. To enhance integration within their various departments, they established individual department code contacts. The goal was to bring others into the process who can represent a particular department's function and assist code implementation at that level.

At the Wickliffe facility, code contacts for the Pollution Prevention Code are the environmental coordinators that represent each operating department. These employees, in addition to their primary jobs as chemists and engineers, act as liaisons between the facility's pollution prevention code steward and their respective departments. Regular coordinator meetings

provide a forum for the sharing of ideas and successes. An electronic file has been established on the facility wide computer network for tracking and sharing specific pollution prevention activities.

New Chemical Assessment Program

In 1997, the R&D division implemented a New Chemicals Issues Assessment method for ensuring that pollution prevention is built into new products starting at their conception and continuing throughout development. Pollution prevention throughout the method is based on the concept of eliminating wasted raw material and energy resources instead of accepting the resulting higher raw material and waste treatment costs. The overall goal is to build desired features into processes and eliminate inefficiencies.

Reduction of Hazardous Waste

Unlike most production facilities that generate a limited number of waste streams in large quantities, as an R&D facility, the Wickliffe site must contend with thousands of different waste streams produced in small to medium quantities. The facility successfully reduced hazardous waste generation through a comprehensive waste characterization and tracking system supported by employee training and documented procedures. Proper waste characterization enables the facility to segregate

The Lubrizol Corporation

waste for cost effective management while minimizing the impact on human health and the environment. Hazardous waste generation has been reduced by 50 percent from 1,225 tons in 1990 to 550 tons in 1996. In 1996, 100 percent of the hazardous waste was managed through recycling, energy recovery or treatment.

Facility Solid Waste Recycling

Recycling is a total part of life at Lubrizol's Wickliffe site. The facility has seen continuous improvement in the overall recycling effort since 1989, when formal tracking began. The facility's office waste recycling program has shown steady progress both in quantity and the types of materials recycled. For example, paper and cardboard for recycle has gone from 105 tons in 1990, the first full year of the program to 280 tons in 1996. The program has expanded from an initial focus on office paper to include beverage cans, newspapers, magazines, phone books, toner cartridges, and video tapes. Their employees have identified innovative ways to recycle and reuse materials. Packing peanuts, cardboard boxes, wooden crates, and spools and pallets are some of the items their shipping/receiving team has successfully recycled or reused.

Orphan Chemical Exchange Initiative

The Wickliffe facility is a founding member of the Orphan Chemical Exchange

Program, an innovative partnership that will decrease the amount of chemicals that end up as waste. The exchange is a collaborative project linking industries and academic institutions in northeast Ohio. The program's purpose is to exchange usable chemicals before they become waste. The exchange program exemplifies the leadership of the Wickliffe facility and is an example of partnering with others to expand pollution prevention outside of the chemical industry.

Other Projects

Recycling In 1997, Lubrizol began replacing all the computers at their Ohio facilities. They accumulated enough polystyrene from the new computer packaging to fill two 53 foot semitrailers. Their shipping and receiving employees palletized the polystyrene and an employee started making phone calls to find a use for the materials. With the help of Ohio EPA's website, an outlet was found. A company in Ohio, Archibald Foam, was willing to take the material if Lubrizol paid the freight. They shipped over 1,000 pounds of polystyrene, at a cost of \$600 per truckload (two truckloads equal \$1,200). However, the cost to dispose of this material would have been approximately \$2,100 per truckload.

Lubrizol Wickliffe recycles styrofoam peanuts and non-Lubrizol pallets. They recycle bubble wrap and clean shrink wrap used as packing for shipments at a savings of

\$2,000 per year. The facility recycles clean cartons for non-regulated samples for an average \$600 savings per month. They shred wax backing of labels and use the paper for packages. The facility returns wooden wire reels to vendors, instead of scrapping them. They reuse wooden boxes and crates for shipments instead of making new ones, saving man power and materials. They reuse caterpillar type pallet boxes for shipments and recycle binders by reuse of donation.

Buying Recycled Products

Lubrizol Wickliffe's procurement department is very aware of pollution prevention and the desire to purchase products with recycled content. Each individual buyer explores opportunities to replace existing products with recycled or recyclable products. Representatives in the purchasing department work with and support other departments who need purchasing assistance in their own recycling or environmentally friendly projects. For example, the purchasing department worked on a team to convert disposable rag usage to washable rags. This had to be coordinated among various departments at Lubrizol and with suppliers. The result was a total annual savings of over \$17,000 (rags, labor and waste) and thousands fewer paper rags going to landfill.

Environmental Benefits

By the implementation of pollution prevention, Lubrizol

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Wickliffe reaped environmental benefits through a consistent reduction in the Toxic Release Inventory (TRI) emissions, reductions in hazardous waste generation, and a well established recycling program. The company reduced TRI air releases by 78 percent since 1987 and eliminated land and water TRI releases. They reduced hazardous waste generation by 50 percent from 1990 to 1996. In the same period of time, it increased the amount of paper and cardboard that is recycled from 105 tons in 1990 to 280 tons in 1996.

Health and Safety Benefits

Employee and community safety and health have very close ties to pollution prevention activities. Lubrizol

Wickliffe activities and processes are approached in an integrated manner considering the potential impact on the employee, the environment and the neighboring community. Through pollution prevention, the facility reduced routine releases. Many of the practices employed to minimize employee exposures, such as closed system material transfers, substitution of less volatile components and minimizing hazardous inventory, result in lower exposure and environmental releases.

Management Commitment

As part of the corporate philosophy, Lubrizol Wickliffe believes in maintaining the health and safety of their employees, customers and neighbors. Environmental

Policy and Responsible Care Vision statements document the facility's commitment to pollution prevention and provide a framework for all business functions to manage and improve environmental performance. Senior management's strong support of Responsible Care has enabled the facility to integrate pollution prevention throughout its operations.

For More Information

The Lubrizol Corporation
Wickliffe Facility
29400 Lakeland Boulevard
Wickliffe, Ohio 44092

Kenneth Frato
Environmental Assurance
Engineering Manager
(440)943-1200, extension 2848

This is one in a series of documents Ohio EPA has prepared to promote pollution prevention activities in Ohio and integrate pollution prevention into Ohio EPA programs. 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 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.

Office of Pollution Prevention WWW address: www.epa.state.oh.us/opp