Shintech, the Japanese chemical company, has been trying since 1996 to locate 3 factories and an incinerator next to homes and schools in the small community of Convent in southern Louisiana. (See REHW #615.) Convent residents and other Louisiana activists are fighting the proposed industrial complex, which would manufacture 1.1 billion pounds of PVC plastic (better known as "vinyl") each year. They argue that Louisiana authorities would violate federal civil rights laws if they licensed the Shintech plant in a predominantly African-American community where pollution is already making people sick. The outcome of this civil rights battle will set important legal precedents.

There is no reason to believe that Shintech will bring economic prosperity to the Convent area. The community already has a variety of high-tech toxic industries, yet 40% of its residents live below the poverty line.[1] According to a representative of the Louisiana Chemical Association, 99% of industrial plant systems are now computer controlled so chemical plants are highly automated and the few plant operators who have jobs must have computer skills, as well as a good working knowledge of physics and chemistry. Like most of Louisiana, Convent and St. James Parish have few residents with the skills necessary to work in the petrochemical industry. There are only 17 African Americans in St. James Parish who qualify as engineering technicians.[2] (In Louisiana, a county is called a parish.)

Shintech's controller Dick Mason has dangled the promise of 165 permanent jobs and $500,000 for job training in St. James Parish. However, neither Shintech or local officials have taken any steps to guarantee that residents of St. James Parish or even Louisiana will be hired. Although it is typical for governments to require a percentage of local hires in exchange for tax breaks, Louisiana officials have agreed to give Shintech $130 million in tax breaks without setting any terms that directly benefit Louisiana citizens. For every permanent job offered by Shintech, Louisiana taxpayers will subsidize the corporation with nearly $800,000 in tax breaks.[3]

As the world's largest user of chlorine, the PVC industry creates unique dangers that other industries (including most other plastics industries) avoid. By its own admission Shintech would release nearly 600,000 pounds of toxic chemicals into the air per year (out of a total of nearly 3 million pounds of air pollutants the plant would emit annually), and would pour nearly 8 million gallons of toxic waste water into the Mississippi River each day.[4]

One of the principal pollutants from Shintech would be vinyl chloride. According to the EPA, "vinyl chloride emissions from polyvinyl chloride (PVC), ethylene dichloride (EDC), and vinyl chloride monomer (VCM) plants cause or contribute to air pollution that may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness. Vinyl chloride is a known human carcinogen which causes a rare cancer of the liver."[5] Shintech's Convent plant would be one of the largest PVC, EDC, and VCM production operations in the world.

A recent front-page series in the HOUSTON CHRONICLE detailed how the vinyl industry has manipulated vinyl chloride studies to avoid liability for worker exposure and to hide extensive and severe chemical spills into local communities. The CHRONICLE reported that a Shintech facility in Texas accounted for nearly half of all "fugitive" air emissions of vinyl chloride monomer in Texas from 1987 through 1996.[6]

Vinyl chloride production is also inherently a source of dioxins, a highly toxic substance that can cause cancer and other illnesses in humans even at very low exposure levels.[7] Dioxins are a global health threat because they persist in the environment and can travel long distances. At very low levels, near those to which the general population is exposed, dioxins have been linked to immune system suppression, reproductive disorders, a variety of cancers, and endometriosis. According to a 1994 report by the British firm, ICI Chemicals & Polymers Ltd., "It has been known since the publication of a paper in 1989 that these oxychlorination reactions [used to make vinyl chloride and some chlorinated solvents] generate polychlorinated dibenzo-dioxins (PCDDs) and dibenzo-furan (PCDFs). The reactions include all of the ingredients and conditions necessary to form PCDD/PCDFs.... It is difficult to see how any of these conditions could be modified so as to prevent PCDD/PCDF formation without seriously impairing the reaction for which the process is designed."[8] In other words, dioxins are an unavoidable consequence of making PVC. Dioxins created by vinyl chloride production are released by on-site incinerators, flares, boilers, wastewater treatment systems and even in trace quantities in vinyl resins.[9]

Around the world, scientists have identified high levels of dioxin near PVC production facilities. In 1996, scientists investigating dioxin in the sediment of the Rhine River in Europe found that overall dioxin levels have declined in recent years except for the specific types traceable to vinyl chloride production.[10] In Lake Charles, Louisiana, high levels of dioxin-like chemicals (e.g. hexachloro-benzene) have been documented in the Calcasieu Estuary outside of the PPG and Vista Chemical PVC production plants.[11] Vinyl production in a chemical complex outside Venice, Italy has polluted the Venice lagoon with dioxin.[12]

Japanese communities are reporting some of the highest dioxin levels in the world from the incineration of wastes containing PVC materials.[13] It is ironic that while Japanese government officials are proposing restrictions on the manufacture of PVC products to avoid increased dioxin levels, Shintech, a Japanese-owned corporation, is battling American citizens to build a PVC production complex in Louisiana.

U.S. communities near vinyl production plants have already been hurt. For instance, in Louisiana, two poor African-American communities, Morrisonville (once next to Dow Chemical in Plaquemine Parish) and Reveille town (once next to Georgia Gulf also in Plaquemine Parish) were bought out and razed by the vinyl production companies because of groundwater contamination, toxic air releases, and health problems suffered by residents.[14] Ethylene dichloride (EDC), a suspected human carcinogen used in the production of PVC, has leaked from the Vista Chemical and PPG facilities into the groundwater below the African-American community of Mossville.[15]

"The worst may be yet to come," according to the HOUSTON CHRONICLE. The CHRONICLE explains that "[t]he 200-foot zone of the Chicot Aquifer, which supplies some private water wells, is tainted with EDC.... The concern is that the compound will seep into the 500-foot zone, which provides city drinking water for more than 100,000 people."[16]

Even if Shintech could make PVC with less than 500,000 pounds of toxic air emissions per year, the corporation would be making a product whose use and disposal create severe environmental and health problems. As Nike pointed out in a recent public announcement that it will remove PVC entirely from its products, "the issue for us with PVC is a lifecycle one. At Nike, we believe in looking at the entire product and resource lifecycle. The pure PVC polymer is not toxic, but its lifecycle is very hazardous to human health and the environment."[17]

PVC products create dioxins when burned, leach toxic additives during use (see REHW #603) and are the least recyclable of all major plastics. [18] Because of these and other reasons a number of organizations have called for a PVC phase-out, including the American Public Health Association[19] and the International Association of Fire Fighters.[20] The Association of Postconsumer Plastic Recyclers has declared PVC a contaminant to plastics recycling.[21] Numerous businesses have either eliminated or begun working towards a PVC phase-out in their products and...
facilities, including Nike, Volvo, Saab, Braun, Ike, the Body Shop, JM and Svenska Bosteder (two of Sweden's leading construction companies).[22] Major construction projects such as the Sydney 2000 Olympics village are being designed to minimize the use of PVC "by selecting alternative materials where they are available, are fit for the purpose and are cost competitive."[23] [To learn about alternatives to PVC, go to: www.greenpeaceusa.org/campaigns/toxics/pvc_dist.htm.]

Even the PVC industry itself cannot be eager to see Shintech come on line. A number of PVC companies (e.g. Geon and Oxychem) have merged, which industry analysts suggest is due to "mounting losses in the vinyls business as prices dived [sic] in 1998. Even the most cost-efficient US producers are suffering as the Asian crisis slashes Asian import demand and operating rates plummet... Low growth rates in the mature European economies mean that the industry's problems cannot be hidden..."[24] Some major companies are bailing out. Shell announced in April that it was seeking a buyer for its vinyl interests, and companies such as Dow are hedging their bets by producing new-generation polyolefins which analysts say will replace PVC in various markets, including packaging, auto interiors, wiring, flooring and other flexible applications. In sum, the production of PVC cannot in any way be considered "desirable" development in Louisiana or anywhere else. The battle against Shintech represents not only one of the biggest environmental civil rights struggles in the nation's history, but also a watershed moment that will impact national materials and chemical policies for decades to come. Either those who want to profit from the expansion of industrial chlorine chemistry will succeed, or the U.S. environmental movement will successfully draw the line in Convent by joining Louisiana's communities on the front line of the struggle, shouting "Enough is enough!"

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[22] For a list of PVC bans see "Chlorine & PVC Restrictions and..."
PVC-Free Policies,” compiled by Greenpeace International. Available at www.greenpeace.org/toxics/frame4cp.html. Select Policy, then PVC restrictions.


Descriptor terms: shintech; pvc; plastics; chlorine; dioxin; citizen groups; la; convent; lean; charlie cray; monique harden; air pollution; vinyl; civil rights; civil rights act of 1964; epa; sab; african-americans; dioxin;