• A misuse defense. Manufacturers say that under strict liability principles, they are held liable even if products are misused. The study endorses a comparative fault system in product cases and permits manufacturers to shift some liability in workplace injury cases.

• A state-of-the-art defense. This idea for manufacturers would bar recovery of damages when a product conformed to industry practice at the time of manufacture.

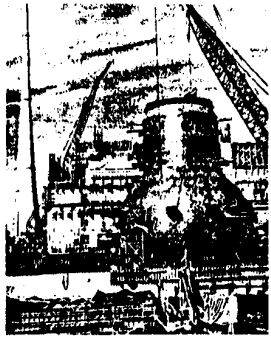
As a short-term solution, the study recommends "adoption of joint underwriting associations with federal reinsurance and 'captive' insurance companies," according to Neill Hollenshead, vice president of Research Group. Captive insurance companies are organized by a manufacturer or group of manufacturers to insure risks of their companies. Such combined ventures have been proposed for chemical companies. □

Nuclear industry may lose liability limit

The problem-plagued nuclear power industry received what may be another major setback late last month. It came as a federal district court decision declaring the Price-Anderson Act, which set up a federally administered liability insurance program for nuclear facilities, unconstitutional. The act, according to judge James B. McMillian of the District Court for Western North Carolina, violates the equal protection and due process provisions of the Fifth Amendment by setting a maximum liability ceiling for a single nuclear accident of $560 million.

The suit was brought against Duke Power Co. and the Nuclear Regulatory Commission by a group of citizens living near Duke Power's Catawba nuclear station and the site of its proposed McGuire nuclear station, now under construction, both near Charlotte, N.C. In finding for these people, judge McMillian stated that the act violates the Constitution "because it allows the destruction of the property or the lives of those affected by nuclear catastrophe without reasonable certainty that the victims will be justly compensated." The act also encourages irresponsibility in matters of safety and environmental protection by setting an unrealistically low ceiling on the accountability of developers, the opinion states. The decision will almost certainly be appealed, either to the circuit court of appeals in Washington, D.C., or directly to the Supreme Court.

The Price-Anderson Act, adopted



Nuclear power plant construction may be threatened by crucial court decision

in 1957 and renewed in 1975, requires nuclear power companies to make payments into a federally held insurance fund that would be used to pay damages in the event of a nuclear accident. Many, including judge McMillian, consider the act to be crucial to nuclear development by private industry. "Without the Price-Anderson Act, regardless of the desires of the nuclear power industry, power companies probably would not be able to obtain the necessary financing, supplies, and architectural skills to build nuclear power plants and to maintain them once construction was complete," he says in his opinion.

Segments of the nuclear industry, at least in their public statements, do not see the act as essential to continued nuclear power development. "We see no nationwide shutdown of nuclear facilities (because of the court decision), and we do not plan to change our schedule on our existing construction sites," says Carl Horn Jr., chief executive officer of Duke Power Co. If the decision is upheld by the Supreme Court, which Horn says he thinks is unlikely, other forms of insurance coverage could be developed, he says. □

FDA proposes lower PCB levels in foods

The Food & Drug Administration is taking steps to reduce the amount of polychlorinated biphenyls (PCB's) allowed in certain food, including milk, poultry, and fish.

According to the agency, recent studies indicate that PCB's fed in high doses to test animals cause liver tumors. The substances also have been associated with increased skin and pancreatic cancers among R&D and refinery workers exposed to PCB mixtures for five or six years. Human ingestion of extremely high levels of the substances, about 35 mg per day, can result in acnelike skin eruptions, darkening of skin and nails, excessive discharge from the eyes, and swelling of the eyelids.

PCB's have been of concern since the early 1970's when they were found to persist and accumulate in the environment. Legal limits for PCB's were first formally established by FDA in 1973. Since that time most of the major uses of PCB's, such as in carbonless copy paper, fire-resistant hydraulic fluids, plasticizers, and paints, have been phased out. The remaining major use of PCB in electrical equipment will be phased out by July 1977, and Monsanto, the only U.S. producer of PCB's, plans to withdraw completely from the market later this year.

Under FDA's proposal, the legal limit or tolerance level for PCB's would be lowered from 2.5 ppm to 1.5 ppm in the fat of milk and dairy products; from 5 ppm to 3 ppm in the fat of poultry; from 0.5 ppm to 0.3 ppm in eggs; and from 5 ppm to 2 ppm in fish and shellfish.

FDA explains that it is not proposing a ban on the products because the Delaney clause, which prohibits the addition to food of any substance that causes cancer in man or test animals, does not apply to substances such as PCB's, which are not intentionally added to food, but enter food because of their presence in the environment. Interested persons have until June 1 to comment on the proposed tolerance levels. □

NAS forum urges use of coal despite problems

"Uncertainty" was the message at the kickoff session of last week's National Academy of Sciences forum on coal—uncertainty and a warning.

The warning was a matter of simple arithmetic. Without a rapid increase in the use of coal, the U.S. will be facing a disastrous energy shortage. Dr. Arthur M. Bueche, vice president of R&D for General Electric, estimated the shortfall to be about 26 quads (quadrillion Btu) by the year 2000, even making very optimistic assumptions about rates of growth and conservation measures (see page 5). By contrast, the 1973 oil embargo cost the U.S. about 1 quad. Without coal, "I am not ruling out the very real possibility of social upheaval and revolution," Bueche says.

Fortunately, however, the U.S. does have coal, some 10 to 30 quin-

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tillion Btu of it. And none of the forum speakers foresaw any technological problem in getting it out of the ground. But they also agreed that industry and government are plagued with environmental, social, and legal uncertainties.

On the production side, it was pointed out that there is no clear federal policy on how fast—and where—coal should be developed. What are to be the standards for the reclamation of strip-mined land? What will be the leasing policy on federal lands?

Industry spokesmen in particular complain that the rules keep changing. Without a stable body of law and policy, they warn, industry will be very reluctant to make the huge investments necessary to expand production.

On the consumption side, environmental concerns seem paramount. "Expand coal burning and relax environmental controls," says Lester B. Lave, an economist at Carnegie-Mellon University, "and by 2010 the whole nation will look like Pittsburgh in 1945."

Technology exists to overcome the problems. Stack scrubbers can absorb sulfur dioxide in limestone, and physically washing the coal before burning will remove clay that forms sooty particulates. But environmental technologies are expensive, about 10 to 20% of the cost of a new plant. And until controversies over clean air standards are cleared up, few industries seem willing to make that investment. □

Ban on flame retardant Tris appears imminent

The Consumer Product Safety Commission (CPSC) appears ready to ban the flame retardant Tris, and environmentalists who have been seeking such a ban say it's none too soon. The issue came to a head at House subcommittee hearings last week in Washington, D.C. At press time, a vote to ban the chemical was expected by week's end.

Tris, or tris(2,3-dibromopropyl) phosphate, widely used to treat children's sleepwear made from polyester and acetate fibers, imparts the needed flame resistance to conform with 1972 federal standards. But laboratory studies have shown that the compound produces kidney cancer in rats, the National Cancer Institute's Dr. Marvin Schneiderman told a House government operations subcommittee last week. Previous in vitro studies using the so-called Ames test also showed the compound to be mutagenic and possibly carcinogenic. Based on these findings, environmentalists fear that children could absorb the compound through their skin, or swallow some of the material by chewing on their garments. Tris is used at levels from 5 to 10% of the weight of the garment, adding further concern about ingestion. Surface-deposited Tris, however, does wash off with repeated laundering.

Rep. Benjamin Rosenthal (D.-N.Y.), chairman of the Commerce, Comsumer & Monetary Subcommittee, declared that up to 45 million children could be exposed "to the enormously serious risk of developing cancer." Rosenthal also seriously questions CPSC's handling of the Tris safety question.

Environmentalists have dogged CPSC for nearly two years to take action on the compound. Robert J. Rauch, a lawyer for the Environmental Defense Fund, told the subcommittee that CPSC "was aware of the potential hazards presented by Tris" since late 1975 but failed to take action. In March 1976, the Environmental Defense Fund petitioned CPSC to require that labels be placed on garments treated with Tris warning consumers to launder garments at least three times before wearing. Commission chairman S. John Byington told the committee that CPSC didn't act sooner because it couldn't make a case strong enough to stand up in court.

Apparel makers, meanwhile, have attempted some last-minute moves to blunt the impact of a ban on the industry. The American Apparel Manufacturers Association met with the commission and suggested that the industry be allowed to sell already treated fabric. The association previously had said that industry planned to stop using Tris-treated fabric with this year's spring sales season. □

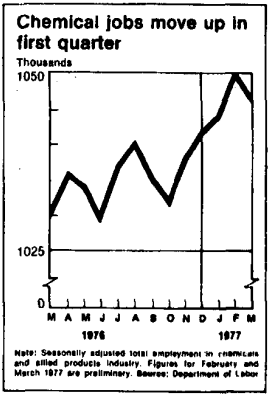
Chemical employment picks up strongly

There has been a notable pickup in jobs across the board at chemical and related companies in the past few weeks, a number of independent surveys indicate. Professionals as well as production employees are in stronger demand than just a few months ago.

The chemicals and allied products industry averaged 10,000 more employees in the first quarter this year than in the final quarter of 1976 and 19,000 more than in the first quarter of 1976, according to preliminary seasonally adjusted figures from the Labor Department. The March total of 1,046,000 settled back 4000 from the revised February peak.

Despite the slight drop in total March employment, the chemical industry pushed up work hours once again in March for the third straight month. And the chemical work week, though down from the extraordinary pace in February, stayed quite high at 41.9 hours.

The Labor Department's work-hour data for March support a number of company comments that the late winter was an upbeat period for chemicals (C&EN, April 4, page 8). Companies noting the improved tempo include some of the largest U.S. chemical producers, such as



Borden, Diamond Shamrock, Koppers, NL Industries, Olin, Reichhold Chemicals, and Union Carbide.

Scientific and technical professionals have participated fully in the new hiring wave. The latest demand reading for this group from Deutsch, Shea & Evans, New York City consultants, shows a February index of 125.7 (1961 = 100). This level is only a bit lower than the 30-month high of 128.3 in January. In February 1976, the index stood at 93.2. Similar strength in demand for chemists and chemical engineers has shown up this year in C&EN's own classified job advertising.

The chemical job thaw this year breaks the frozen state of chemical employment during the business pause in 1976. As in a number of other business indicators last year, employment went through a curious holding pattern from last spring through the fall. During this time, chemical employment fluctuated between 1,030,000 and 1,040,000. □

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