



P2 Bulletin

the newsletter of the New York State Pollution Prevention Institute (NYSP2I)

JUNE 2011

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What's happening in P2

Sustainability: An easy pill to swallow

Integrating sustainable practices into the healthcare industry presents great opportunities to improve the environmental attributes of healthcare facilities, achieves greater operational efficiencies and lower costs, while providing the finest patient care. The New York State Pollution Prevention Institute (NYSP2I) at the Rochester Institute of Technology (RIT) and Rochester General Hospital (RGH) recently completed a solid waste study to identify opportunities for improving waste collection/segregation practices, employee training/education needs and cost saving opportunities. The project focused on understanding RGH's general solid waste stream and how much general waste was being disposed in the Regulated Medical Waste (RMW) stream. The study revealed that 35% of the total RMW generated at RGH contains general waste, and the cost savings for the hospital could be \$200,000 annually!



Disposing of RMW costs nearly 10 times more per pound than general waste. In 2008, RGH generated ~3 million pounds of general waste, and 1.4 million pounds of RMW. Annual disposal costs for general waste were \$112,720 and \$560,000 for RMW. From 17,000 to 72,500 lbs/year of general waste may be disposed of as RMW from Pediatrics and the F-Wing, resulting in an avoidable annual expense of \$7,000 to \$29,000.

This study found that continuous education on best practices regarding the solid waste streams can impact current waste handling practices and result in significant environmental and cost savings. As a result of greater awareness and training to new employees, RGH has saved ~\$100,000 in the cost of RMW disposal over the first 9 months of 2010.

Waste packaging is another major source of hospital solid waste, so there is significant potential for increased communication between hospitals and manufacturers about over-packaging. By proactively addressing packaging design related opportunities, manufacturers will utilize fewer resources. Fuel, space, labor and cost requirements for product storage, packaging removal and transportation would be lower. Markets are shifting towards green packaging. A study conducted by The Freedonia Group states that packaging using recycled content, reusable or degradable material will have a market value of \$41.7 billion by 2014¹.

Sharing ideas between the manufacturers and consumers of medical products within the healthcare industry can enhance product environmental attributes. Additionally, greater dissemination of operational and environmental best practices between healthcare facilities can have a direct positive impact on operational costs.

¹<http://www.wasterecyclingnews.com/email.html?id=1294933853>

Direct Assistance Project: Acme Smoked Fish realizes significant cost savings and water reduction with assistance from ITAC, NYSP21, and Energy Concepts

Acme Smoked Fish Corp. is the largest processor of specialty fish products in the United States. Acme Smoked Fish Corp. imports fresh and frozen fish from Norway, Canada, Scotland, Chile and Alaska and processes this raw material in its facility in Brooklyn, New York.

PROBLEM: One of the first steps in the operation is to bring the fish to 38 degrees Fahrenheit. Acme Smoked Fish Corp. achieves this by thawing frozen fish with water. This first step consumes more than 30 million gallons per year of NYC water. To put this in perspective, this amount of water is the equivalent of three swimming pools a day.

SOLUTION: ITAC (Industrial + Technology Assistance Corporation) conducted a sustainability assessment for Acme and identified a significant opportunity for cost savings in water usage. Next, ITAC teamed up with the NYSP21 and Energy Concepts to do a detailed evaluation of the company's water use and available heat from an on-site CHP system (combined heat and power). An initial analysis indicated that the

largest volume of water was being used during the winter months because in the summer NYC water temperature averages 75 degrees Fahrenheit while in the winter it averages 38 degrees Fahrenheit. Some heat was being recovered from the CHP system to provide hot water for equipment cleaning, but additional heat remained available for other uses.

The team's analysis concluded that the additional waste heat could heat enough water to 63°F to thaw fish year round. As with any process change, the consultants were cautious to avoid creating new processing problems. The following tasks helped to develop confidence in the new thawing process.

- ◆ Developed fish thawing models
- ◆ Ran fish thawing tests
- ◆ Documented incoming city water temperatures: 54°F average for 2009 with a low of 35°F

EXPECTED RESULTS: The analysis concluded that additional waste heat from the Power Plant provided enough hot water to thaw fish at a temperature that can reduce winter water usage by



75%. The analysis included a recommendation report that outlined steps the company should take and the design specs for the equipment needed for the solution.

The recommendation was quickly accepted and Acme Smoked Fish Corp. is in the process of adopting this change. The system should be in place and operational by the 4Q of 2011.

ITAC's clients, small- and medium-sized New York City manufacturing and technology firms, like Acme Smoked Fish, are its #1 priority. By helping them to streamline operations using lean and green manufacturing processes and tools and leveraging technology, ITAC enables them to maintain profitability and even grow while navigating this era of economic hardship.

Together, NYSP21 and ITAC did a phenomenal job in carefully reviewing our process and understanding our needs. After extensive research, NYSP21 developed a thawing model that ACME will undoubtedly continue to use going forward!

— Eduardo A Carbajosa, Acme Smoked Fish Corporation

RTDC Profile

From start-up, to initial growth, through maturity and ongoing innovation, ITAC consistently helps companies to maintain product presence and relevance through faster start-up, rapid growth, quality improvement, lean manufacturing adoption, new product development, green and sustainable practices, market expansion, and technology innovation.

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As we enter the second decade of the 21st century, ITAC is helping clients to seize the moment and grow into the opportunities of the future, creating more jobs for New Yorkers. With ITAC's help, our clients created or retained 4,500 jobs and achieved \$1 billion in sales, savings, and avoided investments over the last five years.

For almost 25 years, New York City's industrial businesses have benefited from ITAC's consulting and training solutions. ITAC knows the effectiveness of its client work because an independent third-party, six to twelve months after project completion, surveys the client and captures quantifiable results about the number of jobs created or retained and the total dollars saved through cost reduction and investments

avoided, and new investments made. ITAC's funding is contingent on delivery of financial results.

A Manufacturing Extension Partnership (MEP) Center, ITAC is part of a national network — underwritten by the U.S. Department of Commerce's National Institute for Standards and Technology (NIST) — allowing us to draw on over 1,400 technical experts across the country. ITAC helps companies to start up faster, sustain profitability longer, and identify opportunities for ongoing growth. The New York State Foundation for Science, Technology and Innovation (NYSTAR) designated ITAC the Regional Technology Development Center (RTDC) for New York City. ITAC also has a partnership with

the NYSP21 for projects associated with waste reduction, material use improvements, material recovery for reuse, and energy recovery.

Technology is pivotal with those next generation companies that could easily founder in a down economy, but are essential to drive the country's economic acceleration and job creation. ITAC staff and programs (such as Kaufmann FastTrac®) and resource network (like the Entrepreneur-In-Residence and

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The Pollution Prevention Achievement Award (P2A2)

acknowledging organizations working to prevent pollution through improved manufacturing processes

TECT Power (Utica, NY) Wins P2A2 Award

On February 16, 2011, NYSP2I presented the Pollution Prevention Achievement Award to TECT Power located in Whitesboro, New York for its efforts in reducing the use of hazardous chemicals in its production processes.

TECT Power manufactures critical titanium rotating components of turbine engines for aviation and industrial applications, as well as components for other industries with similar engineering and quality requirements.

NYSP2I worked closely with Mohawk Valley Applied Technology Corporation, the Regional Technology Development Center in the Utica area. Together, they determined what operational changes could reduce the acid waste generated without adversely affecting the process, and then implement these process improvements.

Through collaborative efforts, the hazardous waste generated from TECT Power's titanium blade

manufacturing process was reduced by nearly 50 percent, resulting in a 60 percent reduction in hazardous waste disposal costs.



left to right: Jack Nasca, NYSDEC, RoAnn Destito, OGS Commissioner, Jack Rockstad, TECT General Manager, Joseph Griffo, NYS Senator, Anahita Williamson, Director New York State Pollution Prevention Institute

And the Next Award Goes To ...

The next Pollution Prevention Achievement Award will be awarded

to **Monroe Litho**, an off-set printer, in Rochester, NY. Nominated by High Tech Rochester, the Regional Technology Development Center, Monroe Litho has made significant contributions to pollution prevention and is a recognized environmental leader in the printing industry. For example, Monroe Litho has achieved 100% reduction (17.5 tons in 2008) of "process" waste by creating employee awareness, making process improvements and padlocking their dumpster. They have reduced



water usage by 5.9% by changing the employees' mindset to conserve.

VOC emissions decreased 29% over a one year period by introducing a new press wash chemical and making other purchasing improvements. Monroe Litho's most significant achievement was consolidating their paper purchasing supply chain which resulted in a savings of 72,000 pounds annually of indirect CO₂ emissions from

transportation (31% reduction in amount of diesel fuel purchased). Additionally, Monroe Litho is 100% wind powered.

The award will be presented in June 2011 to Monroe Litho at their facility located at 39 Delevan Street, Rochester.

RTDC Profile...continued from page 2

Manufacturer-In-Residence) ensured that these entrepreneurs received the guidance, technical resources, and access to financial sources critical to commercialization.

This economy demands that businesses eliminate all excess cost and yet continue to deliver high quality products. ITAC helps businesses to prosper by creating customized solutions to meet these needs. It's just smart business.

Community Grant Highlight



On May 12, 2011, Monroe County Seneca Park Zoo announced the opening of the newly created "Your Green Backyard" Exhibit – featuring the **H2O Hero Exhibit** and stormwater practices around the home. The H2O Hero components of the Green Backyard Exhibit were funded by a community grant from the NYSP2I.

See April's *P2 Bulletin ♦ Special Edition!* ♦ *Community Grants Program* for details on Larry the H2O Hero.

Past Workshop

FILM BIZ

On April 30, Film Biz Recycling (FBR) hosted a free workshop at its Brooklyn, NYC headquarters titled 'Environmental Management: The Emerging Position in Film and Television Production'. The event was moderated by Eva Radke, founder of FBR and creator of 'The Practical Guide to a Greener Production' designed to provide guidance and resources on how to make more sustainable choices in film production.

The interactive workshop had 5 panelists speaking on the evolving role of environmental stewardship and sustainability in the film industry.

Discussion topics ranged from the need for a clearer description of the role of the sustainability steward in the industry, to recycling, water use, and energy use. Sixty-five people attended.

More information on FBR can be found at www.filmbizrecycling.org



Imagine RIT

NYSP2I participated in **Imagine RIT: Innovation and Creativity Festival** on Saturday, May 7, 2011. In its fourth year, Imagine RIT is a public campus-wide event that showcases innovative and creative projects of RIT's students, faculty, and staff to ~30,000 attendees.

NYSP2I's display focused on the Professional Wet Cleaning Program, displaying a variety of "dry clean only" clothes cleaned locally in either perchloroethylene, hydrocarbon, or the environmentally

preferable choice of professional wet cleaning. Information about different cleaning solvents and the dry cleaning process was provided and discussed with attendees. Attendees were able to see, touch, and smell the outcome of cleaning garments using different methods.

NYSP2I also participated in the RIT-Rochester General Health (RGH) System Alliance display with a poster on Sustainability Opportunities in the Healthcare Industry. The poster focused on waste management improvement opportunities as a result of solid waste audits performed at RGH.



Day of Caring

On May 11, 2011, NYSP2I participated in the **United Way's Day of Caring** by cleaning the trails of the Lehigh Valley Trail in Henrietta, NY!



Earth Day

NYSP2I celebrated **Earth Day** this year by participating in Earth Week, a weeklong celebration (April 18-22) bringing together organizations across RIT dedicated to environmental sustainability. NYSP2I staff were on hand to discuss and answer questions about the Professional Wet Cleaning project, case studies of food manufacturers turning their waste into biodiesel, and the P2I direct assistance program.

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111 Lomb Memorial Dr. • Rochester, NY 14623 • 585.475.2512

www.nysp2i.rit.edu

Executive Editor: Dr. Anahita Williamson, Director • **Managing Editor:** Erica Hernandez

Editor: James Sutherland • **Graphic Design:** Laura W. Nelson

Contributing Writers: David Fister, Erica Hernandez, Rajiv Ramchandra, Kate Winnebeck



New York State Pollution Prevention Institute

Rochester Institute of Technology

111 Lomb Memorial Drive

Rochester, NY 14623-0426

585.475.2512, phone • 585.475.6610

nysp2i@rit.edu • www.nysp2i.rit.edu