

Toolkit for Greener Practices

Showcase of Ideas

Option 2-1: Pollution-Prevention Evaluation

Manufacturing Production Lines & Material Inputs

Site conditions:

Two remediation sites in particular come to mind as examples of the cleanup process eliciting more responsible environmental management. Either on their own or with the assistance of the Minnesota Technical Assistance Program (MnTAP), a Twin Cities plating company and a Metro-area wood-treatment plant undertook P2 assessments and made changes as a result.

Preventive activity description:

- A wood-treatment plant installed a closed-loop system to reuse excess treatment solution recovered from lumber curing and the CROW system (See slide on Recovered Environmental Material: A recovery system was chosen as the preferred remedy for a PCP release and a closed loop wood treatment system was installed so that unspent PCP solution and that which was recovered during remediation could be recycled as inputs rather than handled as waste.)
- The wood-treatment plant invested in very detailed and careful evaluation of energy and water resource use and waste generation, instituting many smaller changes that substantially affected the whole system. The kilns are now monitored within a very small range and set at the lowest optimal temperature. Additional insulation was installed on the heated tanks. Following principles of environmentally preferable purchasing, the plant uses more costly Pentacon flakes. These dissolve into the treatment solution more readily, reducing energy consumption. The flakes produce less packaging waste. Water from condensation is recovered and reused via a closed-loop vacuum and chiller. Filter bags were replaced with filter presses, reducing the volume and the frequency of pick up of hazardous waste.
- A plating company reduced water consumption by 28,000 gallons a year by reusing water previously disposed of after use in the post-plating rinse bath. That water was rerouted to the pre-plating rinse bath, eliminating the need for biweekly treatment. The company spent \$120 for these changes, which saved it \$14,000 annually.

Benefits realized through the Pollution Prevention/Sustainability approach:

- Cost savings, reduced environmental liability and energy and water conservation from EPP and process line improvements

Keys to Success

- P2 champions within the business
- Regulatory and technical assistance from the MPCA and affiliated agencies targeting remediation sites

Regulatory administrative/legal tools:

- Bully pulpit: Remediation staff encouraged companies or did not hamper their efforts to take advantage of assistance services within the MPCA and sister agencies that promote prevention.
- MPCA's Small Business Assistance Program: Regulatory assistance shed light on some changes permitted by the laws.
- MnTAP's Intern Program: A summer intern conducted a comprehensive P2 assessment at the plating company.

Recognition: Bell Lumber and Pole, New Brighton; Nico Plating, Minneapolis