

Introduction:

Integrating P2 into the Permit Writing and Enforcement Processes

As part of a cooperative project between the KDHE Office of Pollution Prevention (OPP) and the Kansas Small Business Environmental Assistance Program (SBEAP) programs, two sets of workshops were designed to promote pollution prevention into the regulatory processes in Kansas. In April of 2001 the first of these workshops trained over 50% of the field inspectors for seven industries, in pollution prevention strategies. The manual developed for that effort provides specific process information and P2 practices for each of those industries. In addition, the manual covers P2 practices for solid waste and inventory controls applicable to all businesses.

P2 checklists were developed for each industry and included for inspectors to take out and use during their inspections of these industries. The checklists were designed so the inspector could check the appropriate items the company may need or want to explore for waste and compliance reduction opportunities. Case studies of specific P2 projects and additional resources were included on the back of the checklist for the businesses' use.

Building on that effort, the next set of workshops are focused on integrating pollution prevention into the permit writing and enforcement processes. The manual includes all of the information provided for the inspectors' workshops as well as two new sections and additional resources for KDHE's Topeka agency personnel. Two new sections, P2 in the Permitting Processes and P2 in the Enforcement Processes, are included to provide KDHE personnel with a snapshot of how P2 is used in other states in their permitting and enforcement processes. These sections provide general background information and specific examples and contact information for those programs referenced.

In addition, each industry section includes a new resource for SEPs with examples of accepted P2 technologies or opportunities, and cost-benefit analyses for use in facilitating supplemental environmental projects. This page may be made available to the business or be used by enforcement personnel during the SEP negotiating processes.

Why Support/Implement P2?

Business

P2 offers business and industry opportunities to reduce operating costs, long-and short-term liabilities, and record keeping requirements, and to improve workplace safety.

Agency:

P2 offers regulatory agencies the opportunity to promote P2 through the inspection, permitting, and enforcement processes to meet their state goals of environmental protection and waste reduction.

In response to EPA's Pollution Prevention Policy Statement made in 1993 and the recent Waste Minimization National Plan, many states have closely incorporated P2 with their states' environmental goals through P2 legislation that has specific statewide objectives. Arizona P2 legislation includes the following:

- Requires mandatory P2 planning by hazardous waste generators.
- Contains specific waste reduction goals of 20% waste reduction within two years, 50% within five years, and 70% within ten years.
- Creates a specific program within the department for technical assistance.
- Requires mandatory reporting through a "Toxic Data Report," "Pollution Prevention Plan," and an "Annual Progress Report." The P2 Progress Report is must be filed each July 1, and must include specific waste reduction numbers for all P2 projects. As a result of this program, Arizona has had tremendous success with documented results of waste reduction and has realized a 39% reduction in their statewide generation of hazardous wastes, and a 50% in all wastes within two years of their program implementation.
- Includes an incentive for waste reduction by reducing hazardous waste management fees for companies with P2 plans. P2 plans are approved and certified, and have resulted in a 50% reduction in hazardous waste fees for companies.
- Provides specific program funding through their Hazardous Waste Management Fund, consisting of fees and appropriated monies. Eight full-time employees review and certify 300 P2 plans per year.

Forty states now have P2-specific legislation that supports and complements their state's environmental agency's efforts to reduce pollution and protect the environment. Please see the following Web site for a list of those states with P2 legislation: www.p2.org/inforesources/nppr_leg.html.

Workshop Goals

In our conversations with other states promoting P2 most actively within their regulated universe, the technical assistance providers (TAPs) worked in close partnership with businesses and the agency to provide input on technologies, vendor suppliers, and P2 program training needs. Inspectors and permit writers utilized their internal or external TAPs to help further their goals of reducing pollution and assisting their state's business community. It is the goal of the Kansas Small Business Environmental Assistance Program to serve the regulated community. Our goals for these workshops are to:

1. Heighten awareness of P2 opportunities that exist in the permitting and enforcement processes.
2. Increase awareness of the Kansas SBEAP services and how this program can compliment KDHE's efforts of P2 integration.
3. Provide industry specific P2 opportunities and cost benefit information for use in the premitting and enforcement processes.
4. Explore KDHE's desire to further expand P2 integration into their permitting and enforcement processes.

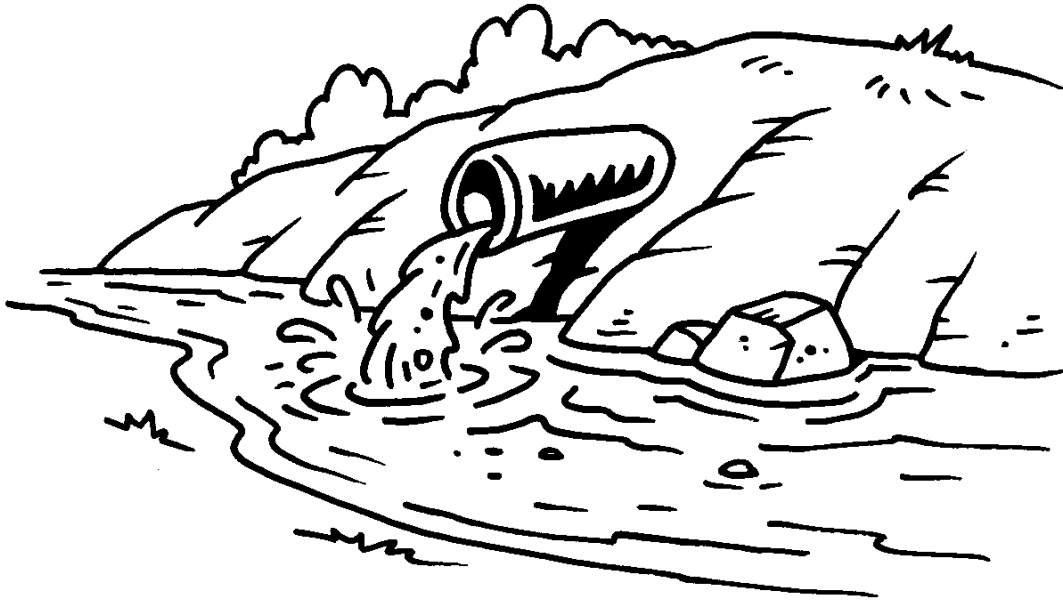
We hope these workshops will provide fertile ground for our continued partnership to further pollution prevention in the state of Kansas.

P2 Review

History of the Development of Pollution Prevention

Congress began addressing pollution issues in the late 1800s. The Rivers and Harbors Act of 1899 made dumping waste in the Mississippi River illegal. Since then numerous laws and agencies have been created to deal with environmental issues. The vast majority of environmental legislation has focused on identification and cleanup of pollution, such as the Resource Conservation and Recovery Act of 1976.

However, in 1990, beginning with the Pollution Prevention Act, EPA shifted focus from "end-of-pipe" pollution treatment and cleanup to policies, technologies, and processes which prevent and minimize the *generation* of pollution. The underlying



theory behind pollution prevention is that it is economically more sensible to prevent wastes rather than develop expensive and risky treatment and control procedures to insure that waste does not threaten human health and the environment.

Reducing hazardous wastes, wastewater discharges, and air emissions helps companies comply with environmental regulations. Pollution prevention (P2) can also save money by reducing raw material purchases and waste disposal or treatment costs. Waste reduction also reduces short- and long-term liabilities since it reduces the chances that wastes, emissions, and discharges will be improperly disposed in the environment and require cleanup. Finally, utilizing P2 strategies can help protect employees' health and safety by reducing exposures to hazardous substances through material substitution and improved operating practices.

Basics of Pollution Prevention Strategies

The following strategies form the basis for P2 programs and are options companies may use to reduce amounts or toxicity of wastes in their operations:

Change the Material

It may be possible to change to less hazardous materials used in the process or product manufacture without impacting the desired performance.

An example of a material substitution practice is using a water-based cleaner in place of a low-flash solvent for parts cleaning, or changing to reusable absorbents for spill cleanup.

Change the Process

How a process or product is manufactured, cleaned, coated, treated, or otherwise handled offers many opportunities for P2. Changing the operating practice can usually be accomplished with little or no capital investment, and yet may produce the greatest results in waste reduction and improved workplace conditions. Some of these approaches include the following:

- changes in operating and maintenance procedures
- changes in management practices
- changes in material and waste stream segregation
- changes in production scheduling
- changes in inventory control
- changes in employee training

Covering solvent tanks when not in use minimizes emissions due to evaporation. Use of drip pans and splashguards are easy and low-cost practices, and help reduce costs from cleanup of spills and leaks. Also, use of partially used solvents for "dirty" operations, while saving clean solvents for final cleaning, is a more cost-effective use of resources and will minimize environmental impacts.

Change the Technology

Due to increasing environmental regulations, world trade competition, and increased concern for worker safety and workplace hazards, many industries have devised new technologies to produce their products or deliver their services. New technologies may include the following:

- layout changes to improve work flow
- increased automation
- improved operating conditions
- incorporation of new technology

For example, use of automatic hot soap parts washers or other aqueous cleaning systems can eliminate hazardous solvent use for cleaning. Another example involves the automotive paint and repair industry where use of high-volume, low-pressure (HVLV) paint guns reduces overspray, which reduces the amount of paint and solvents wasted into the environment.

Benefits of Agency-Driven P2 Promotion

What are the benefits of incorporating P2 to the regulatory processes?

- Provide a more seamless goal for P2 and compliance to reduce the need for “end-of-pipe” controls.
- Provide more business/regulatory partnering opportunities that improve business/government relations.
- Provide equitable enforcement choices for more businesses.
- Provide more opportunities for waste reduction and overall health and environmental benefits.
- Provide measurement opportunities supported by SEP requirements.

How Some States Have Incorporated P2 into Their Agencies

P2 at the regulatory level can be promoted in many ways and may incorporate one or several of the following strategies:

- Establish a state waste reduction program with specific goals.
- Include P2-specific language, either as enforceable or recommended pollutant management.
- Include P2-specific information in permit applications/forms.
- Include and require P2 specific goals and activities reporting.
- Permit “opt-out” for companies utilizing P2 and/or best management practices to eliminate waste streams or permit requirements.
- Allow permit flexibility through pre-approved P2 options.
- Promote local permitting agencies to require waste reduction language or goals in their permits.
- Use permit fees to encourage P2.
- Require industry-specific P2 information dissemination for all inspections.
- Include P2 technical assistance personnel/input for enforcement visits (after initial inspection for businesses with problems or serious violations).
- Promote a state-wide public recognition program for companies going above and beyond compliance/performance standards.
- Promote P2 for SEPs; develop standard listing of SEPs by industry sector.
- Coordinate multimedia inspections, permits, and enforcement activities.
- Target facilities that emit high priority pollutants.

Notes Page