## New VI Research Program To Study Markets For Recycled Vinyl

A new research program funded by the Vinyl Institute will help a Vermont company identify potential markets for recycled vinyl. The program, to be carried out by Vermont Republic Industries (VRI) of St. Albans, Vt., will investigate ways to retrieve vinyl from non-packaging applications and recycle it into high-volume uses. VRI will evaluate the properties of the material that could be recovered and assess its appropriateness for reuse in other products.

"While the Vinyl Institute has funded a number of projects focusing on PVC packaging in the waste stream, this is the first one that looks at other vinyl products that might be destined for landfilling or incineration," says VI Executive Director Roy Gottesman.

The vinyl industry believes such discards may represent a valuable source of near-prime material that could be recycled into other applications, such as drainage pipe, which require less demanding properties.

Vermont Republic Industries, founded in 1984, is New England's largest recycler of PVC scrap. VRI provides plastics recycling services for industrial waste management and resource-saving programs by salvaging plastic scrap from end-use applications and reselling it to companies that recycle the material into other products.

The company will be assisted on the project by faculty members from the University of Vermont's business school who will analyze the business and social requirements needed to establish a profitable PVC recycling industry. The Vinyl Institute hopes that the information gained from the project also can be applied to vinyl packaging, where most recycling activity currently is focused. Results of the VRI program are expected in about 12 months.

**In attendance at the press conference were (l to r): [illegible]d Goodman, manager of technical projects for the PVC division of OxyChem and Vinyl Institute Technical Committee liaison with VRI; Robert Arns, professor at the University of Vermont; Albin D. Voegele, president of VRI; and Roy Gottesman, VI executive director.**

## New Vinyl Recycling Video Released

The Vinyl Institute has released a revised, 9½-minute videotape, "Vinyl: Part of the Recycling Solution." The video discusses the role plastics play in the municipal waste crisis, then goes on to explain why vinyl and other plastics can be part of the recycling solution.

The video also includes footage of demonstration projects showing the feasibility of collecting used vinyl bottles and recycling commingled plastics (including vinyl) into useful products

"This video was originally created to inform state and local legislators that PVC, like other plastics, is eminently recyclable," says VI Executive Director Roy Gottesman. "That use is continuing, but several of our members have found that the video can also be used to educate employees, community groups, and customers. In some places, companies have even arranged for the video to be shown on local-access cable television."

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# environmental update

## Industry Prepares For Next Phase As SARA Title III Deadline Passes

The July 1 deadline for companies to disclose their emissions of toxic chemicals as called for under Title III of the Superfund law (SARA) passed fairly quietly around the country, according to spokespersons for the chemical industry and PVC producers. This was contrary to some predictions that the media would use the event to portray the toxic emissions as a national crisis. But most of the spokespersons cautioned that the issue hasn't gone away just because the first hurdle has been passed.

"Overall, media coverage of the issue has been evenhanded, and the response in most communities has been ho-hum," reports Jon Holtzman, vice president for communications at the Chemical Manufacturers Association. "I think the chemical industry was able to diffuse the first wave of reaction by talking about it openly.

"But remember, with a few exceptions, the public hasn't seen the aggregate data yet," Mr. Holtzman continues. "There is definitely a second wave coming. The environmental groups are hard at work, and although state legislators have been quiet so far, we expect to see bills proposed in several states to restrict emissions of some substances."

### PVC Producers Prepared

Companies in the PVC industry were well-prepared to meet the communications requirements of SARA Title III, according to the five producers *Advisory* contacted. The companies typically gave their plant managers wide discretion about how to communicate the emission information while providing them with support in the form of videotapes, fact sheets and material safety data sheet information. Most of the companies also arranged for their plant managers to attend risk communications training programs.

"We met with each of our plant managers last year to evaluate their respective situations," recalls Mike Reynolds, manager of public relations for Vista Chemical and chairman of the Vinyl Institute Communications Committee. "In some cases, we put together focus groups and contacted community activists in advance of the July 1 deadline. The plant managers at most of our plants invited area residents and the media to come in for a tour."

Companies typically began the communications process with their own employees. "We held a meeting at the plant for all our people where we explained our emissions data and distributed a pamphlet describing the new requirements," says Jerry Mitzner, manager at OxyChem's Burlington North PVC plant in Burlington, N.J. "We are looking to them to be our ambassadors to the community."

### Working Through Coalitions

In the major chemical-producing parts of the country, PVC producers also addressed the issue through industry-organized community awareness and emergency response committees. Some of these industry committees went beyond straight reporting of emissions by individual plants in an effort to stay in front of the issue.

In Geismar-St. Gabriel, La., for example, PVC producers joined with a number of other companies to fund an independent community air-sampling study conducted by Louisiana State University. Preliminary results showed the compounds detected were in the low ppb range.

Three PVC/VCM producers in the Baton Rouge area did their own cumulative impact modeling for vinyl chloride monomer in advance of July 1. As a result, they were able to provide assurances that levels of VCM exposure to the surrounding communities are extremely low.

In Lake Charles, La., PVC producers and other chemical companies formed a coalition with representatives from environmental groups, government, labor, the medical community and McNeese State University to study the effects of chemicals released into the local environment. The companies are committed to make whatever emissions reductions the study finds are necessary to protect public health.

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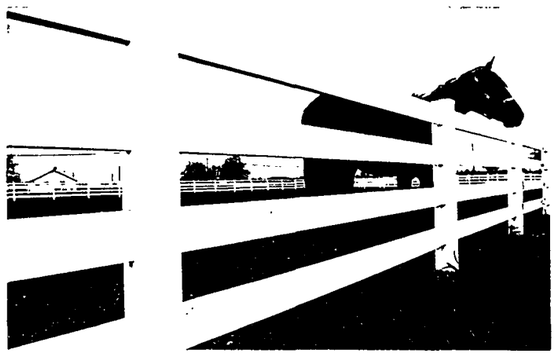
## Vinyl Fencing Catching On

For hundreds of years, farmers and ranchers have had no choice but to put up with the expensive maintenance requirements of wooden fencing – not to mention its other drawbacks. In recent years, however, some property owners have discovered an alternative that is economical, attractive and virtually maintenance-free: vinyl.



**The beauty and minimal maintenance requirements of vinyl fencing have made it the preferred fencing product among leading horse-breeding farms.**

Introduced in the early 1980s, vinyl fencing is becoming increasingly popular, particularly among horse-breeding farms. The market is still in its infancy, but it has very good long-term potential, according to industry sources.

Vinyl fencing is initially more expensive than wood, but it will maintain its original appearance for years without painting or staining. Vinyl fencing is also impact-resistant and will stand up to wide temperature extremes without fading or cracking.

Users can choose from a number of styles, the most popular being round post & rail and plank style. Until this year, vinyl fencing was available only in white; however, one resin maker has developed a compound for a low-gloss brown vinyl fence that resembles natural wood.

"Large horse farms have been the early innovators in this market," says VI Executive Director Roy Gottesman. "As word spreads about the advantages of vinyl fencing, we expect it to become more popular among other farm owners as well as commercial and residential developers."

To help promote demand for the product, the Vinyl Institute recently issued a press release and photo to publications in the farming, architecture, shelter and building & construction markets publicizing this trend towards vinyl fencing. Coverage of the Institute's release in these magazines is expected to appear in the coming months.

## Paper On PVC Fire Properties Issued

The Vinyl Institute has issued a new technical information paper on "Fire Properties of Polyvinyl Chloride." The eight-page paper was authored by Dr. Marcelo Hirschler of BFGoodrich, who is also the VI Technical Committee project leader on fire and combustibility research. The paper incorporates the latest information about the fire-performance properties of PVC, including results of recent tests done at Southwest Research Institute on the health effects of hydrogen chloride (HCl) and the phenomenon of HCl decay in a fire atmosphere.

The report concludes that PVC has excellent fire performance properties compared with wood and other construction materials and is less flammable and no more toxic than most organic materials. Research has shown that HCl is unique among common fire gases in that it decays by reacting very rapidly with most construction surfaces and consequently does not pose a threat in real fires.

Copies of the paper may be obtained from VI headquarters.

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Looking to the future, PVC producers feel ready to deal with the challenges presented by SARA. "We've had such a strict program for so long that these new requirements haven't been a big problem for our plants," remarks Sandie Kroeger, director of corporate communications for Occidental Chemical. "We reduced our hazardous waste generation by 80% company-wide between 1980 and 1986, and our goal is a 5% reduction during each of the next five years."

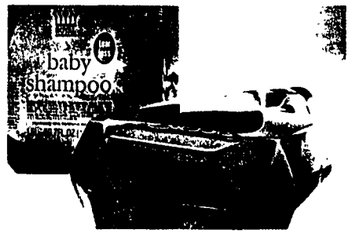
Companies ought to view SARA as an opportunity as well as a challenge, Mr. Reynolds feels. "The way we see it, it's in our direct business interest to tighten measurement techniques, keep emissions as low as possible and operate safely. Showing a real commitment to continually improving our operations is the best way to respond to a skeptical community."

## Bottle Sports New Recycling Symbol

Consolidated Royal's shampoo bottles are among the first containers to sport the Society of the Plastics Industry's new recyclable vinyl symbol. SPI unveiled the voluntary container coding system earlier this year to help recyclers sort plastic containers by resin composition.

The letter "V" and number "3" code for vinyl is one of seven symbols developed by SPI to be placed on the bottom of plastic bottles 16 ounces or more, or trays and tubs which contain at least eight ounces. This system is the plastics industry's way of demonstrating its commitment to sound environmental policies. The coding system is expected to come into wide use within two years.

BFGoodrich, whose vinyl compounds are used in the new shampoo bottles, worked closely with Schoeneck Containers and Consolidated Royal to assure that the recyclable vinyl symbol would appear on the new packaging. Schoeneck incorporated the symbol into the mold it created for blowmolding the bottles.




**A shampoo bottle is one of the first packages to display SPI's new recyclable vinyl symbol.**

"One of the main reasons we selected vinyl for our packaging was because of its recyclability," said Bill Field, president of Consolidated Royal, located in Chicago.

According to Bill Smith, president of Schoeneck Containers, recyclers are interested in vinyl for many of the same reasons packagers are. "Vinyl is strong, shatterproof, multichemical-resistant, cost-effective and has endless design possibilities. I like the idea that the bottle my company made today may be a pipe, fencepost, possibly even a welcome mat tomorrow."

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## New Marketing Task Forces Target Pipe, Electrical Materials Markets

As a result of discussions at the September executive board meeting, the Vinyl Institute has established two new task forces to focus on the pipe and electrical materials markets.

Each group held an organizational meeting in October to develop a mission strategy and programs and to make initial committee assignments. William Reading of Occidental Chemical chairs the Pipe Task Force, while Rick Smith of Vista chairs the Electrical Materials Task Force.

"The formation of these task forces resulted from the VI executive board's decision to embrace a proactive program to expand the market for PVC," says Roy Gottesman, VI executive director.

"Pipe, electrical materials and packaging were identified as the three initial target areas," he continues. "The packaging market, of course, is already the focus of the Packaging Council, which was formed last year and has been very successful. We expect that the Packaging Council will serve as a valuable prototype for these new task forces as they organize and move forward."

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*In This Issue:*



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# advisory

## Vinyl Packaging Council Going After The Expanding Bottled Water Market

With a projected growth rate of 12%-15% a year for the next five years, bottled water is the fastest-growing segment of the domestic beverage industry. Already, 83% of the one billion gallons of water bottled in the U.S. comes in plastic containers, and the trend continues to be away from glass.

keeping with the show's future orientation, the Vinyl Packaging Council exhibit featured the theme: "Vinyl: The Shape of Things to Come." A new pamphlet highlighting the advantages of vinyl water bottles was distributed at the show.

The Council also instituted an ad campaign on the recyclability of vinyl


**The Packaging Council exhibit for the 1988 Bottled Water Show featured the theme: "Vinyl: The Shape of Things to Come."**

Unlike some other segments of the beverage industry, water bottlers are not set in their ways as far as packaging is concerned. High-density polyethylene and polycarbonate are the most popular plastics for bottled water today, but a number of bottlers are looking at the advantages of vinyl bottles.

"We continue to see a good opportunity for vinyl in the U.S. bottled water market," says Rohm and Haas' Carrie Solin, chairman of the Vinyl Packaging Council. "Not only does vinyl meet the industry's need for a reasonably priced, clear material that won't affect the taste of the water, but it's proven itself in Europe, where it is the market leader."

The Packaging Council is actively encouraging bottlers to try vinyl. In early November, the Council exhibited at the 1988 International Bottled Water Show in Atlanta, where more than 2,000 attendees were expected. In bottles. The ad has appeared in *Bottled Water Reporter* as well as several other plastics and packaging publications.

Most recently, an article on trends in bottled water packaging written by Greg Boyd of Kaneka Texas, a Vinyl Institute affiliate member company, appeared as the cover story in the August/September issue of *Bottled Water Reporter* magazine. Reprints of the article, which describes the advantages of vinyl bottles, are available from VI headquarters.

**NEW TECH COMMITTEE CHAIRMAN**

The Vinyl Institute is pleased to announce that Dr. Charles Bush, vice president-research & development for the Geon Vinyl Division of BFGoodrich Co., is the new chairman of the Vinyl Institute Technical Committee.

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