Thurston County Photo Processing Technical Assistance Campaign

Executive Summary

August 2004

Technical assistance visits found that photo processing businesses were knowledgeable about how to properly manage hazardous wastes from their operations.

Waste fluids from photo processing equipment present a challenging waste management task for users ranging from home-based photography businesses to businesses specializing in large-quantity photo development. Photographic fixer solutions contain silver, which is a toxic and persistent heavy metal. Since silver is also regulated as a hazardous waste, this waste fluid requires proper treatment or disposal and cannot be disposed into sewer or septic systems. To assist photo processors with these challenges and learn more about waste disposal options and treatment technologies, the Thurston County Business Pollution Prevention Program conducted a technical assistance campaign for photo processors during the summer of 2003.

The county last formally visited this industry in 1993, and both processing technology and waste treatment options have changed significantly since that time. This campaign also continues an effort to limit additional heavy metals entering the local wastewater utilities and marine waters.

Pollution prevention specialists began the campaign with an intensive research study about photo processing technology, new treatment methods and other programs that have addressed the same industry group. With a solid background in these areas, specialists compiled a list of all home-based photography and commercial development businesses, and began to narrow the list to just those currently operating. The final list included twenty-four (24) participating businesses.

Introductory letters were sent to each business and site visits were scheduled. During the visit, specialists observed storage of developer and fixer chemicals, treatment of the wastewater from the processing unit, and spill preparedness measures. Specialists were interested in the treatment process used to recover the silver from the fixer waste. Photo processing wastes can only be disposed into sanitary sewers if they are pretreated to remove the silver. Photographic wastes should never be discharged into a septic system.

Any business discharging untreated photographic fluids into the sanitary sewer or septic systems would be out of compliance with the Thurston County Nonpoint Source

Pollution Ordinance. All businesses in Thurston County are required to comply with the Nonpoint Source Pollution Ordinance, which was enacted to prevent pollution of local water resources, including drinking water, through proper hazardous waste management.

Pollution prevention specialists also presented a list of best management practices that would further protect water resources and reduce waste from the processing operation. Following the site visit, program specialists would talk to business representatives about their findings, and note if any aspects of the operation needed to be changed. At the conclusion of the initial visits, 19 of the 24 processing businesses were properly treating their photographic wastes and in compliance with the county ordinance. After follow-up visits were completed, all businesses were in compliance or pending compliance. Compared with the findings of the 1993 campaign, a greater percentage of businesses were handling their hazardous wastes properly in 2003.

Many businesses had previously implemented general pollution prevention best management practices. All businesses were found to have proper safety and personal protective equipment and adequate ventilation in processing areas. Additionally, all businesses had properly labeled chemicals, and no unknown chemical containers were found. To further improve safety and enhance pollution prevention, specialists recommended 19 various best management practices, such as chemical handling training and maintaining MSDS for processing chemicals. Of those 19 recommended practices, follow-up contact found that eight practices had been implemented.

County staff reached several conclusions based on their findings from site visits. Sixteen businesses were found to use silver-recovery units to remove silver from their waste. Of those 16, 13 businesses used an outside vendor to regularly service their recovery unit, eliminating the need to train employees about maintenance. Regular, professional maintenance also ensures the recovery system is functioning at the highest efficiency possible. Specialists also found that 16 of the 24 businesses were planning to expand their operations into digital photography, which produces no processing wastes.

This campaign also created additional waste management opportunities for smaller photo processing operations. Prior to the campaign, one local photo processor offered free silver waste treatment for small photo operations and amateur photographers. As a result of the campaign, an additional photo processor agreed to offer these services. Small processors who could not afford a treatment system for their limited waste stream, or who were connected to a septic system, benefited from these agreements. This work also sparked talks with LOTT, the local wastewater treatment utility, about installing a public silver recovery system at the local treatment facility.

In general, this campaign found that the majority of photo processing businesses were quite knowledgeable about health and safety requirements, as well as how to properly manage the resulting waste stream. Customer surveys returned to program specialists indicated that business owners felt comfortable with their knowledge of photo processing waste management, and knew where to obtain additional information if necessary.

For more information about this pilot project, please contact Brad Zulewski, Thurston County Business Pollution Prevention Program, at 754-4111 ext. 6451.