

## Encouraging Environmental Excellence – Silver Level Award

# Washing Systems, LLC

In 2014, Washing Systems, LLC received an Ohio EPA Encouraging Environmental Excellence (E3) Silver Level Award. The silver level recognizes businesses and others that have a good environmental compliance record and have completed environmental stewardship activities. The silver level is open to any business, industry, trade association, professional organization or local government of Ohio.

Located in Loveland, Washing Systems is the leading provider of environmentally sustainable products and services to the North American and European laundry processing industry. Founded in 1989 and employing 100 people, the company strives to produce products that clean better and help create a better environment. With this approach in helping their customers become more efficient, produce cleaner products, and earn more profits, the company has grown into one of the largest chemical suppliers to the commercial laundry industries in the United States and Canada.

### Environmental Efforts and Results

Washing Systems has an on-going commitment to protecting the environment and conserving natural resources. It began this endeavor in 2005, to develop leading-edge innovations and chemistry to enable the customers to improve their environmental footprint and profitability.

The company first accomplished these goals through the development of its new innovative laundry detergent wash chemistry, Pure Solutions Line, developed in 2007. These detergents are 100 percent Nonylphenol Ethoxylates (NPE) free and meet the demanding cleaning performance and economic requirements of industrial launderers. Washing Systems has reduced the pounds of NPE and NPE based detergent formulations from 94 percent (in 2007) of their total detergent sales down to zero percent in 2013, which is more than 3.6 million lb/yr of NPE from entering the environment.

Also, since their introduction, customers using the Pure Solutions line have achieved increased production through the use of shortened cycle times while at the same time reducing their energy and water consumption by an average of 15 percent, when compared to competitor's NPE-free products. After the detergents were developed, Washing Systems partnered with the U.S. EPA's Design for Environment Program (DfE) for the Pure Solutions Line. This chemistry is now recognized as environmentally preferable, defined in the Safer Cleaning Products and DfE component-class criteria.



### Washing Systems, LLC is recognized for:

- Introducing new laundry detergents that reduced the use of Nonylphenol Ethoxylates (NPE) in detergent formulations from 94 percent of its total detergent sales in 2007 to zero in 2013. Customers using this product line realized an additional benefit of increased production through using shortened wash cycles while reducing their energy and water consumption by an average of 15 percent.
- More recently, the company replaced two components that were petroleum-based with non-hazardous, biodegradable bio-based ingredients, making these products free of phosphates and other chemicals.

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Through this partnership, the company strives to continually improve the health and environmental profiles of the current DfE approved products and still grow their DfE product line.

In addition to their Pure Solutions Line, the company continues to expand the chemical products aligning with the corporate goal to improve the health and environmental profile of their chemistry. The company has voluntarily introduced a new builder (Structure) which is based on a natural, sustainable and biodegradable chelating agent for lowering water hardness within the washer. It is the first to offer a builder which is completely phosphate and EDTA (ethylenediaminetetraacetic acid: which is a persistent organic pollutant with cumulative and persistent hazardous degradation products) free. All of its customers are now using this environmentally friendly builder, which has reduced more than 1.3 Million lb/year of phosphates discharged to the environment and more than 104,000 lb/year of EDTA discharged.

Lastly, Washing Systems has also voluntarily eliminated petroleum-based solvents from their formulas by introducing BioSolve, a non-hazardous, bio-based solvent/detergent to their product line. This has reduced more than 200,000 lbs/year of petroleum solvents discharged into the environment. In addition, the company has removed solvents such as butyl cellosolve from their traditional detergents as well, which has reduced an additional 1.3 million lbs/year from the environment.

### Commitment to Continued Improvement

In addition to the management's commitment to incorporate green chemistry into their core values, Washing Systems joined the National Pollution Prevention Roundtable (NPPR) to continue their promotion and encourage the promotion of others towards green chemistry. The company was the first to enter the NPPR's Safer Chemical Challenge Program to further pledge reduction of hazardous chemicals by 2025. The company's reduction goals were well above those stipulated for the challenge of 25 percent by 2025.

Through the partnership with DfE, Washing Systems is constantly evaluating new materials and application processes in an effort to improve the environmental profile and sustainability of their products. As a company, it is committed to utilizing and evaluating components listed on CleanGredients (an online database of cleaning ingredients) and networking with innovative material supply companies to bring these environmental benefits to their customers. Since gaining DfE approval in 2008, the company continued to reformulate their products for greener chemistry. It renewed this partnership again with DfE in 2011.

Washing Systems continues to develop additional products to add to their DfE line of detergents, as well, and in 2011 expanded this to include a new economy linen detergent, Pinnacle Detergent. The company again expanded their detergent line with another DfE approved product in 2013, Spectrum, a concentrated detergent for a total of five DfE approved products. Upon introduction of the detergents in 2007, NPE sales have been reduced from 94 percent down to zero percent in 2013.

The company also sought to improve their overall "detergent system" by adding a phosphate/EDTA-free builder to the wash program and biodegradable solvent/detergent specialty product. Upon introduction in 2011, it has reduced phosphates/EDTA sales from 100 percent down to zero percent in 2013.

### For more information

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For more information about Ohio EPA's Encouraging Environmental Excellence program, contact the Office of Compliance Assistance and Pollution Prevention (OCAPP) at 800-329-7518, or visit [epa.ohio.gov/ocapp/ohioe3.aspx](http://epa.ohio.gov/ocapp/ohioe3.aspx).