

Integrating P2 into the Permitting and Enforcement Process

Solid Waste

Although this section addresses solid waste issues, it is a section that all bureaus may find of interest and is not just intended for the Bureau of Waste Management. For example, even if you work as an air permit engineer and writer, you may have the opportunity to work with large printers or coating operations related to their air emissions. Many of these industries have multimedia problems that offer multimedia P2 opportunities. You may find these simple suggestions helpful for introducing solid waste reduction ideas to the applicant business.

Businesses can be, and in many cases are, leaders when it comes to solid waste reduction. Unfortunately, the average U.S. resident produces more than four pounds of solid waste per day, according to the EPA. This is twice the average amount of waste produced by individuals in other industrial countries, and businesses account for about 60% of the trash volume at landfills. Businesses and consumers can help cut waste by changing what they buy and how much, and recycling as much as possible. Some states require the reduction of solid waste to lengthen landfill life and to reduce waste disposal costs.

The year 2000 figures indicate that Kansans generated about 6.4 pounds of waste per day per person; this is nearly 1 1/2 times as much as the 4.4 pounds per day national average. Nationally about 37% of the population recycles. In Kansas, 2000 recycling rates were about 15%. (*The Wichita Eagle, 1/15/01*)

All business types can reduce solid waste, but businesses and industry that generate large quantities of one type of waste, bulky wastes like cardboard, heavy wastes, or problematic wastes, have the greatest potential for reduction and related cost savings. These industry groups include - printers, retailers, wholesalers, and many types of manufacturers. Providing information during the permitting, inspection, or enforcement process may get the company to think about these issues. The documents prepared for the inspectors contain checklists and suggestions for helping a business prioritize and get started with waste reduction. The following industry-specific examples may also be helpful:

Multimedia waste reduction: Alamac Knits, an East Coast textile company whose processes involve knitting, dyeing, and finishing, implemented chemical substitution, equipment upgrades, and recycling for an annual savings of more than \$160,000 in recycling and reduced permit fees alone. Through chemical substitution, the company reduced its emissions enough to become a minor emission source rather than a major, decreasing regulatory burdens and environmental liability, and saving money on permits and labor. A machinery upgrade resulted in reduced chemical, water, and energy usage. Extensive recycling operations at the plant include plastic

cones, plastics, cardboard cones, wooden pallets, cotton wipes, and scrap paper. Cardboard spinning tubes were unrecyclable due to heavy glues used in their manufacture. The tubes were replaced with recyclable PVC cones, which ended up lasting five times longer and could then be recycled. These solid waste changes resulted in a 39% reduction in the amount of waste landfilled.

Permit process: A chemical substitution project may result in permit avoidance or a decrease in permit classification. Solid waste reduction suggestions could also be presented to the company during the permit process.

SEP: This is a good example of a multimedia SEP project that many manufacturers may lend themselves to. This project included chemical substitution that reduced air emissions, machinery upgrades that reduced hazardous and wastewater discharges, as well as solid waste reductions and recycling elements.

Solid waste reduction: A Kansas company sending nine tons a week of a plastic material to a local land fill recently explored a recycling opportunity with the help of the SBEAP. A plastic manufacturer in an adjacent county was willing to transport and accept the material every week for purposes of recycling it for the manufacturer of railroad ties and related plastic lumber. The plastics manufacturer even agreed to take the other 10 to 20,000 pounds a year of miscellaneous plastic material normally disposed of at the landfill. This amounts to just under a million pounds of plastic material being diverted from the local landfill annually. This manufacturer is also a printer who has several other potential solid, emission, and hazardous P2 opportunities. In fact, one printing company discovered that it could turn pallet waste from a cost to a profit center. Instead of sending pallets to the landfill, the company repaired and rebuilt pallets. And then sold them. This turned a \$100,000 waste cost into a \$300,000 net profit.

Permit process: Solid waste reduction suggestions can be presented to manufacturing companies during the permit process.

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Landfills, transfer stations, household hazardous waste, and small quantity generators locations are permitted through most state agencies. Some states have encouraged these permitted facilities to identify and integrate waste reduction and material exchange programs within their operations. Some examples include –

- Construction and demolition landfills that sort materials for reuse.
- Landfills that allow for controlled salvage.
- Household hazardous waste facilities that operate “shop and swaps.”
- Small quantity generator programs that facilitate material exchanges.
- Installation of oil-burning furnaces at sites that collect used oil.
- HHW or SQG sites that offer antifreeze and paint recycling services, and/or silver recovery.