

Winslow Environmental News

VOLUME 14, NUMBER 2

PUBLISHED BY WINSLOW MANAGEMENT COMPANY, A DIVISION OF ADAMS, HARKNESS & HILL

APRIL 2004

The Environmental Hazards of Printing and Solutions on the Horizon

BY ELLEN PFEIFER

PRINTING IS A DIRTY BUSINESS. FROM THE PRE-PRINTING PHASE TO POST-PRODUCTION, THERE ARE NUMEROUS PROCESSES AND MATERIALS THAT CONTRIBUTE TO POLLUTED AIR, CONTAMINATED WATER, AND HAZARDOUS WASTES. NOT ONLY DOES THE ENVIRONMENT SUFFER FROM POISONOUS EMISSIONS, BUT HUMANS WORKING IN THE INDUSTRY ARE ALSO AT RISK OF INJURY AND ILLNESS FROM SPILLS AND FUMES.



So toxic is the printing business that it has become the target of many government regulations and remediation initiatives. What's more, the industry itself recognizes the hazards and has organized many cooperative associations and voluntary clean-up programs – often as a way to avoid legal damages and prohibitive insurance rates. Some of these programs are developed in partnership with government agencies like the EPA.

To aid the clean-up effort, a number of new

technologies and materials promise revolutionary alternatives to conventional printing techniques.

These include everything from digital photographic processes to new ink formulations to innovative printing press equipment that is easier to clean.

A complex industry with numerous small players

The printing and publishing business is extensive and multifaceted. The Bureau of the Census

Please see PRINTING page 7

FEATURED COMPANY

PRESSTEK: A GREEN PRINTING REVOLUTION

BY CELINE M. SUAREZ

HUDSON, NH – As environmental regulations grow more stringent, the printing industry needs to clean up its act, and Presstek (NASDAQ:PRST) is on the leading edge of a green revolution.



According to the Hudson, New Hampshire-based company's corporate presentation, PRST specializes in "environmentally responsible digital imaging solutions." For those familiar with the printing industry's notorious reliability on toxic chemicals, this statement may sound like a contradiction in terms.

Traditional printing methods involve the use of plates that serve as the master image to be reproduced. Whether text or illustration, an image is

Please see PRESSTEK page 4



MARKETBEAT PAGE 2

Healthy Eating: Healthy Gains

Healthy Eating Index brings more to the table than a balanced diet



PORTFOLIO UPDATE PAGE 6

NYC's Largest Grocery Store

Whole Foods Market's 59,000 square foot facility includes cafe and 42 cash registers

**LATEST WINSLOW
MANAGEMENT STUDY
SHOWS ENVIRONMENTAL
RESPONSIBILITY
CAN BE PROFITABLE**

A new study by Winslow Management Company adds to the evidence that companies that are good to the environment are also good to their shareholders.

Since it was created four years ago, the Winslow Green Index (WGI), an equally weighted index of 100 “green-screened” companies, has had an annualized return of +16.78%, in spite of the bear market of 2000 through 2002. For the same time period, the Russell 2000 Index and the S&P 500 Index were up +6.62% and down -2.53%, respectively. These performance returns cover the period August 1999 through December 2003. As always, past performance is no guarantee of future results.*

“Green stocks aren’t likely to outperform their benchmark by a factor of more than three-to-one in all cases, but our study provides further evidence that green begets green,” said President Jackson W. Robinson. “That is, we believe companies that care about the environment are well positioned to produce better returns than companies that don’t.”

“We believe companies that take advantage of environmental opportunities can gain

Continued – far right column

Healthy Living Stocks Prospering Off the Fat of the Land

BY JACKSON W. ROBINSON

Remember the famous food fight in the movie *Animal House*? Well, we are now in the midst of a new and very different kind of food fight. This one is being waged on a global level by multiple constituencies and the outcome will have a significant impact on lifestyles, diets, government policies, healthcare, businesses, and even portfolios.

As the industrialized world has prospered, obesity and the consequent increase in heart disease and diabetes have become serious health problems with huge financial costs. While people are living longer, many are doing so in a permanent disease state that requires complex, continuous, and expensive treatment. As a result, health care budgets and systems are becoming strained, if not broken.

In a 30-year study just released by the U.S. Centers for Disease Control and Prevention, it was

tion between calorie consumption and weight gain, it is no wonder that the National Institutes of Health find two-thirds of Americans overweight and one-third obese. This finding translates into 75 million new candidates for heart disease or diabetes – in America alone.

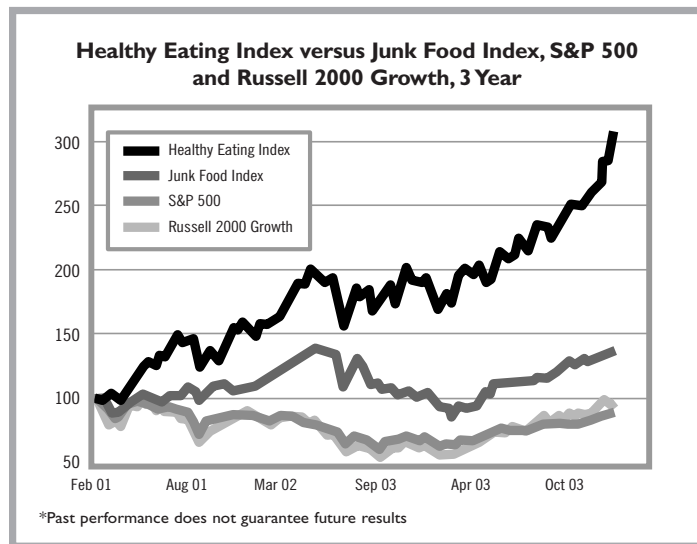
Urgent calls to action are being sounded throughout the world by all the vested interests. For example, in England, the Prime Minister is proposing a 17.5% “fat tax” on all junk foods while here in America, two doctor-developed low carbohydrate diets have become the rage everywhere.

Formulated by the late Dr. Robert Atkins and Dr. Arthur Agatston and known as the “Atkins” and “South Beach” diets respectively, both regimens seek to minimize the consumption of carbohydrates. While the Atkins diet emphasizes all forms

of protein including meat, the South Beach diet is surely more heart friendly as it advocates many aspects of vegetarianism. However, the crux of the diets is to permanently eliminate “junk” and “high-carb” foods from our menus including soda, pasta, bread, candy bars, pizza, cookies, and French fries. And at least on a temporary basis, these diets even exclude sugar-heavy fruits and vegetables such as orange juice, pineapples,

baked potatoes, and pumpkins.

“Low-carb” diets are not only fashionable but are making a huge economic impact. As reported recently in *The New York Times* and according to



reported that American women have increased their average daily calorie consumption by 22% to 1,877. And men are now consuming an average of 2,618 calories per day. Given the obvious connec-

market researchers at NRD Group of Port Washington, NY, 40 million Americans have tried some form of a low-carb diet over the last year. The repercussions are being felt throughout the global food marketplace.

According to industry trade groups like the United States Potato Board and the Florida

businesses have taken a hit, and their stocks are reeling, especially compared to businesses in the “Healthy Eating” category. (See table)

Faced with declining unit sales, the “fast food” chains are furiously adding lower carb alternatives to their menus. To mention a few: YUM! Brands’ Pizza Hut now offers a new “Fit ‘N Delicious”

pizza. Blimpie is rolling out a Carb-Counter menu. T.G.I. Friday’s has introduced several “Atkins” approved, low-carb menus featuring meat dishes. While these quick fix reactions may buy some time for the “fast food” group, we believe they and others like the soda companies will require major makeovers of their core business models.

In the meantime, investors are taking note of the new trends in the food industry. As you can see in the chart, the “Healthy Eating” stocks in the Winslow index are outperforming the representative example of “Junk Food”

Performance Comparison of Indexes			
AS OF FEBRUARY 11, 2004			
	1 YEAR	3 YEAR	5 YEAR
Healthy Eating Index***	75.8%	206.2%	249.5%
Junk Food Index***	45.3%	37.7%	56.2%
S&P 500 Index	36.3%	-12%	-9.6%
Russell 2000 Growth Index	64.7%	-2.5%	-17.8%

* Past performance does not guarantee future results
 ** Data obtained from FactSet Research
 *** Equal-weighted indexes

Index Company Names (TICKER)	
HEALTHY EATING INDEX	JUNK FOOD INDEX
Whole Foods Market (WFMI)	McDonalds Corp. (MCD)
Wild Oats Markets (OATS)	YUM! Brands, Inc. (YUM)
United Natural Foods (UNFI)	Wendy's International (WEN)
Nature's Bounty, Inc. (NTY)	Pepsi Bottling Group (PBG)
SunOpta, Inc. (STKL)	Coca-Cola Co. (KO)

Department of Citrus, over the last two years U.S. consumption of high carbohydrate foods such as oranges, pasta, wheat, potatoes, bread, and rice has declined by about 5%. Producers of these high-carb foods and the corresponding trade groups are fighting back as best they can. Since they can't remove carbohydrates from their products, they are mounting creative public relations campaigns. For example, Florida citrus marketers are busy repositioning orange juice as the “smart” carbohydrate while the potato industry is spending millions of dollars promoting “The Healthy Potato.” And in Rome in February, a conference of nutritional experts convened to promote the health benefits of pasta as the centerpiece of the Mediterranean diet. Nonetheless, high-carb food and “Junk Food”

stocks in every time period and by a significant amount. For example, over the last three years, the Healthy Eating stocks are up +206% versus a modest increase of 38% for those in the Junk Food category.

Unlike diet crazes of the past, we believe that the new low-carb alternatives are a key tool in the global effort to reduce obesity. Companies that offer solutions such as those included in the Healthy Eating category are likely to continue to prosper while those that are part of the problem could continue to falter if not fail.

Emerging growth companies can be very rewarding investments, especially when the investor successfully identifies their points of inflection. □

Continued from far left column

a competitive advantage over their peers through cost reductions, quality improvements, increased profitability, and access to new and growing markets,” Robinson added. “Environmentally responsible companies also have less risk of environmental liability, which could have a major impact on future stock prices.”

*The Winslow Green Index (WGI) is an equally weighted index of 100 “green screened” stocks selected by Winslow Management Company. The green screen evaluates issuers on the basis of factors such as minimizing environmental impact, compliance with environmental regulations, and a proactive environmental policy. As of September 30, 2003, Winslow adjusts the component stocks in the WGI on a quarterly basis. As of December 31, 2003, the average market capitalization of the issuers included in the WGI was \$9.013 billion. The results of the WGI do not reflect the results of an actual trading in a client or proprietary account managed by Winslow. The Russell 2000 index is an unmanaged index of the 2,000 smallest stocks, based upon market capitalization, in the Russell 3000 index. The S&P 500 index is an unmanaged index that includes a representative sample of 500 leading companies in leading industries of the U.S. economy. Returns for the WGI, Russell 2000 Index and the S&P are calculated monthly, assume reinvestment of dividends and, unlike an investment in a mutual fund or other account, do not reflect any fees, charges or expenses. An investor cannot invest directly in any of these indexes. Past performance does not guarantee future results. Returns and principal values fluctuate and you may lose money investing in securities, including securities of environmentally friendly issuers.

The performance of the WGI does not represent actual trading in a client or proprietary account. Winslow began calculating the index in August 1999. From August 1, 1999 through September 30, 2003 there were no changes to the securities that comprised the index. Winslow reviews the securities on the first day of each calendar quarter. There have been no material changes to the criteria used to select securities for the WGI since its inception. The client accounts managed by Winslow had portfolios during the period that were materially different than the model.

photographed, chemically developed, and transferred onto a plate (much like a snapshot is developed onto photographic paper). This procedure involves several time-consuming steps and significant applications of developing chemicals.

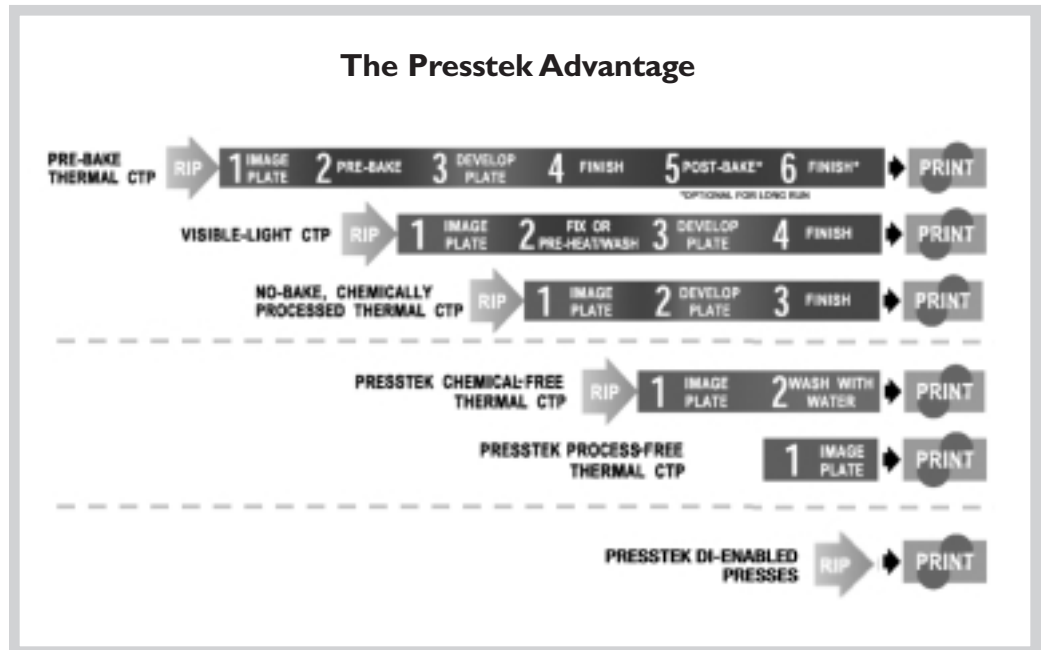
Operating on the assumption that the best way to address pollution is to prevent it in the first place, Presstek offers two printing solutions. The first is Computer-to-Plate (CTP) technology. Using the company's proprietary CTP plate called

of the company's revenues come from a recurring revenue base derived from the sale of consumable plates. The company's second product, Presstek DI, is considered by the industry to be the next generation of printing press. The DI press takes CTP a step further in that it makes the plate internally and prints all in one operation.

Chemicals, chemicals, everywhere; is the water safe to drink?

To learn more, WEN contacted several printers who use Presstek's products on a daily basis. We

Not only does the Presstek system eliminate the need for dangerous chemicals, but it also significantly speeds up the printing process and increases printers' capacity.



This flowchart illustrates the competitive advantage of Presstek's digital enabled printing technology versus traditional plate making processes.

Anthem, and the newest plate called Applause, printers can completely bypass the chemical developing step. In other words, an image is taken from a computer and quickly transferred to a plate that can be used immediately on existing presses. Not only does this system eliminate the need for dangerous chemicals, but it also significantly speeds up the printing process and increases printers' capacity. One of the keys to understanding PRST from an investment perspective is that the majority

wanted to know if the CTP and DI technologies lived up to the company's claims of being greener, cheaper, and faster. One PRST client, Joe Meninno of PrimeNet Marketing in Florida, told us that the local municipal water district had cited his business for emitting too many chemicals into the wastewater stream, costing \$120 per week in water treatment. After switching to Presstek's CTP Anthem plates, he not only eliminated waste disposal from his cost structure, but since Anthem

requires no chemical processing, he stopped purchasing film and plate chemicals altogether. Having made the switch in late March 2003, his year-to-date savings were around \$75,000. With a conservative five-year depreciation schedule, he figures that his investment in CTP will yield a return in about 2 years. And he can't wait to get his hands on the next-generation Applause plates, due out in the first quarter of 2004.

Another customer, Jim Smith of RP Printing & Graphics in the Santa Barbara, California-area told us that Presstek's CTP plates are a good fit for his business because of the local community's sensitivity to environmental issues. He cited significant costs involved in purchasing, handling, and disposing of toxic materials used for developing plates and cleaning presses. Formerly, his presses were taken off-line on a weekly basis to be cleaned. This took several man-hours and the use of hazardous chemicals and cleaning solvents. It also necessitated employees being trained to handle the toxic materials. When Smith decided to make the switch to CTP, he chose Presstek because, unlike the competition, it was the only completely chemical-free process. Now he saves about \$1700 per month in chemical purchases and related costs. Since he has eliminated the chemical-intensive preprinting and cleaning steps, fewer man-hours are required to complete a job. What's more, he has found that the new plates produced images of comparable or superior quality to the old ones. Initially, this was a major concern because his shop specializes in smaller, high-end projects where image quality is a major concern.

A third PRST customer in Ohio, Gene Scott of Pony Xpress Printing, has been running his shop as a test-site for PRST's newest CTP product, Applause. While Anthem plates still require a water wash step, Applause plates are completely

chemical and water free. When contrasted with conventional printing, he states that his company's volatile organic compound emissions (VOC) are essentially negligible. What's more, he is looking to get rid of his old preprinting processor machines because Presstek's plates make them obsolete. A smaller printer, Pony Xpress saves about \$2000 - 3000 per month and also touts its environmentally friendly printing techniques when marketing.

The icing on the cake? Gene Scott was recently asked to join an Ohio Environmental Protection Agency panel to promote clean printing options in that state.

The path to green printing is digital

Because so many printing businesses are small, they have often been exempt, to some degree, from environmental regulations. However, as loopholes are closed and as printers themselves see the need to clean up their act, they will increasingly look for solutions that are environmentally benign. They will also insist on technology that allows them to produce ever more refined imaging. Digital printing systems will be forced to meet both those challenges.

Presstek has the right technology. The next step is getting more printers to make the switch.

The company's key competitive advantage – which all three of the Presstek customers noted – was being first to the marketplace with this product. Having commercialized the only CTP plates that are chemical-free, Presstek must now get the message out to potential customers. Once printers see the savings they are missing, the movement towards digital printing should take on a life its own. And over the next few years as printers start to retire their old presses, they could be looking to the company's DI Press as a next-generation solution. □

Once printers see the savings they are missing, the movement towards digital printing should take on a life its own.

PORTFOLIO UPDATE

Whole Foods Market

(NASDAQ:WFMI)

AUSTIN, TX – In January, Whole Foods Market announced a definitive agreement to acquire UK-based Fresh & Wild Holdings Limited in a stock purchase transaction for approximately \$38 million.

Fresh & Wild owns and operates six natural and organic food stores in the greater London area, located in Camden, City Center, Notting Hill, Clapham, Soho, and Bristol. A seventh one in Crouch End is scheduled to open later this year. The store base is approximately three years old and averages 5,200 gross square feet in size. In a January press release, Chairman and Chief Executive Officer John Mackey stated, "We are very excited about extending our company mission and the Whole Foods Market brand beyond the borders of the U.S. and Canada and into Europe. The U.K. is an obvious choice due to the advanced acceptance of organics and the lack of language barriers there." Recently, Winslow visited Fresh & Wild's Soho store, and upon speaking with several employees, learned that there is great

enthusiasm for the acquisition.

Also, in early February, Whole Food Market opened its largest store, which is located in New York City's Columbus Circle neighborhood. The store is approximately 59,000 square feet and houses a 248-seat café and 42 cash registers. Nearly half the space is devoted to prepared foods, and it is the largest grocery store in Manhattan. The facility is located in the lower level of the Time Warner Center.

Fuel Tech, NV (NASDAQ:FTEK)

STAMFORD, CT – In early February, Fuel Tech announced multiple orders for air pollution control (APC) projects totaling \$2M. One project is a NOxOUT, system for a 550 megawatt utility boiler in the eastern US. Another is an order for process engineering and licensing of a NOxOUT system for a different eastern US boiler, and a third is a NOxOUT system for a new utility boiler being built in the southeastern US.

In addition, FTEK announced a modeling and design order for a demonstration of its FUEL CHEM, Targeted-In-Furnace-Injection (TIFI) process on a very large coal-fired boiler owned by a major utility. The company also made known a three-year contract for the TIFI process at Western Farmer's HUGO Station, a 475-megawatt coal-fired unit in Oklahoma.

In FTEK's fourth quarter conference call in late February, the company stated that it expects revenues from its FUEL CHEM business to increase 75% in 2004. More announcements about new FUEL CHEM customers are expected in the coming two quarters. Management also stated that

it expects the air pollution control business to pick up in the second half of the year, due to a more favorable regulatory environment.

Chiquita Brands (NYSE:CQB)

CINCINNATI, OH – Chiquita Brands International, Inc. announced in mid-January that it named Fernando Aguirre as president and chief executive officer. He succeeds Cyrus F. Freidheim, Jr., who will continue to serve as chairman of the company. Mr. Aguirre has had more than 23 years of experience in brand management, consumer marketing and turnarounds at Procter & Gamble Co. (P&G), where he headed two global businesses and served in several countries.

Commenting in a January press release on the appointment of his successor, Mr. Freidheim said, "Now is the right time to bring in a new CEO with the knowledge and experience to lead Chiquita into the future. In March 2002, Chiquita's new board of directors laid out three main goals: (1) build a solid financial base, (2) set a new direction for long-term, profitable growth and (3) put in place a strong leadership team for the future...The most important part of that team for the future is a new CEO."

To get a sense of Mr. Aguirre's commitment to sustainability issues, Winslow contacted Jeffrey Zalla, VP, Treasurer and Director of Corporate Responsibility, who told us "Mr. Aguirre continues to uphold Chiquita's commitment to sustainable environmental and labor practices. He not only believes in this mission from a personal standpoint, but it is an integral part

of his plan to make Chiquita the world's most respected corporation."

Thermogenesis

(NASDAQ:KOOL)

RANCHO CORDOVA, CA – In February, Thermogenesis Corp. announced that it received an order for four BioArchive Systems from the company's Russian distributor, Delrus Medical. Three were shipped in December 2003 and will be used to address demand for stem cell processing and cryopreservation equipment for Russia's expanding cord blood programs.

BioArchive uses a system involving three sets of bags within a freezing unit where two of the sets provide a sterile method for collecting, concentrating and cryopreserving stem and progenitor cells contained in placental/umbilical cord blood (PCB), and the third bag set is used in a transplant procedure to assure viability of the cells as they mix with the patient's blood.

The BioArchive System is a Class II blood and blood component freezer exempt from the pre-market notification procedures. The company has submitted a master file to the FDA, which summarizes pertinent information on the system's construction and operation. BioArchive also has potential applications involving archiving, storing, managing and retrieving other kinds of biological specimens, that may include stem cells, dendritic cells, T-cells, cell lines, sperm cells, eggs, heart valves, corneas, virus samples, biopsy samples and other blood, tissue and saliva samples.

reported for the year 1997 that 1.66 million people were employed in the industry with revenues from product sales estimated at \$210 billion. Sales in the industry grew 27% between 1992 and 1997.

However, the industry is significantly dominated by small firms. About one-half of all printing facilities have fewer than five employees; approximately 84% have fewer than 20, according to Census figures. In addition, there are a large number of in-house printing facilities – a typical example being the screen-printing operations within Boeing Aircraft.

There is an enormous variety of printed products ranging from newspapers, books and magazines to greeting cards, business forms, posters, stationery, packaging, fabrics, labels, etc. Each involves different production technologies and materials all with their own environmental consequences.

Five printing processes

Generally, printing and publishing can be broken down into the five most common processes. These include:

- **Lithography** – Image areas and non-image areas are deposited on a plate on a single plane (neither raised nor depressed). Ink (traditionally oil-based) is applied to the plate, adhering only to the image areas. The image is transferred or off-set to a blanket (rubber roller) and imprinted on the substrate (such as paper).
- **Gravure** – Electro-mechanically engraved copper images are created on a cylinder. Ink is applied and the surface wiped clean so ink adheres only to engraved surface. Substrate is brought into contact with the cylinder and pressure applied.
- **Flexography** – A negative is exposed on a metal plate and the photographic image developed with an acid bath. Resulting metal engraving may be used directly for letter press (flat bed) or to mold a master using a BAKELITE board. This board becomes the basis for a rubber or plastic plate with a raised image area. Substrate travels across several of these plates, each of which imprints a separate color.

- **Letterpress** – see Flexography. Used much less frequently now.
- **Screen printing** – Uses porous polyester mesh to which a stencil is applied. Ink is forced through the open areas of the screen. Can be used on wide variety of substrates from paper to fabric. ("Profile of the Printing Industry," US EPA Sector Notebook Project, Publication #EPA/310-R-95-014)

Dangerous VOCs generated by all processes

Whether in the imaging process, the printing, or the finishing of published materials, all printing methods have traditionally employed hazardous chemicals like petroleum-based inks (sometimes containing barium and lead), photo-developing chemicals, cleaning solvents, and acid and alkaline etching solutions.

While these can create hazardous solid or liquid wastes, the worst problem is their volatility.

According to the EPA Sector Notebook publication, seven of the top 10 toxic chemicals used in printing are highly volatile VOCs with the solvent toluene by far the worst offender--comprising roughly 70% of total emissions.

Toluene, inhaled or ingested, can cause headaches, confusion, weakness and memory loss. It can also affect kidney and liver function. In the environment, toluene contributes to the formation of ozone.

Voluntary Cleanup Efforts

by Printing Associations

Because of the potential for environmental and human damage, the printing industry is subject to extensive regulation. However, many printing companies, because they are such small operations, fall outside statutory limits. In the aggregate, though, their emissions create a large problem.

As a result, a number of clean-up programs have been initiated through outreach schemes of the Environmental Protection Agency and by private voluntary associations.

So, for example, the EPA created the PrintSTEP System. Without watering down existing emissions or release standards, this pilot project (Printers' Simplified Total Environmental Partnership) is

Please see PRINTING page 8

Winslow Environmental News

Published by Winslow Management Co.
Sixty State St.
Boston, MA 02109
866-804-5414

WEB ADDRESS:
www.winslowgreen.com
as a service to our clients and other interested persons

EDITOR-IN-CHIEF
Jackson W. Robinson

MANAGING EDITOR
Celine Suarez

CONTRIBUTORS
Diane Daly
David Kowal
Ellen Pfeifer

Jackson W. Robinson
Celine Suarez

DESIGNED AND PRODUCED BY
N. J. de Sherbinin Adv.
and Design

Printed on 100% Post-Consumer Recycled Paper from Monadnock Paper Mills

.....
This newsletter is published solely for informational purposes, and neither Winslow Management Company nor Adams, Harkness & Hill, Inc. is recommending any action based upon it. The information is based on sources we believe to be reliable, but it is neither all-inclusive nor guaranteed to be accurate. Opinions reflect our judgement at a particular time and are subject to change. This publication is not intended to be an offer or solicitation to buy or sell securities. Investors should obtain individual financial advice based on their own circumstances before making an investment decision. Past performance is not a guarantee of future performance of an investment. Adams, Harkness & Hill or its principals or employees may have a position in the securities referred to in this report or own options, rights, or warrants to purchase such securities. Additional information on the securities is available on request. Adams, Harkness & Hill may make a market, deal as principal, or in the last twelve months may have managed or co-managed a public offering or acted as initial purchaser or placement agent for a private placement of any of the securities of a company mentioned in this publication. A principal or employee may be a director, and Adams, Harkness & Hill may perform investment banking services for any company mentioned in this publication.

Copyright 2004 Adams, Harkness & Hill, Inc. All rights reserved. Reproductions or redistribution by any means is prohibited.

Should you invest for
the **environment**
superior growth
or **both?**

W I N S L O W
M A N A G E M E N T C O M P A N Y

866-804-5414
www.winslowgreen.com

PRINTING continued from page 7

designed to create a simpler regulatory framework so that small business owners can more easily navigate the maze of rules.

Then there is the Printing Industry of Minnesota (PIM) and its Great Printer Environmental Initiative. An offshoot of a program created by the Council of Great Lakes Governors, the Environmental Defense Fund and the Printing Industries of America, the Great Printer program “encourages printers to take the extra effort to combat pollution,” according to Paul Gutkowski, PIM’s Director of Safety and Environmental Services. A Great Printer commits to “going beyond compliance” by “minimizing

wastes, reusing or recycling waste that cannot be prevented, using less hazardous materials, and seeking ergonomic improvements,” Gutkowski explains.

New technologies, new materials offer a cleaner future

Fortunately, cleaning up the printing industry is becoming easier as the result of numerous new technologies and materials. According to Gutkowski, the biggest change has come from the digital revolution in which printing images are deposited directly on a plate from a computer.

“That’s been fantastic,” he says, “because the fewer corrosive chemicals you use the less goes down the drain or gets splashed on employees’ eyes and skin.”

Other promising developments include waterless printing, solvents that don’t create hazardous wastes, inks with vegetable oil or water bases, chemicals with lower VOCs, even “digital paper.”

“Some of these innovations require substantial investments on the part of printers,” Gutkowski says. But such businesses must still compete against more conventional dirty practitioners. “Most don’t charge extra,” he says, so his organization, PIM, works hard to make the public relations case for Great Printers. “People need to patronize Great Printers,” he says, “but they also need to tell them, ‘It’s great that you’re standing up for what we believe.’” □

**Fortunately,
cleaning up the
printing industry is
becoming easier
as the result of
numerous new
technologies
and materials.**

Winslow
Environmental
News

Sixty State St., Boston, MA 02109

First Class Mail
U. S. Postage

PAID
Burlington, MA
Permit #197