

THE NEW YORK TIMES, SUNDAY, DECEMBER 12, 1976

How Polyvinyl Chloride Met Health Rules

Continued from Page 1

of the companies, led by the Dow Chemical Company, are operating at that level when the OSHA announcement came on March 22, 1974.

Concentrations sometimes ran to 40,000 or 50,000 parts per million previously and the risk was believed to be high. But then two rats

died. Although the rats died of other causes, autopsies showed the presence of angiosarcoma and in April, OSHA moved to a standard of "no detectable" concentration as measured in the air.

The chemical companies argued that the "no detectable" standard would close the industry and bring on national economic disaster. They even offered a study warning

that a shutdown would put 2.2 million people out of work and cost the economy \$65 to \$90 billion.

By October, they had convinced OSHA to change to a 1 part per million average with brief exposures to higher levels permitted. Emissions could go to 25 parts per million if workers wore respirators, but the respirator requirement was delayed by one year to April 1, 1976.

OSHA officials now say that the effects of those changes were minimal and claims by the industry that they made all the difference were "a little face-saving semantics."

But by spring, 1974 most companies had realized the final standard would be tough and that the time had come to try to comply.

They discovered that in converting the gas to polyvinyl chloride resin, large vinyl chloride gas leaks into the atmosphere were developed. And for the more than 1,000 companies that shape the resin into its final form, the unconverted gas in the resin was being liberated during the reshaping.

Reducing emissions in the plants turning vinyl chloride gas into PVC, a powder, was the major problem. Some techniques were easy: telling workers not to use the supercooled gas to refrigerate soft drinks and not to wade ankle-deep in the powder inside the 1,100-gallon reactors. But getting down to 1 part per million means that a single pinhole becomes a sieve the companies say.

"It's just plugging leaks," said Mr. Wheeler of Union Carbide. "There's no magical way you can get there."

Goodrich, though, devel-



Respirators for workers in polyvinyl chloride plants will become mandatory April 1.

oped a new process to reduce the necessity of cleaning reactors — thought to have been a major exposure point. It then moved ahead and developed a new "stripping" process which reduces the residual vinyl chloride left in the resin to the "no detectable" level. This allows the reactors to avoid regulating emission levels in their own plants.

Although most of the attention has focused on the existing 54 PVC plants, Rohm and Haas Co. and Goodrich have designed new plants with technology expected to completely eliminate the emission problem.

OSHA acknowledges that the progress has been remarkable. "I couldn't be more pleased with the apparent success and pro-

gress," said Grover C. Wrenn, acting director of standard development. "I think very few people in industry had any estimates of what could be done."

Most of the PVC producers have reduced emissions to about 2 parts per million. If they can reach 0.5 part per million, OSHA allows them to relax the monitoring requirements "but that last mile is pretty difficult," said John L. Nelson, manufacturing vice president of Goodrich.

Cutting the emissions, however, wasn't cheap. Goodrich says the effort was the largest research and development program in its history, involving 130 scientists and engineers, 425,000 man-hours of work and \$34 million in capital costs. The Society of the Plastics Industry estimates the industry costs could run up to \$300

million. And industry spokesmen say the regulations lower productivity and will add 10 to 15 percent to the cost of manufacturing PVC.

Goodrich, however, notes it can lease its new cleanup technology to others, and that the new equipment cuts labor costs.

And the cost increase complaints aren't as unimpressive when compared to the natural price swings. PVC is down to about 21 cents a pound today (although there are signs that prices are about to rise) from 24 cents in 1974 because of the recession—sales are down about 1 billion pounds from the record 4.7 billion of 1974. And the cleanup price pales beside the doubling of PVC raw material costs over the past two years.

Right now PVC makers believe their biggest problem may be public relations. The

Federal Drug Administration is preparing to ban some types of PVC food packaging on the grounds that residual vinyl chloride migrates into the food.

"People might begin to think: 'If it's not good enough for food, it must not be good for me,'" said Thomas B. Nantz, executive vice president of the parent Goodrich company, who predicts a PVC growth rate of about 8 percent a year. Thus, the chemical makers have been running advertising minimizing the health dangers.

Certainly one sign of the prospects for the chemical was the recent announcement by the Diamond Shamrock Corporation that it would build a new \$100 million vinyl chloride plant near Houston, the first to be announced since the cancer scare started.

RECEIVED

JAN 5 1977

M. E. EISENHOUR

OCCUPATIONAL SAFETY & HEALTH REPORTER

Compliance Programming, by telephone, 202/961-2884/3971.

If the OSHA National Office determines that the specific working condition is covered by FRA authority, the complaint will be referred directly to the National Office of the FRA, unless they request direct referral to their Regional Offices. If a complaint is involved, the complainant shall be notified in writing, by either the National Office or Regional Office as directed, of the disposition of the complaint.

h. State Plans.

(1) *Routine State Inspections.* States with approved 18(b) plans should be advised of these guidelines for conducting routine railroad inspections. The scope of State coverage in the railroad industry is expected to be equivalent to that provided by OSHA, unless it has been determined that under the particular State plan, coverage of the railroad industry is excluded under 29 CFR 1902.2(c).

(2) *Referral to Operational States.* In States that are determined to be operational under 29 CFR 1954.3 and OSHA Program Directive #74-11, all employee complaints and fatality and catastrophe investigations involving working conditions in the railroad industry within OSHA jurisdiction as defined in the preceding paragraph 4(b), will be referred to the State in accordance with the State's operational agreement. The procedures in the preceding paragraph 4(g) should be followed for complaints or portions thereof not within the defined OSHA jurisdiction.

5. **Effective Date:** This directive is effective immediately and shall be retained until superseded or amended.

Field Memoranda

OSHA SAYS DISCHARGED EMPLOYEE COMPLAINTS SHOULD BE DEEMED VALID

Workplace complaints filed by someone who alleges to have been discriminatorily discharged should be deemed valid complaints and promptly investigated, according to Field Information Memorandum 75-1 issued January 3.

The clarification was made by Occupational Safety and Health Administration Associate Assistant Secretary for Regional Programs Barry J. White regarding Section 11(c) and Chapter V1, Section A.2.D.(1) of the Field Operations Manual. The text of the memorandum follows:

"For the purposes of submitting a complaint, an 'employee' would normally be a present employee of the employer whose establishment is being complained about. However, in some circumstances, it may be a former employee; for example, where the employee may have been discriminatorily discharged for a complaint about unsafe or unhealthful conditions in the workplace."

Field Memoranda

OSHA INSTRUCTS FIELD TO RESUME INSPECTIONS FOR VINYL CHLORIDE

Inspections for vinyl chloride should be resumed immediately, Barry J. White, associate assistant secretary for regional programs, Occupational Safety and Health Administration said in Field Information Memorandum 75-4 issued January 8.

The memo reiterates OSHA's position to enforce the provisions of the levels of the temporary emergency standard, which expired October 4, but which are similar to the

CURRENT REPORT

first stage of the permanent standard which has been stayed by the Second Circuit Court of Appeals.

The text of the memorandum follows:

"Attached for your information is a copy of the memorandum to Assistant Secretary John H. Stender from the Solicitor of Labor, dated January 2.

"With this memorandum as a basis, I am directing that inspections for exposure to vinyl chloride be resumed effective immediately.

"Subsection (o)(1) of 29 CFR 1910.93q dated October 4, 1974, page 35898 of the Federal Register [Reference File 31:5343] shall continue in effect although the date is past January 1, 1975. Citations shall be on 1910.93q(o)(1) published October 4, 1974. This means that until further notice all the provisions of the emergency temporary standard (ETS) for exposure to vinyl chloride dated April 5, 1974, shall be implemented and enforced. The April 5, 1974, provisions are found on pages 12342 through 12344 of the Federal Register of that date.

"The amendments of December 3, 1974, in the Federal Register shall not apply nor shall any of the provisions of the October 4, 1974 pages 35896 through 35898 apply except 1910.93q(o)(1) on page 35898.

"OSHA Program Directive 200-29 (Current Report, May 23, p. 1622) of May 22, 1974 remains in effect."

Solicitor's Memo

"The solicitor's memo to Stender referred to in the Field Information Memorandum pointed out the government's request for clarification from the court on its order (Current Report, January 9, p. 925). The memo explains further the Labor Department's position that the stay of the standard refers only to the "second stage of the standard," which requires respirators and a 1 ppm exposure ceiling.

Field Memoranda

OSHA DISCONTINUES ENFORCEMENT OF MOCA STANDARD, RELATED LABORATORY ACTIVITIES

Occupational Safety and Health Administration compliance officers were instructed to discontinue enforcement of the standard for 4,4'-Methylene bis (2-chloroaniline) (MOCA) in 1910.93e, and laboratory activities for all 14 carcinogens in 1910.93(c)(6) through p(6)(3).

The order was issued in Field Information Memorandum 75-2 on January 7 and was signed by Associate Assistant Secretary for Regional Programs Barry J. White. The text of the memorandum follows:

"The standard, 29 CFR 1910.93 4.4' Methylene bis (2-chloroaniline) MOCA has been vacated and remanded by a court decision. Simultaneously, the 14 laboratory activities subsections of 29 CFR 1910.93c(c)(6) through p(c)(6) were also vacated.

"Therefore, you are directed to immediately discontinue enforcing the MOCA standard and the laboratory activities subsections (c)(6) of 29 CFR 1910.93c through p.

"A new MOCA standard is being prepared by the Office of Standards. New laboratory subsections (c)(6) for the remaining carcinogens standards are being prepared also.

"This memorandum is effective until further notice. Please notify all area offices and agreement states accordingly.

"Questions concerning the above should be directed to Ray McClure or Flo Ryer, Division of Occupational Health Programming, Room 760, 1726 M Street, N.W., Washington, D.C. 20210."