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Marybeth W. Rutledge
University of Dayton

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COMMENTS

OSHA REGULATION OF BENZENE: THE MISSING INGREDIENT OF COST-BENEFIT ANALYSIS

I. INTRODUCTION

The 1980 Supreme Court ruling on the regulation of benzene in the workplace¹ sidestepped the troubling question of the role cost-benefit analysis should play in Occupational Safety and Health Administration (OSHA)² regulation of toxic substances.³ Cost-benefit analysis consists of an agency estimate of expected health benefits from a proposed standard, an estimate of what it will cost the affected industry to comply with the standard, and a determination of whether the expected benefits bear a reasonable relationship to the estimated costs. In evading the issue of whether or not the OSH Act⁴ requires the agency to undertake a cost-benefit analysis prior to promulgation of standards,⁵ the plurality opinion in *Industrial Union Department, AFL-CIO v. American Petroleum Institute*⁶ left open a question which has perplexed workers, industry, the agency and courts for a decade. It ap-

1. *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.* 100 S. Ct. 2844 (1980).

2. The Occupational Safety and Health Act of 1970 delegates authority to the Secretary of Labor to promulgate standards of safety and health for American workers, and OSHA is the agency responsible for carrying out this authority. 29 U.S.C. §§ 651-678 (1976).

3. Under the provisions of section 652(8), the Act defines an occupational safety and health standard as one that is "reasonably necessary or appropriate to provide safe or healthful employment." When toxic substances are involved, a standard must also comply with section 655(b)(5) of the Act:

The [agency] . . . 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.

29 U.S.C. § 655(b)(5) (1976). The word "feasible" in this statute, and the debate concerning its interpretation is essential to this discussion.

4. 29 U.S.C. §§ 651-678 (1976).

5. The Court found it unnecessary to discuss cost-benefit analysis in OSHA regulation of benzene because it believed that OSHA had failed to prove the benzene standard was "reasonably necessary" as a "threshold matter." 100 S. Ct. at 2850. See notes 51-54 and accompanying text *infra*.

6. 100 S. Ct. 2844 (1980). Justices Stevens, Burger, Stewart and Powell agreed that the benzene standard was invalid and Justice Rehnquist concurred in the judgment on different grounds. *Id.* at 2878-87 (Rehnquist, J., concurring in the judgment). See notes 55-57 and accompanying text *infra*.

pears likely, however, that the opinion on benzene regulation only postponed a Supreme Court examination of the issue. Cost-benefit analysis and its significance to OSHA regulation of toxic substances in the workplace may have an appreciably greater impact in the near future as the Supreme Court is expected to rule on the OSHA cotton dust standard this term.⁷

This comment will examine the benzene issue and how cost-benefit analysis might relate to its control as seen by OSHA,⁸ the United States Court of Appeals for the Fifth Circuit,⁹ and Justice Powell.¹⁰ The comment will also explore the OSH Act, pertinent legislative history and current judicial interpretation of that history because the key question is whether the Act requires OSHA to undertake cost-benefit analysis.¹¹ The decisions of lower federal courts on OSHA's regulatory control of other toxic substances¹² will also be examined.

II. BENZENE

A. *The History of OSHA's Regulation of Benzene*

Benzene is a hydrocarbon compound which exists naturally in small quantities in the ambient air, but is mainly manufactured for a variety of industrial uses. Petrochemical and petroleum industries pro-

7. *AFL-CIO v. Marshall*, 617 F.2d 636 (D.C. Cir. 1979), *cert. granted sub nom. American Textile Mfrs. Inst. v. Marshall*, 101 S. Ct. 68 (1980). The cotton industry claims the Act requires a cost-benefit analysis to justify the expense of OSHA's dust control strategy. The lower court, however, interpreted the Act and section 655(b)(5) as meaning that an OSHA standard will be sustained as feasible on a showing that compliance with the standard will not put the industry out of business. 49 U.S.L.W. 3463 (Jan. 6, 1981). See notes 108-110 and accompanying text *infra*. EDITOR'S NOTE: At the time of publication of this edition, the United States Supreme Court announced its decision in *American Textile*, affirming the decision of the lower court on the cost-benefit analysis issue. The Supreme Court held cost-benefit analysis by OSHA in promulgating a standard under § 6(b)(5) is *not* required by the Act. *American Textile Mfrs. Inst. v. Donovan*, 49 U.S.L.W. 4720 (June 16, 1981).

8. OSHA claims that cost-justification is required of the agency, but that its primary goal is to protect workers from serious health risks, even if compliance is expensive. See *generally* Industrial Union Dep't, *AFL-CIO v. American Petroleum Inst.*, 100 S. Ct. 2844 (1980).

9. *American Petroleum Inst. v. OSHA*, 581 F.2d 493 (5th Cir. 1978), *aff'd sub nom. Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.* 100 S. Ct. 2844 (1980).

10. 100 S. Ct. at 2875-78 (Powell, J., concurring in part and in the judgment).

11. S. REP. NO. 1282, 91st Cong., 2d Sess. (1970), *reprinted in* [1970] U.S. CODE CONG. & AD. NEWS 5177. See also BNA OPERATIONS MANUAL, THE JOB SAFETY AND HEALTH ACT OF 1970, Appendices A-J (BNA 1971).

12. *United Steelworkers of America v. Marshall*, 49 U.S.L.W. 2155 (D.C. Cir. Aug. 26, 1980) [lead]; *AFL-CIO v. Marshall*, 617 F.2d 636 (D.C. Cir. 1979) [cotton dust]; *American Iron and Steel Inst. v. OSHA*, 577 F.2d 825 (3d Cir. 1978) [coke oven emissions]; *Society of Plastics Indus. v. OSHA*, 509 F.2d 1301 (2d Cir. 1975) [vinyl chloride]; *Industrial Union Dep't, AFL-CIO v. Hodgson*, 499 F.2d 467 (D.C. Cir. 1974) [asbestos dust].

duce ninety-four percent of the total domestic production of benzene.¹³ The categorization of benzene as a toxic substance, capable of producing non-malignant effects in humans, has resulted in the regulation of benzene since 1946; the exposure limit was first set at 100 parts per million (ppm) and was reduced four times in the ensuing twenty-five years, culminating in a threshold limit of 10 ppm being adopted as the standard by OSHA in 1971.¹⁴ That 10 ppm standard is currently in effect¹⁵ and is based "on the nonmalignant toxic effects of benzene exposure and not on any possible leukemia hazard."¹⁶

Soon after 1971, however, several new studies indicated the possibility of a link between benzene exposure and leukemia.¹⁷ In 1974, the National Institute of Occupational Safety and Health (NIOSH), OSHA's research division,¹⁸ observed a connection between benzene and leukemia. NIOSH admitted, however, that it could not "conclusively" link the two closely enough to recommend a change in the 10 ppm level because the observed leukemia incidences occurred at higher exposure levels.¹⁹ In 1976, however, NIOSH revised its recommendation after newly published studies convinced the institute staff that a causal connection did exist.²⁰ NIOSH thereupon recommended that OSHA set the benzene exposure level "as low as possible" and urged OSHA to promulgate an emergency standard of 1 ppm under the Act's provision for such emergencies.²¹ OSHA responded by hiring a consultant firm to determine the costs of compliance at the 1 ppm level,²² and issued voluntary guidelines for that level in 1976.²³

13. American Petroleum Inst. v. OSHA, 581 F.2d 493, 497 (5th Cir. 1978).

14. 29 C.F.R. § 1910.1000, Table Z-2 (1980).

15. 581 F.2d at 498.

16. *Id.*

17. "The epidemiological studies indicated that workers exposed to high concentrations of benzene were subject to a significantly increased risk of leukemia." 100 S. Ct. at 2852. For a summary of these reports, see 100 S. Ct. at 2852, nn.8 and 9.

18. 29 U.S.C. § 669(a)(3) (1976). This section requires the agency to develop criteria for dealing with toxic substances; the criteria are to describe what exposure levels are safe in employment. To fulfill this obligation of the agency, the Act delegates the research function to NIOSH. 29 U.S.C. § 671 (1976).

19. 100 S. Ct. at 2852-53. See 42 Fed. Reg. 22,516 (1977).

20. These international studies on benzene and leukemia are listed in 100 S. Ct. at 2852, n.12. For an analysis of the effects of benzene on leukemia cases among workers in the American rubber industry, see McMichael, *Solvent Exposure and Leukemia Among Rubber Workers: An Epidemiologic Study*, 17 J. OCCUP. MED. 234 (1975) (cited in 100 S. Ct. at 2853, n.12).

21. 100 S. Ct. at 2853. The Act provides for temporary emergency standards when OSHA determines a "grave danger" exists for employees and that the standard is necessary to protect workers from that danger. 29 U.S.C. § 655(c)(1) (1976).

22. Apparently, OSHA was reacting here to its statutory responsibility of ascertaining that the standard will be feasible, although the Act does not specifically require such a determination before promulgation of a temporary emergency standard.

23. 100 S. Ct. at 2854.

In 1977, NIOSH reported an Ohio workers' study to OSHA²⁴ showing a five-fold increase in leukemia for workers exposed to benzene from 1940 to 1949.²⁵ NIOSH agreed that the Ohio study was not determinative of effects at low-level exposures, however, and OSHA did not argue that the study showed a risk of leukemia occurrence at any specific exposure level.²⁶ Convinced of some risk of the cancer at an undefined level of exposure, however, OSHA promulgated a 1 ppm emergency standard.²⁷ When the United States Court of Appeals for the Fifth Circuit issued a temporary restraining order preventing the emergency standard,²⁸ OSHA abandoned it and instead proposed the 1 ppm permanent standard.²⁹ OSHA would not set the level at zero because it would not be feasible;³⁰ industries could not be restricted from production of any benzene until it could be ascertained more fully the precise level at which leukemia occurred in workers exposed to benzene.³¹ OSHA thus determined that available evidence "established that employee exposure to benzene presents a leukemia hazard and that exposure therefore should be limited to the lowest feasible level."³² In accordance with procedures required by the OSH Act, OSHA held public hearings³³ in 1977 where ninety-five witnesses testified and exhibits and documents were submitted.³⁴ In

24. Dr. Peter Infante of NIOSH studied workers exposed to benzene in the production of Pliofilm at Goodyear Tire and Rubber, Inc. plants in Akron and St. Mary's, Ohio. The study was the source of debate, however, as the increase in leukemia which its results indicated apparently arose from very high levels of exposure (100 ppm) to benzene. 581 F.2d at 498, n.13; 100 S. Ct. at 2854, nn.15 and 16.

25. *Id.*

26. 100 S. Ct. at 2855. For a thorough analysis of OSHA's policy judgments, made when the agency is confronted with the need for control of carcinogens, see McGarity, *Substantive and Procedural Discretion in Administrative Resolution of Science Policy Questions: Regulating Carcinogens in EPA and OSHA*, 67 GEO. L.J. 729 (1979) [hereinafter cited as McGarity].

27. 42 Fed. Reg. 22,516 (1977).

28. *American Petroleum Inst. v. OSHA*, No. 77-1516 (5th Cir. 1977). No decision on the merits was issued.

29. 42 Fed. Reg. 27,452 (1977).

30. *Id.* To assess the feasibility of the standard, OSHA commissioned Arthur D. Little, Inc., to study the economic effects of the proposed standard on the affected industries. The study indicated compliance was affordable. 43 Fed. Reg. 5934-43 (1978).

31. When no safe level for exposure to a toxic substance can be established, OSHA has consistently adopted the lowest feasible level, that is, the level which offers the greatest possible protection for workers. See McGarity, note 26 *supra*, at 736-40. This OSHA policy was formally adopted as the Generic Carcinogen Policy on Jan. 22, 1980. 29 C.F.R. §§ 1990.101-152 (1980), corrected at 45 Fed. Reg. 43,403 (1980).

32. 581 F.2d at 499.

33. OSHA employs hybrid rule-making procedures; in addition to notice-and-comment, the Act also permits interested persons to object and request a hearing. 29 U.S.C. § 655(b) (1976).

34. 42 Fed. Reg. 27,452 (1977).

timely fashion, the 1 ppm standard was then promulgated and published with an effective date set for March 13, 1978.³⁵ The 1 ppm standard, however, never became a reality.

B. Industry Challenge and Circuit Court Reaction

The American Petroleum Institute, on behalf of the petroleum and petrochemical industries, quickly challenged the reduction of the benzene standard to 1 ppm in the United States Fifth Circuit Court of Appeals. In *American Petroleum Institute v. OSHA*,³⁶ the principal argument of the Institute was that "substantial evidence and the best available evidence"³⁷ failed to show the reduction to 1 ppm was "reasonably necessary or appropriate to provide a safe or healthful employment."³⁸ The essence of the OSHA reply to the attack was that the agency's mandate is to protect workers from health risks, that benzene exposure created some risk of leukemia, and therefore, that OSHA is required to set the benzene standard at the lowest feasible level.³⁹ That level, according to OSHA, was one which would protect workers without completely dislocating the industry.⁴⁰

The Fifth Circuit found that OSHA had failed to support its conclusion that the 1 ppm standard was "reasonably necessary"⁴¹ and that OSHA had not analyzed the costs and benefits of the reduction. The court said:

Until OSHA can provide substantial evidence that the benefits to be achieved by reducing the permissible exposure limit from 10 ppm to 1 ppm bear a reasonable relationship to the costs imposed by the reduction, it cannot show that the standard is reasonably necessary to provide safe or healthful workplaces.⁴²

The court apparently believed that OSHA should determine a quantitative risk estimate on the danger of low-level exposure so that, in turn, the agency could then better balance the costs and benefits of the proposed reduction.⁴³ Until OSHA could prove more conclusively that the lower standard was reasonably necessary to protect workers, the

35. 43 Fed. Reg. 5917-70 (1978). The standard is codified at 29 C.F.R. § 1910.1028 (1979).

36. 581 F.2d 493 (5th Cir. 1978).

37. *Id.* at 500.

38. *Id.*

39. *Id.* at 501.

40. See notes 30 and 31 and accompanying text *supra*.

41. 581 F.2d at 510.

42. *Id.* at 504.

43. McGarity, note 26 *supra*, at 805. While the court did not specifically request such an estimate from OSHA, Professor McGarity points out that is precisely what the court expected from the agency.

court decided such a standard as the one that OSHA promulgated could not be enforced.⁴⁴ The court read the Act as requiring OSHA to regulate on the basis of “knowledge rather than the unknown,”⁴⁵ rejecting OSHA’s argument that lack of definitive proof concerning low-level exposure effects made impossible a quantitative estimate of the benefits expected.⁴⁶ OSHA reiterated its statutory mandate to protect workers from risks as grave as that of leukemia and its concern that the cancers would increase while awaiting certain proof of low-level exposure effects.⁴⁷ Judge Clark was apparently not persuaded that OSHA’s fear would be realized. He did not contend “that OSHA must wait until deaths occur as a result of exposure at levels below 10 ppm before it may validly promulgate a standard reducing the permissible exposure limit.”⁴⁸ Rather, acceptable proof would be a reasonable projection of human exposure to benzene at higher levels in the past on to the lower exposure level.⁴⁹ With that kind of proof and the establishment of a reasonable relationship between costs and benefits of the reduction, OSHA would be more successful in obtaining judicial support of its lower standard.⁵⁰ In affirming the circuit court opinion, the Supreme Court sidestepped the cost-benefit issue.

C. *Supreme Court Review of the Benzene Standard*

In a five to four decision,⁵¹ the United States Supreme Court upheld the Fifth Circuit ruling, setting aside the 1 ppm standard on the grounds that there was a lack of “threshold” proof of the need for the reduction, and thus, the Court decided it was unnecessary to reach the cost-benefit issue.⁵²

Four Justices, in an opinion written by Justice Stevens, agreed that OSHA had failed to show a significant risk to workers’ health at the current 10 ppm standard, observing that the evidence of leukemia was taken from exposure to higher concentrations of benzene in earlier

44. The opinion seems to be insensitive to what the long wait for the more conclusive proof might bring. If and when scientists should agree that low levels of benzene exposure are proven to cause leukemia in workers, the basis for that proof could well be deaths among American workers.

45. 581 F.2d at 504.

46. *Id.* at 504, n.23.

47. *Id.* at 501.

48. *Id.* at 504.

49. *Id.*

50. *Id.* at 505.

51. 100 S. Ct. 2844. Justice Stevens wrote the opinion, with Chief Justice Burger, Justice Stewart and Justice Powell concurring. Justice Rehnquist concurred in the judgment. Justice Marshall wrote the dissenting opinion, joined by Justices Brennan, White and Blackmun.

52. 100 S. Ct. at 2850.

years.⁵³ Without substantial evidence of a causal link between benzene and leukemia at the 10 ppm level, the plurality held that the setting of the new, lower standard was an impermissible use of agency discretion.⁵⁴ Justice Rehnquist concurred in the judgment, but took the rather unique position that Congress had improperly delegated authority to OSHA by allowing the agency to choose “between setting a safe standard or setting no standard at all.”⁵⁵ He read the Act as authorizing OSHA to make the hard choice of “whether the statistical possibility of future deaths should ever be disregarded in light of the economic costs of preventing those deaths.”⁵⁶ That choice was one Congress ought to make itself, and thus the portion of the Act so authorizing OSHA was an unconstitutional delegation of legislative authority to an administrative agency.⁵⁷

In his concurring opinion, Justice Powell did raise and discuss the cost-benefit issue, however, dealing with the question of whether OSHA was statutorily required to conduct such an analysis.⁵⁸ He agreed with the plurality that OSHA had failed to carry its burden of proof on the threshold question of whether exposure to benzene at 10 ppm presented a significant risk to human health.⁵⁹ Powell’s analysis, however, went further than that of the Court. If it were assumed that the burden had been met, then according to Justice Powell, the Act also required OSHA to “determine that the economic effects of its standard bear a reasonable relationship to the expected benefits.”⁶⁰ He maintained that a standard which may call for burdensome costs of control which were “wholly disproportionate” to expected health benefits was not a “reasonably necessary” standard for OSHA to promulgate.⁶¹ In his view, unless the Act was read in that way, the Congressional intention would be “irrational.”⁶² Congress would be implying that OSHA should ignore economic burdens even if industry would be forced to misallocate resources to meet a new standard and in the process, expose workers to harm from other, unregulated risks.⁶³ Justice Powell found that OSHA had committed its most serious error in failing to document the method behind its declaration

53. *Id.* at 2858.

54. *Id.* at 2873.

55. *Id.* at 2887 (Rehnquist, J., concurring in the judgment).

56. *Id.* at 2879 (Rehnquist, J., concurring in the judgment).

57. *Id.*

58. *Id.* at 2877 (Powell, J., concurring in part and in the judgment).

59. *Id.*

60. *Id.*

61. *Id.*

62. *Id.* at 2878.

63. *Id.* at 2878, n.7.

that the lower standard was cost-justified.⁶⁴ In the legislative intent of the Act, and particularly of Section 655(b)(5),⁶⁵ Justice Powell saw "little doubt that Congress intended OSHA to balance reasonably the societal interest in health and safety with the often conflicting goal of maintaining a strong national economy."⁶⁶ Although OSHA had declared it had found cost-justification for the standard, without a record of how OSHA had so decided, Justice Powell found it impossible to support the agency's conclusion.⁶⁷

III. OSHA'S DUTY UNDER SECTION 655(b)(5) OF THE ACT

A. *Legislative History of the Section*

Justice Powell objected to the plurality's failure to reject OSHA's claim that it must reduce significant risks to human health without considering economic consequences less serious than massive dislocation of industry.⁶⁸ Calling that particular OSHA claim "untenable,"⁶⁹ Justice Powell apparently believed that Congress intended OSHA to consider and weigh economic costs to industry against the proposed benefits of a regulation on a point on the continuum somewhat closer to industry claims of financial burdens.⁷⁰ On the other hand, OSHA contends that Section 655(b)(5) requires the agency to minimize health risks with standards that are "capable of achievement . . . at bearable cost with available technology."⁷¹ Thus, OSHA has decided that unless the industry will be put out of business, or at the very least gravely disabled economically, the agency may promulgate stringent regulations for which the costs of control are very high. Congress has not made it clear to OSHA at what point on the continuum financial costs should lie.

The Act states its general purpose in Section 651(b)⁷² as one which

64. *Id.* at 2878.

65. *See* note 3 *supra*.

66. 100 S. Ct. at 2878, n.6.

67. *Id.* at 2878.

68. *Id.* at 2877. *See* American Fed'n of Labor v. Brennan, 530 F.2d 109, 123 (3d Cir. 1975). In that case, the court agreed with OSHA that the requirement of feasibility mean that costs of compliance were feasible unless they would precipitate "massive economic dislocation" in the industry affected by the regulation.

69. 100 S. Ct. at 2877.

70. Brief for Respondents at 50-51, *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 100 S. Ct. 2844 (1980).

71. Brief for Federal Parties at 57, *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 100 S. Ct. 2844 (1980).

72. The Congress declares it to be its purpose and policy, through the exercise of its powers to regulate commerce among the several States and with foreign nations and to provide for the general welfare, to assure so far as possible every working

will "assure so far as possible"⁷³ that ever person has "safe and healthful working conditions"⁷⁴ and that the agency will act to "preserve our human resources."⁷⁵ The language "so far as possible" is seen by the petroleum industry as limiting OSHA to measures which offer relative protection, rather than absolute protection of human health regardless of economic costs.⁷⁶ The language of Section 655(b)(5) mandates that OSHA promulgate standards which assure to the extent "feasible" that no working person will suffer serious health problems because of exposure to hazards in their working environment.⁷⁷ The feasibility language stems from a minority amendment offered by Senator Jacob Javits⁷⁸ to the original bill establishing OSHA.⁷⁹ The meaning attached to the word was one of reasonableness and practicality, according to the full Senate committee which accepted the Javits amendment.⁸⁰ In the Senate floor debates,⁸¹ Senator Peter Dominick noted that Congress ought to set standards which are feasible and practical.⁸² Legislative history further emphasized the change from protecting workers against hazards which cause "any impairment" to protection against those which cause "material impairment,"⁸³ indicating Congressional concern that costly and stringent regulations be reserved for very serious risks. Those changes in the bill seem to support industry arguments that Congress intended to have OSHA weigh the benefits to human health from standard reductions against the economic costs of implementing those standards.⁸⁴

OSHA argues that a reading of the history of the Act illustrates Congressional intent that the agency act "without regard to a particular balance against costs."⁸⁵ Rather, OSHA contends that its policy

man and woman in the Nation safe and healthful working conditions and to preserve our human resources. . . .

29 U.S.C. § 651(b) (1976).

73. *Id.*

74. *Id.*

75. *Id.*

76. Brief for Respondents at 35, *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 100 S. Ct. 2844 (1980).

77. *See note 3 supra.*

78. S. REP. NO. 1282, 91st Cong., 2d Sess. (1970), *reprinted in* [1970] U.S. CODE CONG. & AD. NEWS 5177, 5222.

79. *Id.*

80. *Id.*

81. 116 CONG. REC. 18,355 (1970) (remarks of Sen. Dominick).

82. *Id.*

83. *Id.*

84. Brief for Respondents at 42-47, *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 100 S. Ct. 2844 (1980).

85. Brief for Federal Parties at 52, *id.* In support of that view, OSHA pointed to the Act's procedural requirements if a variance from a standard is sought, and

of setting the "lowest feasible level"⁸⁶ as it did in the benzene case⁸⁷ satisfies the Congressional test of feasibility.⁸⁸ OSHA also disagrees with the interpretation of feasible as imposing a cost-benefit requirement and suggests that if Congress meant that precise definition of feasibility, the long debate would not have occurred without some hint of establishing cost-benefit analysis as a requirement for OSHA standard-setting.⁸⁹ OSHA found support for its theory in the Clean Air Act⁹⁰ which was enacted the same week as the OSH Act. In the language of the Clean Air Act, Congress wrote that control of fuel additives which endanger public health was to be made after consideration of other "feasible" means to achieve emission standards.⁹¹ If the additives impaired effective operation of emission control devices,

demonstrated that the Act permits selected grounds for allowance of a variance, omitting financial hardship as one of those grounds. 29 U.S.C. §§ 655(b)(6)(C) and (d) (1976).

86. Brief for Federal Parties at 21, *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 100 S. Ct. 2844 (1980). See notes 30 and 31 *supra*.

87. 42 Fed. Reg. 27,452 (1977).

88. Brief for Federal Parties at 55, *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 100 S. Ct. 2844 (1980). Arguing that it was not required to conduct a cost-benefit analysis, the agency said in its brief:

There is no room in this scheme for the Secretary to set standards by weighing the value of life and health against the cost of their preservation. Congress has done that; it struck the balance in favor of maximum health protection, subject only to the requirement of feasibility. The 'lowest feasible level' policy of the Secretary . . . satisfies the imperative.

Id. (OSHA is the administrative agency within the Department of Labor responsible for promulgation and enforcement of standards under the OSH Act; thus, references to the "Secretary" mean the Secretary of Labor and the agency, OSHA).

89. Brief for Federal Parties at 57-59, *id.*

90. 42 U.S.C. §§ 7401 *et seq.* (1978). Specifically, OSHA points to section 7545(c)(1), (2)(A) and (B) of the Clean Air Act:

(c)(1) The Administrator may . . . control or prohibit the manufacture, introduction into commerce, offering for sale, or sale of any fuel additive for use in a motor vehicle or motor vehicle engine (A) if in the judgment of the Administrator any emission product of such fuel or fuel additives causes, or contributes, to air pollution which may reasonably be anticipated to *endanger the public health or welfare*, or (B) if emission products of such fuel or fuel additive will *impair to a significant degree the performance of any emission control device or system which is in general use*. . . .

(2)(A) No fuel, class of fuels, or fuel additive may be controlled or prohibited . . . pursuant to clause (A) of paragraph (1) except after consideration of all relevant medical and scientific evidence available . . . including consideration of other technologically or *economically feasible means* of achieving emission standards under Section 7521 of this title.

(B) No fuel or fuel additive may be controlled or prohibited . . . pursuant to clause (B) of paragraph (1) except after consideration of available scientific and economic data, including a *cost benefit analysis*. . . .

Id. (emphasis added.)

91. *Id.*

however, then the Environmental Protection Agency regulation would be permitted only after a cost-benefit analysis.⁹² Thus, OSHA appears to be arguing that when human health is at stake and the risk is serious, economics is not as weighty a concern as it would be if technological processes were the subject of agency regulatory action.⁹³ If an agency then promulgates a regulation which the affected industry can afford, and the regulation strikes at a risk of harm to humans, OSHA's interpretation of the Act would be that the economic costs are not to prohibit the regulation. Despite the Fifth Circuit benzene opinion to the contrary, OSHA can point to other judicial interpretations of the Act which appear to comport with the agency point of view.⁹⁴

B. OSHA Finds Support in Other Circuit Courts

Until the United States Supreme Court rules on the cotton dust standard,⁹⁵ a definitive answer to the question of whether OSHA is statutorily required to conduct a cost-benefit analysis remains elusive. Several circuit court opinions, however, do provide clues to judicial interpretation of the debated feasibility issue.

In 1980, the United States Circuit Court of Appeals for the District of Columbia⁹⁶ rejected arguments that OSHA should have made a formal cost-benefit analysis before promulgating a permissible exposure limit of lead.⁹⁷ The *United Steelworkers* court, faced with evidence which showed exposure to airborne lead produced lead poisoning in workers, held that the OSHA standard reducing such exposure was validly promulgated. The court endorsed the OSHA interpretation of Section 655(b)(5), that a standard is feasible if it does not threaten massive dislocation of industry.⁹⁸ The opinion reflected an analysis of the issue the court had made earlier in *Industrial Union Department*,

92. *Id.*

93. A possible explanation for why expensive regulations are condoned by a regulatory agency when concerned with technological devices to protect health and safety is that the kinds of standards "whose requirements are somewhat beyond the conceded control capabilities of regulated industries . . . [may] stimulate development of new devices and counter the industries' underestimation of present capabilities." Doniger, *Federal Regulation of Vinyl Chloride: A Short Course in the Law and Policy of Toxic Substances Control*, 7 *ECOLOGY L.Q.* 497, 520, n.80a (1978) [hereinafter cited as Doniger].

94. See notes 95-112 and accompanying text *infra*.

95. *AFL-CIO v. Marshall*, 617 F.2d 636 (D.C. Cir. 1979), *cert. granted sub nom.* American Textile Mfrs. Inst. v. Marshall, 101 S. Ct. 68 (1980).

96. *United Steelworkers of America v. Marshall*, 49 U.S.L.W. 2155 (D.C. Cir. 1980).

97. *Id.*

98. *Id.*

AFL-CIO v. Hodgson.⁹⁹ Concerned with the harmful effects of asbestos dust exposure, the *Hodgson* court said that feasibility included economic as well as technological factors, but that the word "feasibility" does not imply a strict weighing of costs to industry against benefits to human health.¹⁰⁰ As long as the employers in the industry were not driven out of business by the costs of compliance, the *Hodgson* court concluded that the "outer limit"¹⁰¹ was the only economic restriction on agency regulatory action when a risk of serious illness could be shown.¹⁰²

The United States Circuit Court of Appeals for the Third Circuit agreed in its opinion on OSHA regulation of coke oven emissions. In *American Iron and Steel Institute v. OSHA*,¹⁰³ the court agreed with OSHA's finding that coke oven emissions were carcinogenic, and because no absolutely safe level of exposure could be established, that OSHA had the power to limit toxic emissions to the lowest feasible level. The court found OSHA had considered economic costs to the coke and steel industry and had succeeded in showing the industry could survive the costs of reducing the coke oven emissions standard.¹⁰⁴ OSHA and the court were later proven correct, for although the Supreme Court granted certiorari in the case,¹⁰⁵ the steel industry dropped the case because "most of the engineering controls and work practices required by the standards had already been implemented."¹⁰⁶ Apparently, the costs of compliance did not disrupt the industry in any way it could not afford.

The United States Circuit Court of Appeals for the Second Circuit in *Society of the Plastics Industry v. OSHA*¹⁰⁷ also placed the concern of the OSH Act to protect the working person from risks of serious illness over the concern of the plastics industry that a reduction of vinyl chloride exposure levels to 1 ppm would be more costly than the industry could tolerate.¹⁰⁸ The *Plastics Industry* court rejected industry claims that the standard proposed by OSHA was technologically and economically infeasible, finding that OSHA had a duty to protect the

99. 499 F.2d 467 (D.C. Cir. 1974).

100. *Id.* at 477-78. See McGarity, note 26 *supra*, at 787.

101. *Id.*

102. *Id.*

103. 577 F.2d 825 (3d Cir. 1978), *cert. granted*, 100 S. Ct. 3054, *cert. dismissed*, 101 S. Ct. 38 (1980).

104. 577 F.2d at 836.

105. See note 103 *supra*.

106. OSHA COMPLIANCE GUIDE, (CCH) ¶ 10,034 (Oct. 22, 1980).

107. 509 F.2d 1301 (2d Cir.), *cert. denied*, 421 U.S. 992 (1975).

108. *Id.* at 1310.

working person even when the affected industry would have to employ costly measures to comply with an OSHA regulation.¹⁰⁹

In the case currently before the Supreme Court,¹¹⁰ the lower court had engaged in an extensive analysis of the cost-benefit issue before concluding that OSHA action to reduce the exposure level of cotton dust was "economically feasible for the textile industry within the meaning of the Act." In writing the Act, according to the *Marshall* court, Congress concluded that the attainment of the objective of health protection for workers warranted the expense of an effective standard.¹¹¹ The appellate court also pointed to the arduousness of the task of cost-benefit analysis, even if it were required by the Act "[e]specially where a policy aims to protect the health and lives of thousands of people, the difficulties in comparing widely dispersed benefits with more concentrated and calculable costs may overwhelm the advantage of such analysis."¹¹²

Thus, three circuit court opinions dealt with the issue of whether cost-benefit analysis should be required of OSHA in its regulation of toxic substances which endanger workers, and in each case, the courts found that OSHA's duty was to protect the health of the workers as long as the affected industries were not put out of business by the high costs of compliance. The Fifth Circuit, however, did not agree in its opinion in *American Petroleum*.¹¹³ Rather, that court held OSHA should consider costs and benefits in determining whether compliance with the proposed reduced standard for benzene would be economically feasible for the petroleum industry.

The variance between the circuit court opinions and that of the Fifth Circuit in *American Petroleum* may be partially explained by the fact that the Fifth Circuit relied on an earlier decision it had made in a Consumer Product Safety Commission (CPSC) case.¹¹⁴ Because the

109. *Id.*

110. *AFL-CIO v. Marshall*, 617 F.2d 636, 666 (D.C. Cir. 1979), cert. granted sub nom. *American Textile Mfrs. Inst. v. Marshall*, 101 S. Ct. 68 (1980).

111. *Id.* at 664. The court quoted from the legislative debates on the Act in support of its view and added: "In contrast to the Acts for which Congress contemplated a cost-benefit requirement, the legislative history of the OSH Act contains no reference to this kind of economic analysis." *Id.*

112. *Id.* at 665. If the Act does not require OSHA to conduct a cost-benefit analysis, the court could not impose such a procedural requirement on the agency, according to the opinion. For a detailed discussion on the issue of substantive and procedural review of agency action in matters of the public health and safety, see Rodgers, *A Hard Look at Vermont Yankee: Environmental Law Under Close Scrutiny*, 67 *GEO. L.J.* 699 (1979). See also McGarity, note 26 *supra*, at 768-80.

113. *American Petroleum Inst. v. OSHA*, 581 F.2d 493, 501 (5th Cir. 1978).

114. *Aqua Slide 'N' Dive Corp. v. Consumer Product Safety Comm'n*, 569 F.2d

Fifth Circuit court read identical language in both OSHA and CPSC statutes,¹¹⁵ the court determined that OSHA was required to thoroughly examine and weigh the economic costs that safety regulations impose on industry.¹¹⁶ The *American Petroleum* court itself, however, noted that the CPSC statute required that agency "to reduce unreasonable risks,"¹¹⁷ whereas the OSH Act required OSHA to "provide safe or healthful employment."¹¹⁸

The other circuit court opinions appear more persuasive since those courts analyzed the OSH Act and its history to conclude that absolute protection for the worker was mandated, with the only economic limit being the demise of the affected industry. The Fifth Circuit assertion in *American Petroleum* that OSHA weigh heavily the economic costs of compliance against expected health benefits because a parallel statute requires its agency to do so, is less convincing. Each agency is required by its statute to accomplish varying objectives and each agency is empowered to use different means to achieve those goals. Thus, it appears a stronger case could be made for the *American Petroleum* court's reliance on the need for cost-benefit analysis if the court had read the OSH Act implications for such an analysis, rather than the CPSC statute.

In addition, as OSHA had argued in the benzene issue before the Supreme Court, the parallel Clean Air Act specifically required cost-benefit analysis as a requirement in emission control device regulation and the same Act specifically omitted that requirement in regulations made for protection of public health.¹¹⁹ Thus a reading of similar statutes empowering other governmental agencies to protect human health and safety in order to ascertain what the requirements of the OSH Act are, ought not to be controlling because of the varied purposes and objectives at stake. Rather, the issue should be confined to

831 (5th Cir. 1978). The case involved a product believed to be dangerous to users, and the court decided the CPSC statute required the Commission to conduct a cost-benefit analysis prior to regulating the manufacture of the product. *Id.* at 842.

115. The CPSC statute reads, in relevant part: "The Congress finds that—(1) an unacceptable number of consumer products which present unreasonable risks of injury are distributed in commerce." Consumer Product Safety Act, 15 U.S.C. § 2051(b)(1) (1976). "The Commission shall not promulgate a consumer product safety rule unless it finds (and includes such finding in the rule)—(A) that the rule (including its effective date) is reasonably necessary to eliminate or reduce an unreasonable risk of injury associated with such product." *Id.* at § 2058(c)(2)(A).

116. 581 F.2d at 502-03.

117. See note 115 *supra*.

118. 29 U.S.C. § 652(8) (1976). See McGarity, note 26 *supra*, at 786, for his view of how the court "ignored important differences in the two standards."

119. See text accompanying notes 90-92 *supra*.

whether the OSH Act requires OSHA to conduct a cost-benefit analysis before promulgation of stringent standards to control toxic substances. Congress gave OSHA little guidance on the question, the lower federal courts differ in their approaches toward an answer, and the Supreme Court has yet to definitively respond to the problem.

IV. CONCLUSION

The OSH Act was enacted in 1970 and its application in the decade since has found the search for a solution to the cost-benefit analysis question to be a deeply troublesome one. Perhaps, the question is particularly difficult because of the elemental issue involved. The basic issue is, even if one were to decide that the Act requires a cost-benefit analysis, how does one put a dollar value on human life in order to compare it with economic costs of compliance? Are not costs of control also costs to human life in that an economically depressed nation takes a serious toll on the value of human life?

Secondly, the ever-present problem exists that precise knowledge of the link between worker exposure to carcinogens and actual cases of cancer resulting from that exposure¹²⁰ is not available. Even if the Supreme Court establishes that OSHA is required to conduct a cost-benefit analysis,¹²¹ that would necessarily imply that benefits can be accurately predicted, and that there is a rational way to measure human health against costs of compliance, and that there will be a guideline as to the relative weight each factor is to be accorded.¹²²

The Court, as it faces these difficult questions, may resolve them in favor of absolute protection of the worker, despite scientific uncertainty, despite economic costs to industry. On the other hand, the Court may resolve them in favor of industry, requiring OSHA to fully demonstrate the existence of a reasonable relationship between costs and benefits. The Court could conclude that unless such an analysis is conducted, supported by substantial evidence and fully demonstrated, OSHA must curb its regulatory activity.¹²³

120. The so-called mouse-to-man projections, translating dose-response data across species lines, have seldom been well-received by the public. To choose control groups of humans to see if one groups contracts leukemia, for example, after doses of carcinogens, while the other group remains healthy, is sociologically and morally impermissible in our society. See Doniger, note 93 *supra*, at 510-13.

121. The question is scheduled to be raised during oral arguments on the cotton dust case. 49 U.S.L.W. 3465 (Jan. 6, 1981).

122. Doniger, note 93 *supra*, at 521.

123. Justice Rehnquist already believes that empowering OSHA to make a choice between economic costs and prevention of possible human deaths in the future (as he reads the first sentence of section 655(b)(5) to do) is an unconstitutional delegation of

The possibility also exists that the cost-benefit analysis issue in OSHA regulation may be resurrected in Congress. There, the Act, in light of its judicial interpretation and the actual experience of its application, could be reconsidered and amended to more clearly explicate the role of cost-benefit analysis in OSHA regulatory activity. In his dissenting opinion in *American Petroleum*, Justice Marshall anticipated the possibility that Congress might amend the Act to give OSHA more guidance on its power to regulate toxic substances.¹²⁴ He dreaded the effect such a legislative reconsideration would have on American workers; that is, they would be required to "return to the political arena and to win a victory that they won once before in 1970."¹²⁵ The current statute, however, carries with it such complex, value-laden questions about cost-benefit analysis, that it seems appropriate to deal with them in the legislative arena. There, OSHA, employees, and industry, all armed now with the lessons of experience, can confront each other, and their elected representatives, as well as the issue of whether and to what extent economic considerations should be made in regulatory activity aimed at protecting the American worker's health and safety.

Marybeth W. Rutledge

legislative authority to the agency. See notes 55-57 and accompanying text *supra*. Among the questions certified to the Supreme Court in the cotton dust case is whether the OSH Act is unconstitutional in that sense. 49 U.S.L.W. 3465 (Jan. 6, 1981). If a plurality of the Court agrees with Justice Rehnquist on that issue, then OSHA regulation of toxic substances could be severely curtailed.

124. Justice Marshall found no requirement for cost-benefit analysis in the OSH Act, and he saw OSHA's decision to reduce the benzene standard as "wholly rational." 100 S. Ct. 2844, 2903 (Marshall, J., dissenting). But, Justice Marshall feared the plurality opinion would be subject to legislative reversal if Congress sought to amend the Act by clearly requiring OSHA to quantitatively demonstrate a significant risk of harm. *Id.* at 2901.

125. *Id.* at 2902.