

ISSUE 1, VOLUME 2

POLLUTION PREVENTION VIEW
A Newsletter from the Connecticut Department of Environmental Protection

WINTER 2000-01

Mercury Thermometer Swaps

Will Resume in Spring, 2001

You can get that mercury fever thermometer safely out of your medicine cabinet next spring, and help the DEP meet its goal to collect 2001 pounds of mercury. Connecticut Department of Environmental Protection (DEP), Commissioner Arthur J. Rocque, Jr., announced the Mercury Collection Campaign with the unveiling of a large replica of a thermometer in front of its office building on 79 Elm Street. The thermometer replica will be used to publicly track the accumulating quantities of mercury until it reaches 2001 pounds in the fall of 2001. "Although mercury performs many useful functions, it is toxic to humans and wildlife and can impair health when it is released into the environment through spills or incineration" said Dr. Joxel Garcia, Commissioner of the Connecticut Department of Public Health. Mercury acts as a poison to the central nervous systems in humans. Children, especially those under the age of 6, are more susceptible to mercury poisoning.

The yearlong campaign is happening throughout the state, and was kicked off during National Pollution Prevention Week with enthusiasm in Hartford at the DEP's two mercury thermometer exchanges. During the two exchanges, the DEP collected over 1200 mercury fever thermometers and gave out new alkaline battery operated digital thermometers as replacements. Recipients of new thermometers got demonstrations on how to use the digital models from DEP staff.



Since the kick-off, DEP has collected 650 pounds of mercury. This represents 40 pounds of mercury from 32,000 thermometers, 115 pounds from school laboratory clean-outs, and the balance from regional household hazardous waste collections. The household hazardous waste collections accepted elemental mercury, thermostats, barometers and other mercury-containing devices. Upcoming collection activities will include "milk runs" to pick up mercury wastes from dental offices and dairy farms. Additional household hazardous waste collections and thermometer exchanges will resume in Spring, 2001.

Through all these continuing efforts, DEP hopes to meet its goal of 2001 pounds of mercury collected by fall of 2001. Do you want to know more? Check DEP's website <http://dep.state.ct.us> for household products containing mercury, and action to take if you have a spill. Questions? Call DEP's Office of Pollution Prevention at (860) 424-3297. ■

HOW CAN YOU PREVENT POLLUTION AT HOME?

"A Green Home is a Healthy Home," published on the National Wildlife Federation's (NWF) website will tell you how.

The National Association of Physicians for the Environment and the Environmental Alliance of Senior Involvement teamed up with the NWF to provide tips on how to conserve water, save energy and decrease waste while making home improvements, doing lawn and garden work, shopping and traveling. The pamphlet is available on line at: www.nwf.org/nwf/greenhome.

INSIDE



Naugatuck Glass

Reduces Scrap by 50%

Reprinted in part from CONNSTEP Advantage

Imagine reducing waste by 50 percent – without major capital expenditures!

Naugatuck Glass has done just that in the company's silvering operation. Naugatuck Glass produces mirrors for the cosmetic industry and glass gauges for aeronautic and marine industries.

The company was introduced to "the Systems Approach" for improving manufacturing processes and environmental performance at a workshop led by Dr. Robert Pojasek. The Systems Approach provides a team of workers with quality tools for working toward long-term, continuous improvement.

Robert Pojasek of Pojasek & Associates assisted by Connecticut State Technical Assistance Program (CONN/STEP) Environmental Engineer, Judy Wlodarczyk introduced the Systems Approach to Naugatuck Glass Plant Manager, Dave Moore. Pojasek, Wlodarczyk and Moore worked with a team from Naugatuck Glass to identify opportunities for minimizing the company's waste. Moore said, "The Systems Approach helped us analyze the whole process step-by-step." Dave Moore said, "the analysis was done after getting input from everyone on the team, which consisted of management, production people and a representative from an outside vendor."

Systems Approach techniques used by Naugatuck Glass included process mapping, root cause analysis, prioritizing alternatives and establishing an action plan. Process mapping visually depicts what goes into the production process and what comes out, either as product or as waste.

The team found by using process mapping on the silvering line, that broken glass and defective and scrap mirrors represented a significant opportunity for waste reduction. Once these items were targeted, the team worked on root cause analysis to generate ideas for solving the waste problems, and developed an action plan to create solutions.

Since the action plan called for greater communications and understanding among employees, the company began holding regular department meetings where workers developed better knowledge of each other's job duties. They learned about the economics of their actions, silvering costs, and therefore, the costs associated with generating waste. The meetings provided a forum for employees to voice their concerns and get action. As a result attitude and morale at the company have improved.

The resulting action plan recommended operator training focused on proper glass loading, which greatly reduced scrap and defective mirrors. Ergonomic changes were made, including the addition of anti-fatigue mats and improved positioning of glass at the load end to reduce fatigue. Sound baffling has been erected around noisy equipment to increase comfort levels. An additional worker was hired to relieve the operators during breaks, allowing for longer and more frequent breaks to reduce fatigue.

Because very large glass sheets were found to be more prone to breakage, the company discontinued using them, resulting in better yield for production. Replacement of old water spray nozzles has decreased water usage by more than 10 percent, and improved reporting of glass and mirror scrap has reduced inventory discrepancies.

The results from this first phase of the Systems Approach was that broken glass in the mirror making operation was reduced by 50 percent in the first month and water usage was down over 10 percent, with minimal cost of implementation and little risk to production. Realizing that the 50% reduction represents short-term results, the Naugatuck Glass team continues to monitor the mirror-making operation and to hold regular progress meetings to make sure the success rate continues and improves.

Naugatuck Glass is continuing to use the systems approach to make changes and address other waste reduction opportunities. To view the entire article, visit the ConnSTEP Website at www.connstep.org. ■

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Steering Towards Less Mercury

Three people have their heads under the hood of a Ford Escort at the State of Connecticut's fleet operations. You may think they're checking the oil, but when a small part is placed in a black plastic bucket you know you're wrong. Do you believe they are helping to protect the environment? They are. This team is learning how to get mercury switches out of the State's cars and replace them with switches that use ball bearings to activate hood and trunk lights.

During National Pollution Prevention (P2) week, Tom Corbett from New York State Department of Environmental Conservation provided training on removing mercury switches from automobiles. The switches are used primarily to activate trunk and hood lighting in

mostly American makes. Tom and two Connecticut DEP workers offered training at a car dealer, the state of Connecticut fleet operations and the City of Hartford Fleet operations. Here they trained employees on how to remove, and properly dispose of mercury switches, and how to replace the switches with non-mercury models. Two automobile recyclers were also trained to remove the switches before the cars are crushed for



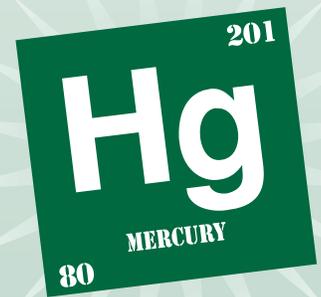
recycling. Fleets, auto recyclers and dealers that participated were given a switch disposal bucket. The buckets hold about 20,000 switches, which amount to 44 pounds of mercury. DEP intends to arrange for free disposal of the mercury switches for participants.

If you have mercury switches in your automobile, there is little risk of them breaking. However the concern arises when the automobiles are crushed, shredded or smelted, then the mercury can be released to the environment. To determine if your automobile contains mercury switches see Figure 1.

If you want to let Ford and General Motors know that it is important to you as a consumer that they discontinue using mercury in their vehicles, write to Greg Dana, Alliance of Automobile Manufacturers, 1401 H Street, NW, Suite 900, Washington, D.C. 20005. For more information about this program contact Tom Metzner at DEP's Recycling Office at (860) 424-3242. ■

VEHICLE MAKE	VEHICLE YEAR(S)	VEHICLE MODEL
*American-made vehicles from 1995 to date still contain mercury switches to actuate hood and truck convenience lighting. Some exceptions are 1997 and newer Jeeps, Chrysler product mini-vans 1997 and newer.		
Ford	1974-1994	Tempo, Escort, LTD, F250, Ranger, Taurus, Crown Victoria, Thunderbird, Topaz, Bronco II, Cougar
Buick	1977-1990	LeSabre, Regal, Park Avenue, Celebrity, Skyhawk, Skylark, Century, Firenza
Pontiac	1984-1990	Sunbird, Bonneville, Grand Am
Oldsmobile	1977-1990	Cutlass Ciera, Cutlass Supreme, Calais, Toronado, Regency, Delta
Chevrolet	1981-1990	Beretta, Caprice, Lumina
Chrysler	1975-1994	New Yorker, Le Baron, Shadow, Cordoba, Laser, Reliant, Sundance, Ades*
Cadillac	1979	DeVille, Cimarron
Audi	1984	Make not available

WHAT'S NEW IN P2?



"Exposing Mercury"

If you'd like to help spread the word about mercury and our environment, you can now borrow DEP's new tabletop display "Exposing Mercury". DEP and the Department of Public Health have teamed up to create the display, which is available for any business or organization for a period of 1-2 weeks. The display is packed with information including mercury in consumer products, the many ways mercury can enter our environment, and what you can do to reduce pollution from mercury. You'll learn the answers to questions such as: What is mercury? Why is mercury a health problem? What can I do to help prevent mercury pollution? **If you are interested in displaying the board you may reserve it by calling the DEP pollution prevention office at (860) 424-3297.**

Green Book Rates Autos

Do you want an easy way to find the most fuel-efficient vehicles on the market? **ACEEE's Green Book - The Environmental Guide to Cars & Trucks for model year 2000 ranks cars and trucks on their fuel economy.** Published by the American Council for an Energy Efficient Economy (ACEEE), the guide lists an environmental rating for every make and model sold in the US. **You may order a guide at \$8.95 from ACEEE at 1001 Connecticut Ave., N.W., Suite 801 Washington, D.C., or go to ACEE's website at www.aceee.org.**

EPA Website Ranks Cars by their Emissions

If you are interested in comparing tailpipe emissions from new U.S. car models you may check rankings at EPA's new website www.epa.gov/autoemissions.

P 2 C A L E N D A R

A S E L E C T I O N O F P 2 R E L A T E D E V E N T S

FRIDAY – SUNDAY, MARCH 16 -18, 2001

The Connecticut Home Show

Trade show sponsored by Home Builders Association of Hartford County. Come meet the DEP Pollution Prevention Staff at the Hartford Civic Center.

Friday 2 p.m. to 9 p.m.

Saturday 10:00 a.m. to 9 p.m.

Sunday 11:00 a.m. to 6:00 p.m.



THURSDAY - SATURDAY, MARCH 22- 24, 2001

Building Energy 2001

Conference brings together renewable energy and green building.

Sponsored by the Northeast Sustainable Energy Association.

For information call NESEA (413) 774-6053



New Solid Waste Plan Needs You to Reach Its Goals

Where will your garbage go in 2015, 2017 and 2020? The DEP's "Proposed Solid Waste Management Plan: Minimizing Disposal in the 21st Century" can provide some of the answers to this question. The Plan's emphasis is on encouraging citizens and businesses to use source reduction, recycling and composting so there is no need to construct new waste-to-energy facilities or expand our current facilities.

If you run a grocery store or restaurant, the Plan recommends that you consider separating and composting your organic waste. If you work in a school or business, DEP wants you to increase efforts to recycle corrugated cardboard and white office paper. At home, your town may begin charging for waste collection and disposal based on the amount of solid waste you generate. This will encourage people to reduce the waste they generate and to recycle as much as possible.

The Proposed Plan will further protect you and your family from metals in the environment. Some efforts are already underway to reduce mercury in the waste stream. Other programs that encourage the separation and recycling or proper disposal of wastes that contribute to toxicity, such as electronic appliances,

batteries, fluorescent light bulbs and thermostats will be promoted.

For the last decade, the DEP has worked closely with the public, municipalities and the waste industry to develop innovative programs that educate and foster source reduction and recycling. As a result, the State's Recycling rate has increased every year since 1992. However, because the Connecticut's municipal solid waste landfills are mostly closed and there is limited capacity at the state's six waste-to-energy facilities, the State needs to do even more source reduction and recycling as its population increases.

"Unfortunately, many schools and businesses have been slow to adopt and implement recycling programs," said Kim Trella, of DEP's Waste Planning and Standards Division. "With their assistance, Connecticut can make greater progress toward recycling goals."

Copies of the plan are available at municipal libraries and town halls throughout the state. The public can also obtain copies of DEP's Proposed Solid Waste Management Plan by contacting the DEP at (860) 424-3022 or view the executive summary on DEP's web site: <http://dep.state.ct.us>. ■



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