

OCCUPATIONAL HEALTH AND THE FEDERAL GOVERNMENT: THE WAGES ARE STILL BITTER

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INTRODUCTION

On January 22, 1974, as a result of investigations by one of its plant physicians, the B. F. Goodrich Company reported to the National Institute for Occupational Safety and Health (NIOSH) that several employees at its plastics factory in Louisville, Kentucky, had died from angiosarcoma, a rare form of liver cancer.¹ The workers had experienced chronic exposure to vinyl chloride, a colorless gas used in the production of the solid plastic, polyvinyl chloride.² The discovery of four deaths within five years at one facility was striking when viewed against the U.S. average of about twenty-one deaths per year from this type of cancer.³

In subsequent weeks, a hurried NIOSH survey turned up additional past and present cases of angiosarcoma in workers at U. S. plants using vinyl chloride.⁴ In addition, a report from Germany described cases of both angiosarcoma and serious liver disease, non-cancerous but conceivably pre-cancerous, in workers who fashioned floor tiles from polyvinyl chloride.⁵ The implication that vinyl chloride might have leached from the tiles gave particular cause for alarm; while only 6,500 American employees are currently engaged in the production of polyvinyl chloride from vinyl chloride, there may be as many as 700,000 producing plastic goods from polyvinyl chloride.⁶ Disclosures that vinyl chloride is an ingredient in the propellant of certain aerosol pesticides,⁷ cosmetics,⁸ drugs,⁹ and

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¹ See OSHA, Emergency Temporary Standard for Exposure to Vinyl Chloride, 39 Fed. Reg. 12,342 (1974).

² See Auerbach, *Liver Cancer Cases Spur Plant Inquiry*, Washington Post, Jan. 26, 1974, §A, at 4, col. 1; Brody, *Liver Cancer Alert Declared to Protect Plastics Workers*, N.Y. Times, Feb. 15, 1974, at 1, col. 8.

³ See Saar, *Vinyl Chloride and Cancer*, Washington Post, May 5, 1974, § C, at 2, col. 1.

⁴ See OSHA, Emergency Temporary Standard for Exposure to Vinyl Chloride, 39 Fed. Reg. 12,342 (1974). See also Saar, *supra* note 3.

⁵ See Brody, *Vinyl Chloride Parley Told of Danger to Workers*, N.Y. Times, May 11, 1974, at 17, col. 2; Kramer, *Scientists Hear Reports Vinyl Chloride May Be More Dangerous Than Realized*, Wall St. J., May 13, 1974, at 8, col. 3.

⁶ See Kramer, *supra* note 5. Scientists have recently suggested that vinyl chloride exposure may be associated with genetic damage and cancer at sites other than the liver. See Greider, *Chemical Tied to Defects*, Washington Post, Aug. 22, 1974, § A, at 14, col. 1.

⁷ See Environmental Protection Agency, Vinyl Chloride Emergency Suspension Order Concerning Registrations for Certain Products and Intent to Cancel Registrations, 39 Fed. Reg. 14,753 (1974).

household products,¹⁰ that a freight train derailment in Philadelphia last April discharged vinyl chloride from a tank car onto a highway,¹¹ and that factories emit the gas into the environment¹² added to the alarm.

Publicity over vinyl chloride drew fresh public attention to the health hazards of the workplace. The silent violence inflicted by industrial dusts, gases, and liquids¹³ provided much of the impetus for the passage of the Occupational Safety and Health Act of 1970,¹⁴ which for the first time thrust federal agencies into a prominent role in the struggle to reduce job accidents and diseases.¹⁵ But in the years that followed, clamor over the economic impact of the statute upon small businesses¹⁶ and dismay over the government's promulgation of allegedly trivial safety and health standards¹⁷ combined to divert concern away from the Act's goal of achieving healthful working conditions.¹⁸ Upon occasion, an incident of disaster proportions would make headlines,¹⁹ but ongoing exposures to toxic substances attracted little interest. The vinyl chloride crisis serves as a grim reminder that job health hazards did not vanish with the passage of the new law. Indeed, it underscores the need for vigilant oversight of the federal government's regulation of toxic exposures in the workplace.

After reviewing the statutory mandate for government action, this article will consider three aspects of the government's application of the 1970 Act to industrial health hazards: the development of recommendations for health standards by NIOSH; the setting of health standards by the Occupational Safety and Health Administration (OSHA); and OSHA's enforcement of those standards. The carcinogen standard is examined as a case study of OSHA's performance in standard setting, while the Target Health Hazard Program is used to illustrate its enforcement activities. By no means an exhaustive coverage of the entire topic, the article seeks to stimulate continuing examination of the federal government's performance in protecting workers from the dangers of toxic substances.

⁸ See Food and Drug Administration, Vinyl Chloride as an Ingredient of Drug and Cosmetic Aerosol Products, *id.* at 30,830.

⁹ *Id.*

¹⁰ See Consumer Product Safety Commission, Self-Pressurized Household Substances Containing Vinyl Chloride: Proposed Classification as a Banned Hazardous Substance, *id.* at 30,112.

¹¹ See Saar, *supra* note 3.

¹² See Kramer, *supra* note 5. See also Saar, *supra* note 3.

¹³ See J. PAGE & M. O'BRIEN, BITTER WAGES 11-46 (1973) [hereinafter cited as BITTER WAGES].

¹⁴ 29 U.S.C. §§ 651-78 (1970).

¹⁵ For a background to the Act, see BITTER WAGES chs. 3-8.

¹⁶ See generally *Hearings on Small Business and the Occupational Safety and Health Act of 1970 Before the Subcomm. on Environmental Problems Affecting Small Business of the House Select Comm. on Small Business*, 92d Cong., 2d Sess. (1972); *Hearings on Implementation of the Occupational Safety and Health Act Before the Subcomm. on Labor of the Senate Comm. on Labor and Public Welfare*, 92d Cong., 2d Sess. (1972).

¹⁷ See BITTER WAGES 201-02.

¹⁸ "The Congress declares it to be its purpose and policy . . . to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources." Occ. Safety & Health Act § 2(b), 29 U.S.C. § 651(b) (1970).

¹⁹ See, e.g. Nunes, *Indictments to Be Sought in Collapse of High-Rise*, Washington Post, Apr. 17, 1973, § A, at 1, col. 3 (fourteen workers killed in Virginia).

I

THE STATUTORY MANDATE

The statute gives the Secretary of Labor broad authority to promulgate and enforce job safety and health standards,²⁰ a function delegated to OSHA²¹ within the Labor Department. It also requires the Department of Health, Education, and Welfare, through NIOSH, to develop criteria and recommended standards for exposures to toxic substances and harmful physical agents,²² and to carry out various research and educational programs.²³

The Act permits three methods of standard setting. Within two years from the effective date of the Act, OSHA could publish as final federal standards, without recourse to rulemaking procedures, any existing national consensus standards or established federal standards.²⁴ On May 29, 1971, OSHA took advantage of this provision to promulgate a large number of standards, including some 400 Threshold Limit Values (TLV's) which set limits for exposure to toxic substances over a forty-hour week.²⁵ The TLV's had been developed by the American Conference of Government Industrial Hygienists (ACGIH), a private group, and had been adopted as federal standards in 1969 under the Walsh-Healy Public Contracts Act.²⁶

OSHA may also set emergency temporary standards upon a finding that employees are exposed to grave danger and require immediate protection.²⁷ An emergency temporary standard takes effect immediately upon publication in the Federal Register, and lasts no more than six months.

The final method by which permanent standards are promulgated involves rulemaking procedures spelled out in the Act.²⁸ In the formulation of health standards, NIOSH performs detailed scientific research and makes recommendations which may encompass safe exposure levels, necessary warnings, methods

²⁰ Occ. Safety & Health Act §§ 6, 9-10, 29 U.S.C. §§ 655, 658-59 (1970).

²¹ The acronym "OSHA" has also been applied to the Act itself. See BITTER WAGES 167; Cohen, *The Occupational Safety and Health Act: A Labor Lawyer's Overview*, 33 OHIO ST. L.J. 788 (1972); Note, *The Occupational Safety and Health Act of 1970: State Plans and the General Duty Clause*, 34 OHIO ST. L.J. 599 (1973); Note, *The Occupational Safety and Health Act of 1970: Some Unresolved Issues and Potential Problems*, 41 GEO. WASH. L. REV. 304 (1972).

²² Occ. Safety & Health Act § 20(a)(3), 29 U.S.C. § 669(a)(3) (1970).

²³ NIOSH's responsibilities include: making toxic-substance hazard evaluations on request of employers or employees, *id.* § 20(a)(6), 29 U.S.C. § 669(a)(6); publishing industry-wide studies of the effect of chronic or low-level exposure to substances, processes, and stresses, *id.* § 20(a)(7), 29 U.S.C. § 669(a)(7); publishing an annual list of all known toxic substances and the concentrations at which toxicity is known to occur, *id.* § 20(a)(6), 29 U.S.C. § 669(a)(6); conducting educational programs to secure an adequate supply of personnel to administer the Act, *id.* § 21(a), 29 U.S.C. § 670(a); and providing for programs to train employers and employees in job accident and illness prevention, *id.* § 21(c), 29 U.S.C. § 670(c). See also Health Resources Administration, Dep't of Health, Education, and Welfare, Organization, Functions, and Delegations of Authority Amendments, 39 Fed. Reg. 1456 (1974).

²⁴ Occ. Safety & Health Act § 6(a), 29 U.S.C. § 655(a) (1970).

²⁵ OSHA, National Consensus Standards and Established Federal Standards, 36 Fed. Reg. 10,466, 10,504-06 (1971).

²⁶ Public Contracts, Dep't of Labor, Safety and Health Standards for Federal Supply Contracts, 34 Fed. Reg. 7946 (1969).

²⁷ Occ. Safety & Health Act § 6(c), 29 U.S.C. § 655(c) (1970).

²⁸ *Id.* § 6(b), 29 U.S.C. § 655(b).

of monitoring, and a requirement of medical examinations.²⁹ But ultimate responsibility for issuing the standard rests with the Secretary of Labor³⁰ and thus with OSHA. A person who may be adversely affected by a standard may challenge its validity in a federal court of appeals.³¹

OSHA also bears the burden of enforcing the Act. Its inspectors may issue citations for violations of standards³² or of the statutory general duty clause.³³ These citations may be contested before an independent Occupational Safety and Health Review Commission,³⁴ from which decisions may be appealed to a federal court of appeals.³⁵

II

THE PERFORMANCE OF NIOSH

A. Institutional Inadequacies

Viewed in its historical perspective and against the magnitude of its task, NIOSH's record invites a sense of despair. Federal agencies concerned with occupational health predate World War I.³⁶ NIOSH's immediate predecessor, the Bureau of Occupational Safety and Health, was charged with being ineffective in the years prior to the passage of the 1970 Act. Critics alleged that it was woefully underfunded, lost in the tangles of the HEW bureaucracy, permeated with an aloof air of professionalism which divorced it from what should have been its working-class constituency, and hobbled by a lack of legal authority that forced it to adopt an excessively subservient attitude toward industry in order to gain access to the information needed to carry out research.³⁷

The 1970 Act gave the agency a new name, responsibilities, and legal authority to enter workplaces and obtain information from employees.³⁸ Unfortunately, this has not amounted to a new lease on life. Dr. Marcus M. Key, NIOSH's Director until September 1, 1974, put it this way in 1973:

NIOSH is not expanding, it is shrinking. It is getting the proverbial meat ax. . . . Our present laboratory space isn't even adequate for any kind of research. It's substandard. . . . We have been frozen on hirings for most of our existence, and we are losing key staff right and left because we don't have the grade points to promote them. . . . I don't think NIOSH is a viable organization at this time.³⁹

²⁹ *Id.* §§ 6(b)(1), 6(b)(7), 29 U.S.C. §§ 655(b)(1), 655(b)(7).

³⁰ *Id.* § 2(b)(3), 29 U.S.C. § 651(b)(3).

³¹ *Id.* § 6(f), 29 U.S.C. § 655(f).

³² *Id.* § 9, 29 U.S.C. § 658.

³³ *Id.* § 5(a)(1), 29 U.S.C. § 654(a)(1). See also Morey, *The General Duty Clause of the Occupational Safety and Health Act of 1970*, 86 HARV. L. REV. 988 (1973).

³⁴ Occ. Safety & Health Act § 10(c), 29 U.S.C. § 659(c) (1970).

³⁵ *Id.* § 11(a), 29 U.S.C. § 660(a).

³⁶ EXECUTIVE OFFICE OF THE PRESIDENT, *THE PRESIDENT'S REPORT ON OCCUPATIONAL SAFETY AND HEALTH* 105 (1972) [hereinafter cited as 1972 PRESIDENT'S REPORT].

³⁷ See BITTER WAGES 88-94.

³⁸ Occ. Safety & Health Act § 20(b), 29 U.S.C. § 669(b) (1970).

³⁹ Quoted in Brody, *Many Workers Still Face Health Peril Despite Law*, N.Y. Times, Mar. 4, 1974, at 20, col. 5.

When asked to update this statement in March, 1974, Key replied, "If anything, it's worse."⁴⁰

In the years prior to 1970, the agency suffered constant reorganization,⁴¹ an affliction which has not ceased. When the Act became effective, NIOSH was shifted into the Health Services and Mental Health Administration within HEW's Public Health Service.⁴² In mid-1973, NIOSH was transferred to the Center for Disease Control, which also falls within the Public Health Service.⁴³ Thus, the Institute remains an obscure nook within a gigantic department, unable to draw attention to the pervasive problems of occupational health.⁴⁴ Moreover, HEW-imposed personnel restrictions threaten to damage severely the agency's ability to retain a professional staff.⁴⁵

B. Procedures for Formulating Standards

It is estimated that U.S. factories and workshops make use of or generate some 25,000 toxic substances, and that industry introduces 500 to 600 new toxic substances each year.⁴⁶ NIOSH must not only develop recommendations and criteria for the most harmful of these (reckoned at 1,000 to 2,000⁴⁷), it must also update the existing 400 legal standards based upon what may now be inadequate TLV's.⁴⁸ Since the effective date of the 1970 Act and as of September 1, 1974, NIOSH has produced eighteen criteria documents with stan-

⁴⁰ *Id.* For a detailed report of the agency calling for a budget of \$50 million, see NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH, PROTECTING THE HEALTH OF EIGHTY MILLION AMERICANS: A NATIONAL GOAL FOR OCCUPATIONAL HEALTH (1965), reprinted in *Hearings on S. 2193 and S. 2788 Before the Subcomm. on Labor of the Senate Comm. on Labor and Public Welfare*, 91st Cong., 2d Sess., pt. 2, at 1727, 1740 (1970) [hereinafter cited as *Hearings on S. 2193 and S. 2788*]. For budget appropriations since fiscal year 1972, in which the NIOSH budget has been limping along at slightly more than half this amount, see EXECUTIVE OFFICE OF THE PRESIDENT, THE PRESIDENT'S REPORT ON OCCUPATIONAL SAFETY AND HEALTH 103 (1973) [hereinafter cited as 1973 PRESIDENT'S REPORT]. For the HEW request for \$25,848,000 for fiscal year 1975, see *Hearings on Departments of Labor and Health, Education, and Welfare Before a Subcomm. of the House Comm. on Appropriations*, 93d Cong., 2d Sess., pt. 3, at 340 (1974) [hereinafter cited as *Hearings on 1975 Appropriations*].

⁴¹ See BITTER WAGES 88-90.

⁴² See 1972 PRESIDENT'S REPORT 105.

⁴³ See OFFICE OF THE FEDERAL REGISTER, U.S. GOVERNMENT MANUAL, 1973-74, at 231 (1973). See also GENERAL ACCOUNTING OFFICE, REPORT TO THE SENATE COMMITTEE ON LABOR AND PUBLIC WELFARE: SLOW PROGRESS LIKELY IN DEVELOPMENT OF STANDARDS FOR TOXIC SUBSTANCES AND HARMFUL PHYSICAL AGENTS FOUND IN WORKPLACES 7 (1973) [hereinafter cited as GAO REPORT].

⁴⁴ The testimony of Dr. Marcus M. Key, Director of NIOSH, at appropriations hearings suggests that of a *vox clamantis in deserto*. See *Hearings on 1975 Appropriations*, pt. 3, at 258, 311, where Dr. Key had to compete for attention with programs for rat and venereal disease control.

⁴⁵ Although NIOSH asserts that its civil service grade average should be at least 9.5, HEW placed a freeze on hiring in August, 1971, when the NIOSH average was 7.81, and the Institute was not allowed to hire or replace employees above the GS-9 level until February, 1972. See GAO REPORT 41-42. Furthermore, NIOSH was directed to decrease its average to 7.7 by June 30, 1972, and then to 7.64 by June 30, 1973. It consequently suffered personnel cuts in fiscal years 1973 and 1974. *Id.*

⁴⁶ *Id.* at 16.

⁴⁷ *Id.*

⁴⁸ See Testimony of Professor Samuel S. Epstein, M.D., Case Western Reserve University Medical School, before the Select Subcomm. on Labor of the House Comm. on Education and Labor, Apr. 25, 1974, at 7 (on file with the authors).

dards recommendations.⁴⁹ On the basis of these materials, OSHA has produced only one final standard.⁵⁰

The statutory basis for NIOSH's involvement in the setting of health standards derives from section 20(a)(2) of the Act, which requires the agency "to consult with [OSHA] in order to develop specific plans for such research, demonstrations, and experiments as are necessary to produce criteria . . . enabling [OSHA] to meet [its] responsibility for the formulation of safety and health standards under this Act."⁵¹ OSHA's responsibility for formulating health standards is spelled out in some detail in section 6(b)(5):

[OSHA], in promulgating standards dealing with toxic materials or harmful physical agents . . . , 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 even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards . . . shall be based upon research, demonstrations, experiments, and such other information as may be appropriate. . . . Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired.⁵²

When read together, these provisions clearly call for health standards based on sound factual data, but they also invest paramount importance in protecting workers. NIOSH, remaining faithful to its scientific bent, has emphasized careful research.

A recent report issued by the Government Accounting Office (GAO) describes the procedures followed by NIOSH in developing a criteria document.⁵³ The first step, taking an estimated six to twelve months, involves a literature search of existing information on the toxic substance or physical agent in question. Next, NIOSH may initiate its own research to fill in any gaps in the data. This is an open-ended process whose breadth and length will vary according to the amount and quality of existing research. NIOSH may contract some or all of this research to outside investigators. The GAO report concludes that from three to five years may be necessary for this step. The NIOSH staff then prepares a draft of the criteria document, which is subjected to an extensive review process involving NIOSH technicians, outside consultants, professional societies, and other federal agencies. It takes from twelve to fourteen months for this review to culminate in final approval by the Director of NIOSH and the General Counsel of HEW.

In light of the demonstrated need for urgent and massive action in the occupational health area, the process followed by NIOSH is agonizingly slow. On the one hand, the scope of the review to which draft documents are subjected

⁴⁹ The Health Services and Mental Health Administration of NIOSH has issued the following recommended standards criteria documents on occupational exposure: Beryllium (1972), Carbon Monoxide (1972), Hot Environments (1972), Inorganic Lead (1972), Noise (1972), Asbestos (1972), Ultraviolet Radiation (1972), Coke Oven Emissions (1973), Chronic Acid (1973), Inorganic Mercury (1973), Toluene (1973), Toluene Diisocyanate (1973), Trichloroethylene (1973), Inorganic Arsenic (1974), Sulfuric Acid (1974), and Sulphur Dioxide (1974).

⁵⁰ 29 C.F.R. § 1910.93a (1973).

⁵¹ Occ. Safety & Health Act § 20(a)(2), 29 U.S.C. § 669(a)(2) (1970).

⁵² *Id.* § 6(b)(5), 29 U.S.C. § 655(b)(5).

⁵³ GAO REPORT 24-26.

may be questioned on the ground that the procedures followed by OSHA permit sufficient participation by outside groups and individuals.⁵⁴ On the other, the NIOSH process has been criticized for the conflicts of interest which have allegedly tainted the involvement of outside consultants,⁵⁵ and for the Institute's failure to publish draft criteria documents in the Federal Register to assure that any interested party will have the opportunity to share in the formulation of the final document.⁵⁶

The 1972 *President's Report on Occupational Safety and Health* stated that "there may be as many as 100,000 deaths per year from occupationally caused diseases,"⁵⁷ a startling disclosure that somehow failed to find its way into the 1973 Report.⁵⁸ A basic assumption of the 1970 Act was that the promulgation of standards relating to exposure to disease-causing substances would be central to federal efforts to reduce the toll. Yet congressional funding and the agency's own procedures have left NIOSH armed with a peashooter for the tiger hunt.

III

OSHA'S ADOPTION OF THE CARCINOGEN STANDARD

On the effective date of the 1970 Act, it was no secret that American workers were being exposed to carcinogenic substances.⁵⁹ Yet OSHA did not seem to assign high priority to the development of standards that would limit or eliminate these exposures. Indeed, when the first package of existing federal and national consensus standards was promulgated under section 6(a),⁶⁰ the agency inexplicably lost an opportunity to put into effect a total ban on nine known carcinogens,⁶¹ forcing itself to invoke the formal standard setting procedures of the Act. The resulting permanent carcinogen standard was the first health rule developed

⁵⁴ See Occ. Safety & Health Act §§ 6(b)(1)-(4), 29 U.S.C. §§ 655(b)(1)-(4) (1970).

⁵⁵ See Testimony of Professor Samuel S. Epstein, M.D., *supra* note 48, at 9-10; *Hearings on 1975 Appropriations*, pt. 3, at 288-90.

⁵⁶ Occ. Safety & Health Act § 6(c)(3), 29 U.S.C. § 655(c)(3)(1970). See GAO REPORT 58-60.

⁵⁷ 1972 PRESIDENT'S REPORT 111.

⁵⁸ The omission did not pass unnoticed during the House appropriations hearings for fiscal year 1975. See *Hearings on 1975 Appropriations*, pt. 1, at 454-55, 464-66.

⁵⁹ See, e.g., H.R. REP. No. 91-1291, 91st Cong., 2d Sess. 15 (1970); S. REP. No. 91-1282, 91st Cong., 2d Sess. 2-3 (1970).

⁶⁰ Occ. Safety & Health Act § 6(a), 29 U.S.C. § 655(a) (1970).

⁶¹ See OSHA, National Consensus Standards and Established Federal Standards, 36 Fed. Reg. 10,466, 10,504-06 (1971), codified in 29 C.F.R. § 1910.93 (1973). The regulations issued on that day activated as enforceable standards under the 1970 Act exposure standards already in effect under a federal statute which had adopted by reference exposure limits for some 400 substances set in 1968 by the American Conference of Government Industrial Hygienists (ACGIH). See Public Contracts, Dep't of Labor, Safety and Health Standards for Federal Supply Contracts, 34 Fed. Reg. 7946 (1969). The document containing TLV's of airborne contaminant adopted by ACGIH for 1969 is reprinted in *Hearings on S. 2193 and S. 2788*, at 1249-77. Additions to, and changes from, the 1968 list are noted. An appendix to the list of substances named nine compounds to which "[b]ecause of the high incidence of cancer, either in man or in animals, no exposure or contact by any route, respiratory, oral or skin should be permitted." *Id.* at 1269. OSHA took the position that the appendix was not included in the 1971 package. The compounds listed in the appendix were included in OSHA, Emergency Temporary Standard on Certain Carcinogens, 38 Fed. Reg. 10,929 (1973).

from scratch by OSHA⁶² and provides a useful case study of the agency's capabilities.

It was pressure from union leaders that ultimately spurred OSHA into action, albeit at a somewhat leisurely pace. In late April, 1972, a delegation from the AFL-CIO met with the Secretaries of Labor and HEW to urge stronger enforcement of the 1970 Act.⁶³ They complained particularly about OSHA's failure to set standards for cancer-related toxic substances. The next month, an OSHA official wrote to NIOSH asking for information on carcinogens mentioned by the unionists.⁶⁴ In July, NIOSH published a notice in the Federal Register requesting information on fifteen carcinogenic substances as the first step in the formulation of a criteria document.⁶⁵ A letter from NIOSH's Director to OSHA on July 12, 1972, warned that "[r]ecognizing the frailties of the current state of technology in the area. . . you can understand that alternative approaches to carcinogen control in the workplace must be achieved in a different manner than is used for control of other substances."⁶⁶

Among the "frailties" was the difficulty in ascertaining a clear cause and effect relationship between job exposures and cancer. It may be possible to establish that a substance can cause cancer in animals. But short of actual instances, how does one show that a substance—even a specific dose of an animal carcinogen—will cause cancer in man? Because the Act does not automatically ban substances found to produce cancer in animals,⁶⁷ OSHA had to decide at what point animal tests provided "the best available evidence" that an exposed employee would suffer "material impairment of health or functional capacity."⁶⁸ Since a finding that an employee would be exposed to serious danger from exposure could trigger the promulgation of an emergency temporary standard, OSHA also had to decide at what point the evidence would justify that finding.

⁶² As of this writing, OSHA has exercised its authority under the 1970 Act to set (1) an emergency temporary asbestos standard, OSHA, Emergency Standard for Exposure to Asbestos Dust, 36 Fed. Reg. 23,207-08 (1971), as well as a permanent asbestos standard, 29 C.F.R. § 1910.93a (1973), the latter of which has substantially survived judicial review, *Industrial Union Dep't, AFL-CIO v. Hodgson*, 499 F.2d 467 (D.C. Cir. 1974); (2) an emergency temporary pesticide standard, OSHA, Emergency Temporary Standard for Exposure to Organophosphorous Pesticides, 38 Fed. Reg. 10,715-17 (1973), effective date suspended, *id.* at 15,729, republished as amended, *id.* at 17,214-16, which the Fifth Circuit has vacated, *Florida Peach Growers Ass'n v. United States Dep't of Labor*, 489 F.2d 120 (5th Cir. 1974); (3) an emergency temporary, 29 C.F.R. § 1910.93 (1973), and permanent carcinogen standard, OSHA, Carcinogens, 39 Fed. Reg. 3756-97 (1974), with the former partially set aside by the Third Circuit, *Dry Color Mfrs. Ass'n v. Department of Labor*, 486 F.2d 98 (3d Cir. 1973), and the latter currently under review by the Third Circuit, *Synthetic Organic Chem. Mfrs. Ass'n v. Brennan*, Civil No. 74-1129 (3d Cir. Aug. 26, 1974); and partially under review by the Third Circuit, *Oil, Chem. & Atomic Workers Int'l Union, AFL-CIO v. Brennan*, Civil No. 74-1149 (3d Cir., filed Feb. 1, 1974); and (4) an emergency temporary, OSHA, Emergency Temporary Standard for Exposure to Vinyl Chloride, 39 Fed. Reg. 12,342-44 (1974), and proposed permanent standard for vinyl chloride, OSHA, Standard for Exposure to Vinyl Chloride, *id.* at 35,890.

⁶³ See Culhane, *Occupational Safety Agency Weighs Emergency Standard for Chemical Compounds*, NAT'L J., Apr. 21, 1973, at 567.

⁶⁴ See *id.*

⁶⁵ 37 Fed. Reg. 13,285-86 (1972).

⁶⁶ Letter from Dr. Marcus M. Key, Director of NIOSH, to M. Chain Robbins, Deputy Assistant Secretary of Labor, OSHA, July 12, 1972.

⁶⁷ The Occupational Safety and Health Act contains no provisions similar to the clause of the Food, Drug, and Cosmetic Act which does require such a ban. See 21 U.S.C. §§ 348(c)(3)(A), 360b(d)(1)(h), 376(b)(5)(B) (1970).

⁶⁸ Occ. Safety & Health Act § 6(b)(5), 29 U.S.C. § 655(b)(5) (1970).

One approach might have been to take immediate action against those substances, such as betanaphthylamine, which had already been firmly linked to cancer in humans, and had been placed on the ACGIH zero-exposure list.⁶⁹ But OSHA preferred to ponder the problem. In January of 1973, the Oil, Chemical, and Atomic Workers Union (OCAW) and the Health Research Group (HRG) filed a petition with OSHA for an emergency temporary standard (ETS) for ten carcinogens.⁷⁰ This followed the pattern of earlier asbestos proceedings, which did not commence until a labor union filed a petition with OSHA, despite considerable evidence establishing the hazards of asbestos dust.⁷¹ In February, OSHA responded by invoking section 6(g) of the Act to set a high priority for the development of a standard.⁷² Three months later, the agency issued its own emergency temporary standard for fourteen carcinogens.⁷³

Unlike the ETS for asbestos, which reduced the existing TLV for asbestos dust to which employees could be exposed,⁷⁴ the emergency carcinogen standard was somewhat modest and vague. After a bald recitation that the fourteen substances were carcinogenic and presented a grave danger to employees, the regulation imposed certain requirements on work practices in areas where the carcinogens were being handled.⁷⁵ The only provision for medical surveillance

⁶⁹ See *Hearings on S. 2193 and S. 2788*, at 1269. The inadequacy of state occupational health laws to prevent worker exposure to betanaphthylamine had been cited as a reason for the passage of the federal statute. H.R. REP. NO. 91-1291, 91st Cong., 2d Sess. 15 (1970). Exposure to the chemical has continued. See Brodeur, *Annals of Industry—Casualties of the Workplace*, NEW YORKER, Nov. 19, 1973, at 87, 143. Brodeur's five-part series has been published in book form under the title *Expendable Americans*.

⁷⁰ Petition to OSHA by Health Research Group and Oil, Chemical and Atomic Workers International Union Requesting a Zero Tolerance for Ten Carcinogens Through an Emergency Temporary Standard Issued Under the Authority of the Occupational Safety and Health Act, received by OSHA on Jan. 4, 1973 (on file with the authors). The carcinogen petition asked for a standard that allowed "no exposure or contact by any route" for the ten substances and mixtures containing them, except as sanctioned by a use permit system. The permit system was based on systems in effect in Pennsylvania, 25 PA. R. & REGS. § 205.1 (1971), and England, STAT. INSTR. 1967, NO. 879 (Carcinogenic Substances Regulation). The proposed zero-tolerance regulation requiring justification for use was derived from 12A N.Y. CODES, R. & REGS. §§ 12-1.6(a)(1), 12-1.6(c), 12-18.5 (1971). OSHA could grant permits upon proof by clear and convincing evidence that no substitute for the chemical existed or that the formation of the chemical as an intermediate in a reaction was unavoidable, and where the applicant had installed monitoring equipment and acute exposure treatment facilities and had established medical surveillance programs. The petition also asked for regulations requiring continuous monitoring, with medical and monitoring records kept for each worker and signs posted in the immediate vicinity of the substance. OSHA would be required to review permits every six months.

⁷¹ For an excellent, detailed account of the asbestos proceedings, see Brodeur, *Annals of Industry—Casualties of the Workplace*, NEW YORKER, Oct. 29, 1973, at 44; *id.*, Nov. 5, 1973, at 92; *id.*, Nov. 12, 1973, at 131; *id.*, Nov. 19, 1973, at 87; *id.*, Nov. 26, 1973, at 126.

⁷² 38 Fed. Reg. 4037-40 (1973).

⁷³ *Id.* at 10,929-30. The carcinogens were among those in the July 6th NIOSH request for information. See note 65 *supra*. The one chemical on the NIOSH list not included in the ETS was dimethyl sulfate.

⁷⁴ 36 Fed. Reg. 23,207-08 (1971).

⁷⁵ Employers were required to provide showers and "clean" and "dirty" changing rooms; employees were to shower each time they left the work area and were to be given clean clothing each time they entered. 38 Fed. Reg. 10,929 (1973). Signs were to warn that the chemical was "Cancer-Producing." *Id.* at 10,930. The standard exempted mixtures containing less than one per cent (by weight) of the carcinogen and workplaces where the carcinogen was transhipped in sealed containers. *Id.* at 10,929.

and monitoring was that the employer send OSHA information about the type of medical surveillance and monitoring that had been instituted.⁷⁶ Though the purpose of the ETS was to protect workers from exposure to carcinogens, the thrust of the monitoring and medical surveillance sections was merely informational.⁷⁷ Shortly after OSHA issued the emergency standard, the OCAW and HRG filed suit challenging it,⁷⁸ and the Dry Color Manufacturers' Association petitioned for a stay.⁷⁹

Under section 6(c)(3) of the Act, an ETS upon publication serves also as a proposed rule for a permanent standard.⁸⁰ On July 16, OSHA republished the carcinogen ETS as a proposed rule and added two new parts to the proposal.⁸¹ The first, in the form of general statements rather than proposed regulations, put interested parties on notice that OSHA was considering the promulgation of further requirements relating to medical examinations, monitoring, and reporting. The second was a new proposed rule establishing a system of use permits. The proposal was much less stringent than one included in the petition for an emergency standard by the OCAW and HRG.⁸² The publication of this proposal seemed to be aimed at forestalling objections that inadequate consideration was being given to the idea of a use permit system. Shortly afterward, OSHA revised the ETS itself by modifying a number of the work practice requirements in response to comments, objections, and recommendations.⁸³ Many companies apparently had difficulty understanding the ETS, and though variances

⁷⁶ *Id.* at 10,930.

⁷⁷ The Advisory Committee on Carcinogens was told that the purpose of the monitoring and medical surveillance sections was "to ascertain what medical surveillance programs are in effect and what monitoring is being done." Steven Witt, Office of the Solicitor, OSHA, Transcript of the Standards Advisory Committee on Carcinogens, Aug. 2, 1973, at 91 [hereinafter cited as SACC].

⁷⁸ *Oil, Chem. & Atomic Workers Int'l Union v. Brennan*, Civil No. 73-1383 (3d Cir., filed May 9, 1973).

⁷⁹ In *Dry Colors Mfrs. Ass'n v. Department of Labor*, 486 F.2d 98 (3d Cir. 1973), the court set aside the ETS for two of the carcinogens, on the ground that OSHA's statement of reasons for finding that the chemicals were carcinogenic and that the requirements of the ETS were necessary to protect employees were inadequate (a charitable conclusion, inasmuch as it was nonexistent), and hence a violation of section 6(e) of the Act, which provides that "[w]henver the Secretary promulgates any standard . . . under this Act, he shall include a statement of the reasons for such action, which shall be published in the Federal Register." Occ. Safety & Health Act § 6(e), 29 U.S.C. § 655(e) (1970). The court stated that the regulation should have at least referred to the documentary evidence upon which the finding of carcinogenicity was based, and explained why the procedures set out in the standard were chosen. Although not ruling upon the substantive issue of whether the record supported a finding that the two chemicals in question were carcinogenic, the court expressed its considerable doubts. 486 F.2d at 105-07. *See also* *Associated Indus. v. United States Dep't of Labor*, 487 F.2d 342 (3d Cir. 1974). In setting aside a standard requiring lavatories in workplaces, the court rejected the Labor Department's contention that a less severe standard of review apply to legislative-type determinations, and held that not only findings of fact but also policy decisions relating to the regulation must be supported by substantial evidence in the record. *Id.* at 348-50. *See generally* Note, *Judicial Review Under the Occupational Safety and Health Act: The Substantial Evidence Test as Applied to Informal Rulemaking*, 1974 DUKE L.J. 459.

⁸⁰ Occ. Safety & Health Act § 6(c)(3), 29 U.S.C. § 655(c)(3) (1970).

⁸¹ OSHA, Emergency Temporary Standard for Certain Carcinogens: Commencement of Rulemaking Proceeding, 38 Fed. Reg. 18,900-03 (1973). It omitted requirements for justification that no substitute for the carcinogenic chemical existed, preapproval inspections by OSHA, and permit reapproval by OSHA every six months. *See* Petition to OSHA, *supra* note 70.

⁸² *See* note 70 *supra*.

⁸³ OSHA, Revision of Emergency Temporary Standard on Certain Carcinogens, 38 Fed. Reg. 20,074-76 (1973).

were requested and granted, some plants made no attempt to comply.⁸⁴ At the same time, OSHA was enforcing the emergency standard without resort to monitoring equipment, relying instead on mere physical observation by inspectors.⁸⁵

Meanwhile, OSHA had exercised its discretionary authority under section 6(b)(1) to establish a Standards Advisory Committee on Carcinogens.⁸⁶ Numerous administrative problems hampered the Committee from the beginning. Though scheduled to hold only eight to ten sessions,⁸⁷ it held twenty, and still did not have time to consider carefully the form of the use permit system,⁸⁸ requirements for record-keeping,⁸⁹ and regulations which should govern mixtures containing carcinogens.⁹⁰ None of the members received any data prior to the first meeting.⁹¹ NIOSH, overburdened with information received as a result of its July, 1972, request, had not evaluated the material.⁹² The Committee was told to attempt to obtain information on alternative technology from industry sources,⁹³ but some of those sources refused to cooperate because of the proprietary nature of the information.⁹⁴ When Committee members wanted to subpoena information on which corporate witnesses had based testimony, OSHA

⁸⁴ Robert E. Gleason, Polyurethane Manufacturers Association, SACC, Aug. 2, 1973, at 194. The confusion regarding the ETS is typified by the testimony of Monsanto representatives before the Advisory Committee. After production had been halted by the May 3rd standard, Monsanto began again "only after we sat down with the Department of Labor and got a more realistic interpretation of what their intention was when they wrote the standard." The company showed OSHA a letter they had written to users, indicating Monsanto's interpretation of the requirement and asked OSHA to indicate in a letter whether or not OSHA approved of it. The letter was expected within a couple of days but was not received, "[s]o, we have just gone with the verbal understanding that we had, and kind of given up hope on getting written word from them [OSHA]. To make it more complete and totally honest, they suggested, 'Why don't you get a variance? After all, you have certain operations which may make it very difficult to meet some interpretations of this standard, and therefore, why don't you just come in for a variance?'" However, Monsanto's legal department preferred not to request a variance as the public might think that "[t]he company was trying to get around the standard." Donald M. Ross, *Monsanto*, *id.* at 151, 170.

⁸⁵ See OSHA Program Directive No. 200-19 (1973) (original ETS); OSHA Program Directive No. 200-19A (1973) (revised ETS).

⁸⁶ See Charter, Standards Advisory Committee on Carcinogens (on file with the authors). Its first meeting took place on July 25, 1973.

⁸⁷ *Id.*

⁸⁸ An OSHA official instructed the Advisory Committee to recommend or reject the idea of a use permit system and to leave administrative details to OSHA. SACC, Aug. 24, 1973, at 874. Differences of opinion on the Advisory Committee were sufficient to cause the defeat of a motion to adopt as a recommendation OSHA's proposed permit system. See *id.* at 1066.

⁸⁹ The Advisory Committee voted on the record-keeping requirements contained in the July 27th revision, though without discussion, due to a lack of time. Several Committee members had wanted to strengthen the OSHA requirements. See *id.* at 1071.

⁹⁰ The question of mixtures containing carcinogens had been tabled to allow discussion of other requirements. *Id.* at 1065. By the time discussion of the subject resumed, there was no longer a quorum. *Id.* at 1077. The Advisory Committee also discussed the desirability of regulating chemicals which could combine to form a carcinogen, such as happens when formaldehyde and hydrochloric acid combine to produce bis chloromethyl ether. See, e.g., *id.*, June 27, 1973, at 27; *id.*, July 19, 1973, at 125.

⁹¹ See *id.*, June 25, 1973, at 203. Initially there had been no provision for distributing NIOSH material to Committee members.

⁹² See *id.*, June 26, 1973, at 9.

⁹³ See *id.*, July 12, 1973, at 230.

⁹⁴ See *id.*, Aug. 15, 1973, at 62.

denied the request.⁹⁵ The Committee was also instructed not to inquire into the relative carcinogenicity of the substances⁹⁶ or into economic considerations.⁹⁷

The Committee's final recommendation called for a performance standard of "no measurable exposure or contact . . . by any route, oral, respiratory or skin."⁹⁸ It endorsed in principle the idea of a use permit system⁹⁹ and specified work practice rules that were in many respects stricter than those proposed by OSHA.¹⁰⁰ In mid-September, OSHA held hearings on the various proposed standards. As one might have expected, labor representatives supported the recommendations of the Advisory Committee,¹⁰¹ while industry officials argued that proof of human carcinogenicity was inadequate,¹⁰² that threshold limit values

⁹⁵ See 3 OCC. SAFETY & HEALTH REP. 350 (1973).

⁹⁶ See SACC, June 25, 1973, at 76.

⁹⁷ See *id.*, Aug. 15, 1973, at 114. Economic considerations did, however, intrude when the Committee reached a consensus on monitoring by the "most sensitive, feasible sampling and analytical methods available," *id.*, Aug. 16, 1973, at 163, defining "feasible" as "capable of being accomplished successfully within the best practicable available technology as it exists or may develop." *Id.* at 206. In reaching this conclusion, the Committee discussed loss of jobs, the economic importance of some of the carcinogens, and potential monopolization by those firms which could afford the costs. See, e.g., *id.*, June 23, 1973, at 27, 100; *id.*, June 27, 1973, at 131; *id.*, Aug. 8, 1973, at 40; *id.*, Aug. 15, 1973, at 100; *id.*, Aug. 17, 1973, at 33. The Committee also discussed the amount of epidemiological evidence that would justify the imposition of heavy costs. See, e.g., *id.*, July 12, 1973, at 148; *id.*, July 13, 1973, at 4; *id.*, July 19, 1973, at 208.

⁹⁸ OSHA, Standards Advisory Committee on Carcinogens: Notice of Receipt of Recommendations of the Committee and of Their Availability for Public Inspection, 38 Fed. Reg. 24,373-77 (1973).

⁹⁹ *Id.* at 24,378.

¹⁰⁰ The Committee recommended that employers should use monitoring and sampling procedures "appropriate to each carcinogen or combination of carcinogens and capable of detecting by the most sensitive, feasible methods available." *Id.* The Committee expressed concern that extremely sensitive monitoring provide almost continuous feedback; it urged OSHA, in conjunction with NIOSH and the Environmental Protection Agency, to develop monitors with a sensitivity of at least one part carcinogen per one billion parts of air, with readings at a maximum two-hour interval and a back-up system to provide readings at ten-minute intervals with a sensitivity of at least 100 parts per billion. *Id.*

The Committee's recommendation made no distinction between outdoor and indoor regulated areas. *Id.* at 24,376. The question whether outdoor areas could or should be regulated came under consideration by the Committee, which felt that if a distinction were made, it might be used as a loophole. See SACC, Aug. 23, 1973, at 423, 453.

The Committee rejected, by a 7-2 vote (with three abstentions), the "Cancer-Suspect" sign on carcinogen containers required by the revised ETS, on the ground that it did not sufficiently apprise employees of the danger. *Id.* at 647, 667. The Committee's recommendation was that the sign on the containers read "Cancer-Hazard, Danger—Avoid All Contact and Exposure." 38 Fed. Reg. at 24,377.

The Committee recommended that employees who worked in regulated areas be given a training and indoctrination program specifying the process, the nature of the hazard, the medical surveillance programs, and the employee's role in emergency procedures. *Id.*

¹⁰¹ Labor representatives argued that a zero tolerance level should be set, and that medical-reporting requirements should include the exposure of each employee. See 1 OSHA, *Hearings on Proposed Regulation of Certain Carcinogens* 105 (1973); 4 *id.* at 768, 774 [hereinafter cited as *Carcinogen Hearings*].

¹⁰² See generally 1 *id.* at 95; 2 *id.* at 199, 280; 3 *id.* at 394, 440, 540, 601; 4 *id.* at 710.

Industry argued either that animal studies were per se insufficient evidence of potential human carcinogenesis or that they might support the carcinogenic potential of inordinately large doses of the substance in question applied in ways (such as through subcutaneous injection) that did not relate to human exposure at the worksite. There were indications that industry was unwilling to admit to any carcinogenesis. For example, counsel for Dow Chemical interrupted cross-examination of one of Dow's witnesses, Dr. Perry Gehrig, and contradicted Dr. Gehrig's testimony that Dow considered bis chloromethyl ether, one of the substances to be regulated, carcinogenic. Dr. Gehrig nonetheless reiterated his prior statement. 3 *id.* at 615.

should be set,¹⁰³ that the Act did not authorize a use permit system,¹⁰⁴ and that strict controls were not economically feasible.¹⁰⁵ Though these were not adversary proceedings in the adjudicative sense, some cross-examination was permitted.¹⁰⁶ An administrative law judge presided and certified the record, without making any findings.

Economic considerations obviously troubled OSHA. The final decision on the permanent standard for asbestos had taken into account the financial costs of compliance¹⁰⁷ and had been challenged on this point.¹⁰⁸ To ascertain the costs of the carcinogen standard, OSHA prepared an economic impact statement.¹⁰⁹ Though not required by the Act, this was a much wiser course than that followed in developing the asbestos standard, when OSHA contracted with a private consulting firm to provide an economic impact study.¹¹⁰ OSHA's cost study for the carcinogen standard concluded that the economic effect might be significant for only six of the fourteen substances.¹¹¹ While the study attempted to estimate the number of workers exposed to the carcinogens, it affixed no economic cost to the harm they might suffer because of a determination that this type of measurement was impossible.¹¹² In early December, the Assistant

¹⁰³ See, e.g., 1 *id.* at 25, 70, 93; 2 *id.* at 181; 3 *id.* at 397, 585.

¹⁰⁴ See 1 *id.* at 25, 70; 2 *id.* at 162, 296, 368; 3 *id.* at 397; 4 *id.* at 675. The basic contentions were that the Act required that standards be applied uniformly, with provision for variances, and that the proposed permit system would allow the immediate closing of a plant, in contravention of the requirement of a court order, as specified in section 13 of the Act dealing with imminent hazards. See Occ. Safety & Health Act § 13, 29 U.S.C. § 662 (1970). Firestone Tire and Rubber Company argued that a permit system would decrease worker vigilance, and would discourage plant improvements by requiring a new permit for every alteration. See 4 *Carcinogen Hearings* 635.

¹⁰⁵ See, e.g., 2 *Carcinogen Hearings* 317; 3 *id.* at 406, 434, 556; 4 *id.* at 691.

¹⁰⁶ See OSHA, Emergency Temporary Standard for Certain Carcinogens: Commencement of Rulemaking Proceeding, 38 Fed. Reg. 18,900 (1973). The procedure was similar to that used in the asbestos hearing, described in *Industrial Union Dep't, AFL-CIO v. Hodgson*, 499 F.2d 467 (D. C. Cir. 1974).

¹⁰⁷ See OSHA, Standard for Exposure to Asbestos Dust, 37 Fed. Reg. 11,318, 11,319 (1972).

¹⁰⁸ A judicial decision rendered after the promulgation of the permanent carcinogen standard vindicated OSHA's use of economic considerations. In upholding the asbestos standard, the District of Columbia Court of Appeals stated that "practical considerations can temper protective requirements. Congress does not appear to have intended to protect employees by putting their employers out of business—either by requiring protective devices unavailable under existing technology or by making financial viability generally impossible." *Industrial Union Dep't, AFL-CIO v. Hodgson*, 499 F.2d at 477-78. The decision to permit economic factors to be weighed rested upon the court's interpretation of a single statutory term. Section 6(b)(5) of the Act requires OSHA, when promulgating standards relating to toxic substances or harmful physical agents, to "set the standard which most adequately assures, to the extent feasible . . . that no employee will suffer material impairment of health or functional capacity" and to take into account "the feasibility of the standards." Occ. Safety & Health Act § 6(b)(5), 29 U.S.C. § 655(b)(5) (1970). There is nothing in the legislative history to demonstrate that Congress intended "feasibility" to include economic considerations. *But see Florida Peach Growers Ass'n v. United States Dep't of Labor*, 489 F.2d 120, 130 (5th Cir. 1974). In overruling the pesticide's ETS, the court stated: "The promulgation of any standard will depend upon a balance between the protection afforded by the requirement and the effect upon economic and market conditions in the industry."

¹⁰⁹ OSHA, *Some Economic Aspects of an Occupational Safety and Health Standard for the Use of Fourteen Carcinogenic Compounds* (1973) (preliminary study based on data available as of Aug. 10, 1973).

¹¹⁰ For a description of the study and its conflict-of-interests aspects, see Brodeur, *Annals of Industry—Casualties of the Workplace*, NEW YORKER, Nov. 19, 1973, at 87.

¹¹¹ OSHA, *supra* note 109, at 54.

¹¹² Interview with David Bell, OSHA, in Washington, D. C., Apr. 26, 1974.

Secretary of Labor for Occupational Safety and Health stated that the agency must take economic impact into account in formulating the permanent standard, but that it must not be the primary consideration; the intent of the law was to give some, but not controlling, regard to economic costs.¹¹³

After some delay, at least in part because of OSHA's alleged failure to file an adequate environmental impact statement with the Council on Environmental Quality,¹¹⁴ the final regulation was published on January 29, 1974.¹¹⁵ It was composed of fourteen separate and nearly identical standards, one for each carcinogen. As in the case of the asbestos standard,¹¹⁶ OSHA did not follow some of the key provisions of the Advisory Committee recommendation. The standard made no mention of monitoring, although the preamble stated that "OSHA has requested NIOSH to develop, on a priority basis, methods for determining qualitative and quantitative amounts of the carcinogens in the workplace."¹¹⁷ No mention was made of a performance standard of no exposure, although the preamble noted that "the intent of the standard is to reduce exposure of workers to any of the listed substances to the maximum extent practicable consistent with continued use."¹¹⁸ The idea of the use permit system was rejected after a consideration of "the administrative and legal aspects of a permit system, as against those of general standards enforced by the use of the current enforcement tools of the Act."¹¹⁹ Some of the work practice requirements in the permanent standards were less stringent than those recommended by the Advisory Committee.¹²⁰

OSHA gave no reason for the omission of monitoring requirements, although there was evidence in the record that the monitoring of some, if not all, of the substances was possible.¹²¹ Nor did the introduction to the standard make

¹¹³ Quoted in 3 OCC. SAFETY & HEALTH REP. 861 (1974).

¹¹⁴ See OSHA, Occupational Safety and Health Standards: Carcinogens, 39 Fed. Reg. 3756 (1974).

¹¹⁵ *Id.* at 3756-97.

¹¹⁶ See OSHA, Occupational Safety and Health Standards: Standard for Exposure to Asbestos Dust, 37 Fed. Reg. 11,318 (1972).

¹¹⁷ 39 Fed. Reg. 3759 (1974).

¹¹⁸ *Id.* at 3758.

¹¹⁹ *Id.*

¹²⁰ For example, the permanent standard exempted outdoor systems from ventilation requirements, required that employees be provided with clean clothes only for decontamination, transfer, charging, and discharging operations, and retained the "Cancer-Suspect" sign requirement of the July 27th revised ETS. For the recommendations of the Advisory Committee, see 38 Fed. Reg. 24,375 (1973). See also note 99 *supra*.

¹²¹ See OSHA, Supplement to Final Environmental Impact Statement, Proposed Regulation, Handling of Certain Carcinogens 63 (undated, on file with the authors). The District of Columbia Court of Appeals had recognized the importance of monitoring a challenge to the asbestos standard "because the results of that process often determine when and what protective measures are required." *Industrial Union Dep't, AFL-CIO v. Hodgson*, 499 F.2d at 481. The court also stated that when OSHA makes policy judgments, considerations of persuasive force behind those judgments must be identified.

What we are entitled to at all events is a careful identification by the Secretary, when his proposed standards are challenged, of the reasons why he chooses to follow one course rather than another. Where that choice purports to be based on the existence of certain determinable facts, the Secretary must, in form as well as substance, find those facts from evidence in the record. By the same token, when the Secretary is obliged to make policy judgments where no factual certainties exist or where facts alone do not provide the answer, he should state and go on to identify the considerations he found persuasive.

Id. at 475-76.

clear whether OSHA was rejecting the use permit system on legal grounds or for reasons of administrative feasibility. At least one court has indicated that OSHA should take into account the additional risks to which workers would be exposed as a result of a choice based on feasibility, and balance cost to employers (and presumably costs of administration) against risk to employees.¹²² The preamble to the carcinogen regulation does not indicate that OSHA used this type of balancing approach in opting against the use permit system. Omissions and defects such as these have led both industry and labor to challenge the carcinogen standard in the courts on the grounds that OSHA's performance in setting the standard did not comport with the statutory mandate.¹²³

IV

OSHA ENFORCEMENT OF STANDARDS: THE TARGET
HEALTH HAZARD PROGRAM¹²⁴

As part of its compliance effort, OSHA initiated a Target Health Hazard Program, intended to focus on five specific health hazards.¹²⁵ Asbestos, lead, silica, cotton dust, and carbon monoxide were selected on the basis of employee exposure, the existence of standards, and the availability of technology to measure levels of exposure.¹²⁶ OSHA's inspection priorities¹²⁷ list the Target Health Hazard Program as third, behind fatalities (or catastrophes) and employee complaints,¹²⁸ but ahead of routine and follow-up inspections.

Prior to May, 1973, OSHA did not collect and organize data to show the number of inspections per toxic substance under the Target Health Program. Data for the ten months between May, 1973, and February, 1974, show: (1)

¹²² Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d at 479.

¹²³ Oil, Chem. & Atomic Workers Int'l Union v. Brennan, Civil No. 74-1149 (3d Cir., filed Feb. 1, 1974); Synthetic Organic Chem. Mfrs. Ass'n v. Brennan, Civil No. 74-1129 (3d Cir., filed Jan. 29, 1974).

¹²⁴ OSHA's performance in attempting to secure compliance with job health standards in general is difficult to evaluate because of a dearth of data. One episode, which came to light because of the closing of a plant in Tyler, Texas, does give cause for concern. The incident is described at length in Brodeur, *Annals of Industry—Casualties of the Workplace*, NEW YORKER, Oct. 29, 1973, at 44; *id.*, Nov. 5, 1973, at 92; *id.*, Nov. 12, 1973, at 131. NIOSH had taken air samples in the plant and had found asbestos dust in violation of the current standard. Though this information was reported to OSHA, no enforcement action was taken. Only when NIOSH officials made the facts known to a union and the latter made an official complaint did OSHA inspectors finally visit the plant and issue citations. The extent to which NIOSH reports violations to OSHA and to which OSHA follows up with inspections is a matter which deserves thorough investigation.

¹²⁵ See OSHA, U.S. DEPT' OF LABOR, THE TARGET HEALTH HAZARDS (OSHA Pub. No. 2051, 1972).

¹²⁶ See 1972 PRESIDENT'S REPORT 50-51. There also exists a Target Industry Program, which is aimed at eliminating safety hazards in five industries with high accident rates. *Id.* at 47-50.

¹²⁷ See OSHA, U.S. DEPT' OF LABOR, COMPLIANCE OPERATIONS MANUAL IV-2 (1972). Although Target Health Hazard is third in priority, 35 per cent of man-hour resources is allocated to the Target programs, while 10 per cent is allocated to catastrophe and/or fatality investigation, and 30 per cent is allocated to complaint investigation. *Id.* at IV-1.

¹²⁸ Employees or representatives of employees may request inspections by OSHA compliance officers if they believe that a standard violation exists in the workplace and that it threatens physical harm. Occ. Safety & Health Act § 8(f)(1), 29 U.S.C. § 657(f)(1) (1970).

160 inspections for asbestos, covering fewer than 3,600 of the 200,000 employees estimated to be exposed; (2) 275 lead inspections, covering 3,000 of the 1.6 million exposed workers; (3) 400 silica inspections, covering fewer than 4,100 of the 1.1 million workers exposed; (4) 45 cotton dust inspections, covering 944 of the estimated 800,000 workers exposed; and (5) 897 carbon monoxide inspections, covering about 27,000 workers.¹²⁹ The conclusion we draw from this data is that the much touted Target Health Program has, in fact, produced only minimal compliance efforts by OSHA. This conclusion is reinforced by comparing Target Health data with overall inspection data for January, 1974. During that month, the Target Health Hazard Program accounted for only 147 out of 5,882 total safety and health inspections.¹³⁰ The imbalance may be even greater, for some Target Health inspections may have resulted not from the Program but from employee complaints.¹³¹

To be sure, compliance with health standards presents special problems. For example, a shortage of industrial hygienists,¹³² who perform OSHA health inspections, has clearly impeded the Program. In addition, OSHA area directors, who want to look good on paper by recording a high number of total inspections, may be slighting the Target Health hazards since health inspections are often more time consuming than safety inspections.¹³³ Nonetheless, the conclusion seems inescapable that the Target Health Hazard Program has been more slogan than substance, a talking point in annual reports¹³⁴ and congressional testimony,¹³⁵ but in reality an enforcement effort without direction or commitment.

CONCLUSION

It is painfully clear that OSHA does not see itself as the cutting edge of efforts to improve occupational health. As one critic has observed, the agency "perceives itself as an arbitrator between employers and employees, with the end result the negotiation of the workers' statutory right to 'a safe and healthful workplace.'" ¹³⁶ A former Assistant Secretary of Labor for Occupational Safety and Health reflected this syndrome when he told a congressional committee that "since the criticism of the OSHA program is about equal from all sides,

¹²⁹ These figures were excerpted from OSHA Report 27N, National Detailed Target Health Inspection Data (made available for hand-copying only). The statistics on exposed workers appear in OSHA, U.S. DEPT OF LABOR, THE TARGET HEALTH HAZARDS (OSHA Pub. No. 2051, 1972).

¹³⁰ See U.S. Dep't of Labor, OSHA Issues January Figures on Job Safety and Health Inspections, Press Release No. 74-117 (Mar. 14, 1974).

¹³¹ See 1973 PRESIDENT'S REPORT 36, Table 7 n.4.

¹³² At the end of 1972, OSHA's field enforcement staff included only sixty-eight industrial hygienists. *Id.* at 33. In May, 1973, three OSHA area offices were operating without an industrial hygienist. See *Hearings on Departments of Labor and Health, Education, and Welfare Appropriations for 1974 Before a Subcomm. of the House Comm. on Appropriations*, 93d Cong., 1st Sess., pt. 6, at 883 (1973).

¹³³ For example, the asbestos standard is based upon an eight-hour, time-weighted average of airborne concentrations of asbestos fibers. See 29 C.F.R. § 1910.93a(b) (1973).

¹³⁴ See, e.g., 1973 PRESIDENT'S REPORT 34-35.

¹³⁵ See, e.g., *Hearings on 1975 Appropriations*, pt. 1, at 505.

¹³⁶ Testimony of Bertram R. Cottine, Health Research Group, before the Select Subcomm. on Labor of the House Comm. on Education and Labor, May 22, 1974, at 2-3 (on file with the authors).

we are probably steering the right course toward accomplishing the objectives of the act."¹³⁷ In other words, since labor and management are equally displeased with us, we must be doing something right; it appears not to have occurred to OSHA that such criticism might suggest that the agency is doing nothing right.

OSHA's failure to take the initiative in the field of job health is manifested by the need for outside stimuli, such as petitions for standards, to prod the agency into action.¹³⁸ The tortoise-like pace of standard development has actually been decelerated by a new step OSHA has introduced into the procedure: an advance notice of proposed rulemaking, so interested persons may comment on NIOSH criteria documents submitted to OSHA.¹³⁹ This step, which the Act does not require, invites public participation before OSHA decides to propose a standard. Since the public may again participate when OSHA publishes its proposed rule, the procedure would appear to be duplicative.

It would be overly sanguine to expect that the revelations concerning vinyl chloride will dispel the administrative neglect of occupational health. Rather, Congress should undertake a thorough examination of every aspect of federal regulation of occupational health, with OSHA the focus. The goal should be to formulate a grand strategy for standards development and enforcement. The former should encompass a regularized approach to new regulations, the mandatory upgrading of existing exposure limits, and a capacity to deal with emergencies. The latter requires greater resources and coordination. The relationship between OSHA and NIOSH also deserves close attention, especially in light of OSHA's current tendency to ignore the recommendations of NIOSH.¹⁴⁰

A strategy without means of implementation is worthless. Congress should commit itself to provide adequate funding for OSHA and NIOSH, an indispensable concomitant to any fresh assault on occupational health hazards. In addition, the 1970 Act may need to be strengthened. For example, given the vast number of toxic substances already in use and unregulated, it makes little sense to permit industry to introduce new ones without legal requirements that their occupational

¹³⁷ Testimony of George C. Guenther, Assistant Secretary of Labor for Occupational Safety and Health, in *Hearings on Small Business and the Occupational Safety and Health Act of 1970*, *supra* note 16, at 305.

¹³⁸ A recent disclosure that as many as 1.5 million workers may be exposed to a risk of lung and lymphatic cancer from ingestion or inhalation of inorganic arsenic has set off another frantic OSHA scramble. See Burnham, *High Levels of Cancer Are Found in Arsenic Workers*, N.Y. Times, Aug. 30, 1974, at 13, col. 1; Richards, *1.5 Million Workers Exposed to Cancer Peril*, Washington Post, Aug. 30, 1974, § A, at 1, col. 1.

¹³⁹ See, e.g., OSHA, Standard for Occupational Exposure to Carbon Monoxide: Advance Notice of Proposed Rulemaking, 38 Fed. Reg. 22,631-32 (1973). See also Testimony of Bertram R. Cottiné, *supra* note 136, at 6-7.

¹⁴⁰ Compare NIOSH, Occupational Exposure to Asbestos (1972) (criteria document), with 21 C.F.R. § 1910.93a (1973) (permanent asbestos standard). For OSHA's rejection of the NIOSH criteria document on hot environments, see Letter from John Stender, Assistant Secretary of Labor for Occupational Safety and Health, to Dr. Marcus M. Key, Director of NIOSH, Apr. 5, 1974.

However, it should be noted that the District of Columbia Court of Appeals concluded in the asbestos case that "[t]he NIOSH recommendation was undoubtedly important in the eyes of Congress as an aid to the Secretary, but we cannot see that it was intended as more than that." *Industrial Union Dep't, AFL-CIO v. Hodgson*, 499 F.2d at 477. The court pointed out that NIOSH need not take into account "elements of feasibility," factors which OSHA must weigh in its determinations.

safety be established. Once they are in use, the elements of feasibility and economic costs enter into deliberations over standards. A decision made before the use of a new substance becomes widespread and "essential" would give health considerations greater weight relative to industry costs than they are now afforded. Without such broad-based, sustained, and substantial efforts to deal with occupational health, federal action will continue to betray the lofty goals of the 1970 Act, offering little more than rhetoric to the American worker.