Two NYS Cleaners will convert to Wet Cleaning

We are excited to announce All Fabric Cleaners of Suffolk County and Rainbow Cleaners of Manhattan have been awarded $17,500 grants to convert their operations from perc-based dry cleaning to professional wet cleaning and to further demonstrate wet cleaning technology to other dry cleaners.

A 2010 U.S. Environmental Protection Agency Region 2 Source Reduction Assistance Grant awarded to NYSP2I funded the purchase and installation of wet cleaning equipment to the cleaners. Many dry cleaners operate using perc, the traditional dry cleaning solvent that has both environmental and health concerns. It is classified as a probable human carcinogen and persists in sediment and air once released into the environment. Perc is particularly problematic in New York City, where many dry cleaners are located on the bottom floor of apartment buildings. Professional wet cleaning is an environmentally preferable alternative which uses specialized equipment and detergent to wash dry-clean-only garments in water.

Performance and cost data for All Fabric Cleaners’ and Rainbow Cleaners’ past perc operations and new wet cleaning operations will be collected by NYSP2I to compare the two technologies. The data collected will be used to encourage other cleaners to convert to wet cleaning and educate New York State policymakers about the use of perc and wet cleaning.

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Supporting Manufacturing Leadership Through Sustainability: Tonawanda, NY

NYSP2I has been awarded a Source Reduction Assistance Grant from the U.S. Environmental Protection Agency to work with manufacturers in the Tonawanda area, near Buffalo, NY. The grant, which totals $130,000, will be used to assess opportunities for local manufacturers to reduce energy, environmental impacts and associated costs.

This effort supports Tonawanda’s Economy, Energy, and Environment (E3) initiative, which is driven by a concern for air quality. The NYSP2I is the lead technical resource in assisting this region to develop and invest in pollution prevention and green engineering technologies. The E3 program is an interagency effort involving the U.S. Environmental Protection Agency, the U.S. Department of Energy, U.S. Department of Labor, U.S. Department of Commerce, and the U.S. Small Business Administration, coordinated locally by EPA Region 2, the NYSDEC, the Clean Air Coalition of Western New York (CACWNY) and the Town of Tonawanda.

E3 provides a model of collaboration among local, regional and Federal agencies, continued on page 3

Toxics Reduction and Sustainability in Paper Manufacturing

NYSP2I received two grants from the EPA’s Great Lakes Restoration Initiative (GLRI). NYSP2I was awarded $200,000 for the Toxics Reduction and Sustainability in Paper Manufacturing project to assist companies in the St. Lawrence Watershed area of the North Country. The project is composed of two key phases: Phase 1 involves conducting Lean, Energy and Environment (LE2) assessments at four paper manufacturing companies to identify opportunities in reducing toxic chemical releases to the Great Lakes, reducing energy consumption and water usage, and reducing operational costs. Phase 2 will involve technology transfer and will facilitate a broad impact to the Great Lakes ecosystem through dissemination of project case studies. Best practices will also be shared with paper manufacturers across NY State and in other Great Lakes states such as Illinois and Minnesota.

The second GLRI award of $194,192 will help fund workshops educating homeowners to reduce and prevent contaminants from entering the Great Lakes from residential nonpoint sources. Workshop topics include: green cleaning, personal care products, household hazardous waste and pharmaceuticals, and household products. Workshops are scheduled to begin in April 2012 and will be delivered in Buffalo, Rochester, Syracuse, and Massena.

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Opportunities and Initiatives in the New York State Food Processing Cluster: Outlook for 2012

The New York State Food Processing Cluster is comprised of the entire supply chain, from farm to fork, including agriculture, manufacturing of agricultural or food processing equipment, processing of food, support of the process (producing labels, boxes, cans, bottles, etc.), and the selling of the finished product. In 2010 and 2011, NYSP2I worked with a broad range of companies in this cluster ranging from manufacturers of dairy based products to wineries. Common themes in relation to pollution prevention and sustainability opportunities observed by NYSP2I are food processing which we are now actively engaged in include:

1. Water Usage and Discharge
Many food manufacturers utilize water heavily for product cooling and clean-up operations. The water used for product cooling tends to be non-contact single-pass flow. In other words, the water neither makes direct contact with the food products, nor is recirculated (closed-loop). This presents a significant opportunity for reduction of water usage by filtering cooling water and re-circulating it, and in some cases, reduction in energy usage through heat recovery.

NYSP2I is also working with companies to determine the feasibility of recovering, reconditioning and reusing wastewater by utilizing membrane filtration technologies such as Reverse Osmosis (RO).

2. Waste-to-Energy
Byproducts of food manufacturing that are discharged into the wastewater stream (such as cheese whey) and water used for clean-up operations tend to be high in organic content. This presents the manufacturer with a water treatment burden as well as wastewater surcharges.

NYSP2I, in partnership with the Golisano Institute for Sustainability (GIS), is researching opportunities available in making beneficial use of the organic content in wastewater from food manufacturing companies to produce energy via anaerobic digestion or fermentation.

3. Solid Waste
Solid waste generated from food processing operations mainly includes packaging, raw material waste and product waste resulting from by-products, operation start-up/shutdown, and quality issues. In many cases, the solid organic wastes can be supplementary feedstocks into waste-to-energy applications along with the organic content in wastewater. Packaging waste, which can include corrugated cardboard or plastics, are recycled by many food processors.

In some cases, plastic packaging has quantities of raw material left over which may be unacceptable to recyclers. There may be opportunities for greater plastic recovery through the use of plastic recovery equipment (i.e., shredding, cleaning, drying), and some manufacturers are experimenting with such technologies.

Improving the efficiency of production operations, combined with diverting unavoidable food waste towards waste-to-energy operations and maximizing recycling of packaging can have a significant impact on reducing the quantity of waste sent to landfills from the food processing cluster. These practices can concurrently reduce the costs and environmental footprint of companies in this cluster.

NYSP2I collaborated with High Tech Rochester (HTR), Industrial & Technology Assistance Corp (ITAC) and Hudson Valley Technology Development Center (HVTDC) to present Farm to Fork: New FDA Food Safety Modernization Act — What Does It Mean To You?

These workshops discussed the newly established FDA Food Safety Modernization Act (FSMA) aimed at ensuring the safety of the United States food supply. Waste minimization and pollution prevention case studies were also presented and sparked much interest and discussion from the participants.

Attenders learned about current compliance requirements and the available options for food safety fundamentals, HACCP, ISO 22000 and NYSP2I’s experience in food processing as it relates to a reduction of water usage, energy usage and waste. Reach out to NYSP2I to learn more about the Farm to Fork events and what assistance may be provided to you!
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NYSP2I recently awarded R&D grants to University at Buffalo and the Rochester Institute of Technology to conduct innovation research applicable to New York State businesses. Sarbajit Banerjee from the University at Buffalo’s chemistry department will work with Graphene Devices of Williamsville, N.Y., to further develop an environmentally friendly alternative to hexavalent chromium coating. The goal of this project is to provide the local metal finishing industry access to novel coating technologies that are simultaneously cost-competitive and environmentally more benign compared to hexavalent chromium coating. NYSP2I was pleased to receive 25 applications from 12 different communities throughout New York State. The committee is finalizing its project selection and awardees will be notified in early January 2012.
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Both cleaners will hold demonstration events to showcase the technology to other dry cleaners in spring and summer 2012. If interested in attending a demonstration or for more information on this program, please contact Kate Winnebeck at kate.winnebeck@rit.edu or visit www.nysp2i.rit.edu/garment-cleaning.

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EcoHours are free 1 hour webinars on environmental topics in everyday life to help you make more informed choices and reduce your environmental footprint.

The Fall Series included the following presentations:

The Hidden Dangers of Personal Care Products, Kate Winnebeck, NYSP2I

Children’s Environmental Hazards at Home, Karen Miller, Huntington Breast Cancer Action Coalition, Inc.

Toxic Toys: Playing with Danger, Kate Winnebeck, NYSP2I

Save the dates for NYSP2I’s Eco Hour Spring Series:

March 20 – Healthy Homes, Presented by Kate Winnebeck and Erica Hernandez, NYSP2I

April 24 – Green Cleaning, Bobbi Chase, Clean & Healthy NY

May 22 – EcoHealthy Childcare, Kate McArdle, Child Care Council

For more information on the EcoHour webinar series, visit www.nysp2i.rit.edu/eco-hour.html

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