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February 4, 1975

TO: All Members of:

SPI Food, Drug and Cosmetic
Packaging Materials Committee;
General Polyvinyl Chloride Interest
Mailing List;
Ad Hoc Liquor Bottle Committee;
Plastic Pipe Institute
(Executive Board);
Plastic Bottle Institute
(Voting Representatives);
SPI Executive Committee;
SPI Public Affairs Committee;
VC and PVC Producers Committee

Ladies and Gentlemen:

Following up on yesterday's letter, enclosed herewith is a copy of the Decision of the Second Circuit in the vinyl chloride case. Unfortunately, it was necessary for us to retype the copy we received on Friday since we learned late yesterday that the printed versions would not be out until late today, if then.

Cordially yours,

Jerome H. Heckman

Enclosure

AP00000994

[Please Note: This copy was retyped from the Court's typewritten copy when it was learned that printed copies would not be available until later.]

UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

Nos. 505, 603-608, 670, 671

September Term, 1974

Argued December 13, 1974

Decided January 31, 1975

Docket Nos.	74-2284	74-2450
	74-2286	74-2491
	74-2308	74-2585
	74-2345	74-2609
	74-2449	

THE SOCIETY OF THE PLASTICS INDUSTRY, INC., Petitioner

v.

OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ET AL., Respondents

HOOKER CHEMICALS & PLASTICS CORPORATION, and AIR PRODUCTS AND
CHEMICALS, INC., and TENNECO CHEMICALS, INC., Petitioners

v.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, ET AL., Respondents

UNION CARBIDE CORPORATION, Petitioner

v.

UNITED STATES DEPARTMENT OF LABOR, ET AL., Respondents

THE B. F. GOODRICH COMPANY, Petitioner

v.

PETER J. BRENNAN, ET AL., Respondents

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(Covington & Burlington on the brief)

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AFL-CIO.

MR. JUSTICE CLARK:

This is a petition for review of the health and safety regulations for the vinyl chloride industry, 29 C.F.R. §1910.93q, promulgated by the Secretary of Labor on October 4, 1974, pursuant to the Occupational Safety and Health Act, 29 U.S.C. §651 et seq. (hereinafter OSHA). The standard and the Secretary's statement of reasons for its imposition are set forth at 39 Fed. Reg. 35890-35898. In brief, the Secretary has adopted a standard which requires that no worker is to be exposed to concentrations of vinyl chloride in excess of one part per million (ppm) averaged over any eight-hour period, 29 C.F.R. §1910.93q(c)(1).

Petitioners -- manufacturers of vinyl chloride and vinyl chloride products -- make five principal claims: (1) the available scientific and medical evidence does not establish that the 1 ppm exposure level adopted by the Secretary is required by health or safety considerations; (2) that the Secretary violated the requirements of 29 U.S.C. §655(b)(5) by adopting a standard which is technologically and economically infeasible for the industry

In these circumstances, Judge McGowan concluded, the reviewing court must recognize that its task defies generalized description and go from there to achieve its paramount objective which "is to see whether the agency, given an essentially legislative task to perform, has carried it out in a manner calculated to negate the dangers of arbitrariness and irrationality in the formulation of rules for general application in the future." Automotive Parts & Accessories Assn. v. Boyd, 407 F. 2d 330, 338 (D.C. Cir. 1968).

Thus armed with these salutary remarks on our limitations and our obligations, we turn to the challenged regulations. The examination of the 4,000-page record in this case has been a prodigious task, aggravated by duplications of testimony, irrelevant exhibits and letters, almost illegible reproduction of documents, and a generally blunderbuss approach in petitioners' briefs. Given the task, however, we have performed it and conclude that the standard laid down by the Secretary is fully supported by the record and well within the requirements of Universal Camera Corp. v. NLRB, 340 U.S. 474 (1951), and Assoc. Industries of New York State, Inc. v. Department of Labor, 487 F. 2d 342 (2d Cir. 1973), as well as Industrial Union Department, AFL-CIO v. Hodgson, *supra*.

II. BACKGROUND

There are three basic components of the vinyl chloride industry. First, there are the manufacturers of vinyl chloride itself. A gas at ambient temperatures and pressure, vinyl chloride monomer (VCM) is primarily synthesized by the oxychlorination of ethylene in a handful of large outdoor production plants which resemble oil refineries. Shell, Dow, and Goodrich are the leading producers, accounting for some 50% of the 5.2 billion pounds annually available in the United States. Because of the high degree of automation involved in this manufacturing process, only some 1,500 workers are employed in VCM production. VCM plants are open-air facilities, primarily in the South.

Second, there are the manufacturers of polyvinyl chloride (PVC). Virtually all vinyl chloride is polymerized into thermoplastic PVC resin which serves as the basis for a wide variety of useful plastics products. Goodrich is by far the largest single producer, producing some 20% of the country's 5.4 billion pounds annually, though in total there are only 21 companies operating the 37 PVC plants. Historically, PVC production has been a "batch" or non-continuous operation carried out in relatively small (2,000-6,000 gallon) "reactors" which require frequent cleaning; the trend, however, is towards substantially larger reactors. PVC plants are not open-air facilities and are generally located in colder climates than VCM plants. They employ some 5,000 workers.

In 1971, MCA began to inquire by letter regarding the conduct of toxicological studies on laboratory animals with VCM and in May of 1971 heard a detailed presentation by Dr. Viola regarding his earlier studies as well as other studies then unreported. The industry began talking about raising funds for epidemiological research on VCM carcinogenicity, but not until March 30, 1972, did 17 U. S. companies agree to finance such a study. By then, the first deaths of U. S. workers due to VCM exposure were being recorded.

Months were consumed in 1972 by negotiations among the participating company representatives, and it was not until February of 1973 that a protocol was agreed upon and a research contract for animal exposure studies signed. Meanwhile, startling results from European experiments were filtering back to the industry. By January of 1973 it was discovered that European experiments with rats had not only found tumors of the ear canal (which Dr. Viola had reported as early as 1970), but also of the kidneys and liver at concentrations as low as 250 ppm VCM, but not at 50 ppm. This discovery, however, was kept confidential, and it was not even revealed to the National Institute of Occupational Safety and Health (NIOSH) until July 17, 1973.

Earlier, on September 27, 1971, a patient of Dr. J. L. Creech, Jr., plant physician of the B. F. Goodrich Chemical Company in Louisville, Kentucky, died. The patient had been employed for 15 years as a helper and operator in Goodrich's Louisville PVC plant. When first hospitalized, a tentative diagnosis was made of a bleeding duodenal ulcer, but upon re-admittance and after an exploratory laparotomy and biopsy was carried out, he was found to have angiosarcoma of the liver, an exceptionally rare and irreversible cancer which strikes only 1 person in some 50,000, no more than 20-30 persons a year. Eighteen months later, on March 3, 1973, another former employee of the Louisville plant died, and a third died on December 19, 1973, again of angiosarcoma of the liver. Recognizing the rarity of the tumor and learning that all three had worked in the Goodrich PVC plant, Dr. Creech brought the matter to the attention of Goodrich, and then on January 22, 1974, to the attention of the National Institute of Occupational Safety and Health (NIOSH).

News of other deaths followed swiftly. On January 29, 1974, Goodrich reported the death of a fourth former employee from angiosarcoma; a report of the death of a fifth employee followed on February 15th. Six days later, Union Carbide advised NIOSH of the death of one of its PVC workers from liver angiosarcoma. Goodyear Tire and Rubber Company announced a vinyl chloride worker fatality from liver angiosarcoma on March 1, 1974, and reported two more such deaths from the same cause on March 22nd. Goodrich reported cases of liver angiosarcoma in two of its living employees.

deliberation for many years." 39 Fed. Reg. 16986. In the interim, he concluded, it was necessary to abandon the 50 ppm emergency temporary standard and to establish it at as low a level as can be detected using methodologies sensitive to 1 ppm plus-or-minus 50%, i.e., the so-called "no-detectable" level. This level was to be reached through the "institution of engineering controls and work practices as soon as feasible," but respiratory protection was to be afforded where the goal could not otherwise be achieved.

On May 24, 1974, notice of a hearing on the proposed standard to be held before an Administrative Law Judge was given. Eight days of hearings were held during June and July of 1974, and additional materials were received from interested parties until September 25th. In addition, the record of the previous hearing on February 25, 1974, was ordered to be included.

On October 1, 1974, the final standard was promulgated, effective January 1, 1975.^{2/} See 39 Fed. Reg. 35890. The main provisions are as follows:

(1) The standard applies to manufacturers of VCM and PVC and to fabricators of PVC, but excludes those merely handling or using already-fabricated products. 29 C.F.R. §1910.93q(a)(2).

(2) In place of the potentially obscure "no detectable level" standard, a permissible exposure limit not greater than 1 ppm averaged over an eight-hour period is set, but allows for peaks of VCM exposure up to 5 ppm during periods not exceeding 15 minutes. 29 C.F.R. §1910.93q(c).

(3) All employers are required to conduct an initial program of monitoring and measurement of exposure levels, but need not continue monitoring if initial levels are below the so-called "action level" of 0.5 ppm averaged over the eight-hour work day. 29 C.F.R. §1910.93q(d).

(4) The standard requires that "feasible engineering and work practice controls" be employed to reduce exposure below the permissible exposure wherever possible or to the lowest practicable level if not possible, supplemented by respiratory protection. 29 C.F.R. §1910.93q(f)(2).

^{2/} Petitioners' application for stay of the January 1st deadline was granted pending our disposition of the matter.

Certainly, there is little margin for safety if a response can be expected at a level below 50 parts per million which in truth is now only a fifty-fold safety factor in terms of the proposed standard. According to toxicological principles, were this compound a non-carcinogen, then to establish a tolerance or safe level, there would have to be a 100 to 1 margin of safety in terms of a no-effect level, and from the experimental data on the animals, we don't even know what the no-effect level is. Obviously, this would put the allowable level at a small fraction of a given standard -- of the given standard.

As in Industrial Union Department, AFL-CIO v. Hodgson, supra, the ultimate facts here in dispute are "on the frontiers of scientific knowledge", and, though the factual finger points, it does not conclude. Under the command of OSHA, it remains the duty of the Secretary to act to protect the workingman, and to act even in circumstances where existing methodology or research is deficient. The Secretary, in extrapolating the MCA study's finding from mouse to man, has chosen to reduce the permissible level to the lowest detectable one. We find no error in this respect.

(b)

Failing in this contention, petitioners strongly urge that the Secretary breached his statutory mandate to insure that the standard selected is a "feasible" one.^{3/} Relying on the so-called Snell Report,^{4/} petitioners claim that VCM and PVC manufacturers will never be able to reduce levels of exposure to 1 ppm through engineering means. They point to the conclusion reached by the Snell Report that:

3/ 29 U.S.C. §655(b) (5) provides in part:

The Secretary *** shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity ***.

4/ This report, "Economic Impact Studies of the Effects of Proposed OSHA Standards for Vinyl Chloride," was prepared in September of 1974 by Foster D. Snell, Inc., an independent consultant, at the request of the Secretary of Labor and estimates the cost to the industry of complying with various exposure levels between 50 ppm and 0-1 ppm. Plant and industry visits were the principal means of information gathering.

We cannot agree with petitioners that the standard is so clearly impossible of attainment. It appears that they simply need more faith in their own technological potentialities, since the record reveals that, despite similar predictions of impossibility regarding the emergency 50 ppm standard, vast improvements were made in a matter of weeks, and a variety of useful engineering and work practice controls have yet to be instituted. In the area of safety, we wish to emphasize, the Secretary is not restricted by the status quo. He may raise standards which require improvements in existing technologies or which require the development of new technology, and he is not limited to issuing standards based solely on devices already fully developed. Cf. Chrysler Corp. v. Dept. of Transportation, 472 F. 2d 659, 673 (6th Cir. 1972); Natural Resources Defense Council, Inc. v. E.P.A., 489 F. 2d 390, 401 (5th Cir. 1971).

There is much testimony in the record, especially in the Snell Report, indicating that VCM concentration can be easily pinpointed and largely corrected. For example, many of the companies engaged in PVC manufacture still perform the cleaning of batch reactors by opening the vessel and having the worker physically enter it. In chipping off the accretion from the walls of the vessel, the worker is thus exposed to a high concentration of VCM. Yet other, less hazardous methods are currently available and in use, in which the vessels are cleaned by machinery, emulsions or simply water under high pressure. Other sources of exposure are encountered in filling tank cars, measuring, testing and repairing pipe joints or other connections. The Snell Report indicates that much of this may be alleviated.

But whether it can or not, the Secretary's compliance scheme does not rest only on engineering and work practice controls. He does mandate that the industry use such technology to the extent feasible, but, more importantly, he requires that, in addition, respiratory protection be used if engineering means cannot bring the VCM level down to the permissible limit.

To be sure, respirators have their drawbacks. These problems were detailed at the hearings and recognized by the Assistant Secretary. Self-contained and air-hose type breathing equipment is bulky, expensive, and infeasible for full-time use, as well as potentially hazardous in terms of tripping, restricted mobility, and over-exhaustion of workers. But the fact remains that they effectively eliminate exposure to VCM, and they are already being used by some PVC companies in the cleaning process and at other points in production with good success.

petitioners urge are beyond statutory contemplation. We think that the Secretary is simply "fighting fire with fire" and using the labels to bring the danger of vinyl chloride forcibly to the attention of the workers. Cf. Synthetic Organic Chemical Mfrs. Assn. v. Brennan, 503 F. 2d 1155 (3rd Cir. 1974). They deserve no less treatment. We have also considered the other arguments of the petitioners and find them untenable.

V.

It is our conclusion that the challenged aspects of the Secretary's vinyl chloride standard are supported by substantial evidence in the record and that the petitions for review must be denied. Taking into account the delay occasioned by these petitions, we think that a reasonable "lead time" is appropriate and therefore order that the Secretary's regulations, rather than being effective January 1, 1975, shall become effective sixty days after the date of this order and that the time requirement as to respiratory protection contained in 29 C.F.R. §1910.93g (g)(1) is re-scheduled accordingly.