

Partners On Demand: Toxics Use/Hazardous Waste Elimination Success

This story demonstrates how a mid-sized printing and manufacturing company, working with the Oregon Department of Environmental Quality, can implement changes to its hazardous material consumption and disposal processes and produce meaningful results. From positive environmental impact to financial responsibility, this endeavor was a success.

Background

Partners On Demand Inc., established in 2004 provides commercial and digital printing, program management and distribution services. In addition to these services, the company offers inventory management for a wide variety of materials along with an established set of International Organization for Standardization-compliant assembly procedures.

At inception, Partners On Demand equipped its business with new, state-of-the-art printing, finishing and technology equipment that exemplified the prevailing industry standard for quality and efficiency. Specific to this plan, Partners On Demand's printing equipment meets or exceeds utilization standards for modern press chemistry, employing less caustic and harmful chemicals while maintaining high-quality print standards.

In addition, Partners On Demand uses soy inks and water-based coatings in the printing process. POD is committed to an operational policy that is positive for the environment and the community.



Partners On Demand is in Beaverton, Oregon

Environmental challenges

In 2007, the company set a lofty goal of reducing toxic substance use and eliminating hazardous waste. The measure of success for this objective is a reduction of hazardous waste generator status from "Small Quantity Generator"

generating a high of 3,118 pounds per year to "Conditionally Exempt" and generating no reportable hazardous waste!

Initial challenges included:

- Evaluating current and new technologies to further reduce toxic chemicals and hazardous waste
- Updating processes and procedures involving hazardous materials use and waste generation, and train employees in the proper handling of these materials



Print shop reaching goal of "zero toxics"

Opportunities for toxics reduction

Two specific areas of focus were both the parts washer and waste fountain solution.

Parts Washer:

The parts washer, necessary in the production process, posed a challenge. The task was to find a suitable replacement for the solvent being used. Using a third party specializing in reduction and disposal of hazardous waste, Partners On Demand identified and implemented use of a non-hazardous solvent for the parts washer. Some diligence was required in selecting a replacement solvent as there was concern the replacement solvent would be less effective. Ultimately, this was not an issue, as the new solvent performed at the same standards as the previous solvent.

Waste Fountain Solution:

Fountain solution is required in the printing process and the interaction of press chemistry with printing inks is vital to the overall process. Partners On Demand was able to effectively change to a solution which contained fewer toxins both prior to and after mixing with inks.



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Additionally, the company adjusted dilution rates to optimize performance while reducing toxicity of waste. A continuing challenge will be re-testing of the waste stream to confirm toxic levels are below waste stream thresholds.

Reduce

Through focused effort on waste reduction, the company eliminated generation of hazardous waste in 2008. Partners On Demand reported 3,118 pounds of hazardous waste in 2005, dropped to 1,361 pounds in 2007 and in 2008 produced no reportable hazardous waste.

Reuse

Partners On Demand took waste reduction a step further by implementing a continuous use program for its parts washer solvent. A third party removes non-hazardous solvents from the parts washer at Partners On Demand and reuses the solvent at its own facility. This program extends the solvent's life before its final disposal.

Recycle

Since inception Partners On Demand has recycled all eligible materials including paper, plates, plastic and metal containers and office waste, working with various recycling partners. Additionally, the company moved waste materials from the non-hazardous soy inks, water-based coatings, and press chemistry with an accredited waste management company which manages options for reuse, recycling, treatment and disposal.

Rethink

In 2009, the company looked at its wash-up procedures and found that its parts washer was originally recommended to accelerate the cleanup process. However, there was never a high volume of ink that needed to be removed in the first place. Since its inks are non-hazardous, it didn't make sense to use a hazardous (flammable solvent) material to wash them up. Partners on Demand eliminated its parts washer and now simply spends a few extra minutes using rags to remove the ink film from the trays.

Economic benefits

The company's waste reduction efforts also translated into meaningful cost reduction in the handling and moving of waste. The company saved nearly \$8,000 in waste management fees in 2008 compared to 2007.

These savings were realized despite the fact that Partners On Demand experienced 15 percent growth in business during the same time period. Partners On Demand successfully implemented new methods for handling non-hazardous waste

in 2009, which has resulted in even greater cost reductions. It's easy to say these efforts have saved the company tens of thousands of dollars so far.



Eliminating hazardous waste generation

For more information

For more information on how to dispose of your hazardous waste properly, visit www.deq.state.or.us/lq/hw/technicalassistance.htm

Phone DEQ Hazardous Waste Technical Assistance at 503-229-5913, Portland, or call toll-free in Oregon at 1-800-452-4011, ext. 5913.

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