PROMULGATING STANDARDS FOR THE REGULATION OF TOXIC SUBSTANCES UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT: *INDUSTRIAL UNION DEPARTMENT, AFL-CIO v. AMERICAN PETROLEUM INSTITUTE*

I. INTRODUCTION

In *Industrial Union Department, AFL-CIO v. American Petroleum Institute,*[1] the Supreme Court, in a plurality opinion announced by Justice Stevens,[2] held invalid a new safety standard promulgated by the Occupational Safety and Health Administration of the Department of Labor [hereinafter OSHA] which, *inter alia,* reduced the permissible employee exposure limit on airborne concentrations of benzene, a chemical substance used widely in the manufacture of a variety of industrial products.[3] Because the Secretary of Labor had presented no "substantial evidence"[4]

1. 448 U.S. 607 (1980).

2. Burger, C.J., and Stewart, J., joined in the opinion, while Powell, J., filed an opinion concurring in part and concurring in the judgment. (Burger, C.J., also filed a concurring opinion.) Rehnquist, J., filed an opinion concurring in the judgment as well. Marshall, J., filed a dissenting opinion, in which Brennan, White, and Blackmun, JJ., joined.

3. As the Court noted:

> Benzene . . . is a colorless, aromatic liquid that evaporates rapidly under ordinary atmospheric conditions. Approximately 11 billion pounds of benzene were produced in the United States in 1976. Ninety-four percent of that total was produced by the petroleum and petrochemical industries, with the remainder produced by the steel industry as a by product of coking operations. Benzene is used in manufacturing a variety of products including motor fuels (which may contain as much as 2 per cent benzene), solvents, detergents, pesticides, and other organic chemicals . . . . Benzene is a toxic substance. Although it could cause harm to a person who swallowed or touched it, the principal risk of harm comes from inhalation of benzene vapors. When these vapors are inhaled the benzene diffuses through the lungs and is quickly absorbed in the blood.

448 U.S. 615-16. *See* 43 Fed. Reg. 5918, 5920-25 (1978); American Iron & Steel Inst. v. OSHA, 577 F.2d 825 (3d Cir. 1978), *cert. dismissed,* 448 U.S. 917 (1980) (coke oven emissions that include benzene).

4. Judicial review of occupational safety and health standards is authorized by 29 U.S.C. § 655(f) (1976), which provides:

> Any person who may be adversely affected by a standard issued under this section may at any time prior to the sixtieth day after such standard is promulgated file a petition challenging the validity of such standard with the United States court of appeals for the circuit wherein such person resides or has his principal place of business, for a judicial review of such standard. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Secretary. The filing of such petition shall not, unless otherwise ordered by the court, operate as a stay of the standard. The determinations of the Secretary shall be conclusive if supported by *substantial evidence in the record considered as a whole.*

(emphasis added).

On review, the Fifth Circuit noted the problems involved in attempting to apply the traditional substantial evidence test in assessing OSHA standards resulting from informal rulemaking. "The problem centers not on how to apply the test to factual

that the new standard was "reasonably necessary and appropriate to provide safe or healthful employment and places of employment," as required by OSHA's enabling legislation,[5] but instead had relied solely on a more rigorous standards section of the enabling legislation applicable to toxic substances in particular,[6] the Court determined that the Secretary of Labor had exceeded his statutory authority in issuing the new standard.[7]

II. BACKGROUND

Although benzene had long been considered a toxic substance, it was not until the late 1960's that epidemiological studies began to indicate that exposure to high concentrations of benzene significantly increased the risk of leukemia among workers so exposed.[8] In 1969, the American National Standards Institute[9] adopted a national consensus standard for employee exposure of ten parts benzene per million parts air (ppm) averaged over an eight hour day with a peak ceiling concentration of fifty ppm for ten minute periods.[10] Shortly after the Occupational Safety

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findings subject to evidentiary development, but rather on how to review legislative-like policy judgments." American Petroleum Inst. v. OSHA, 581 F.2d 493, 497 (5th Cir. 1978).

5. Under §2(b)(3) of the Act, the Secretary of Labor is empowered to "set mandatory occupational safety and health standards applicable to businesses affecting interstate commerce . . . ." 29 U.S.C. §651(b)(3) (1976). The term "occupational safety and health standard" is defined in §3(8) of the Act [29 U.S.C. §652(8)] as a "[s]tandard which requires conditions, or the adoption or use of . . . practices, means, methods, operations, or processes *reasonably necessary and appropriate* to provide safe or healthful employment and places of employment." (emphasis added).

6. Procedures for formulating and promulgating such standards are set forth in §6(b)(5) of the Act [29 U.S.C. §655(b)(5)], which is specifically applicable to toxic materials or harmful physical agents. This subsection provides:

> The Secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, 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 under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate. In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired.

The modifying effect of §652(8), the definition section, upon §655(b)(5) was determinative of the Supreme Court's holding in the principal case.

7. 448 U.S. 659 (1980).

8. *Id.* at 618. *See* 43 Fed. Reg. 5918, 5920-25 (1978).

9. "The American National Standards Institute is one of two private organizations which formulate consensus standards for commerce and industry. The other is the National Fire Protection Association." American Fed'n of Labor v. Brennan, 530 F.2d 109, 111 n.2 (3d Cir. 1975).

10. 448 U.S. 617. *See* 43 Fed. Reg. 5918, 5919 (1978).

and Health Act [hereinafter the Act] [11] was passed, the Secretary of Labor adopted this consensus standard as the federal standard.[12]

Although the National Institute of Occupational Safety and Health [hereinafter NIOSH], OSHA's research arm,[13] took note of the poten-

11. Occupational Safety and Health Act of 1970, 29 U.S.C. §§651-678 (1976).

12. This standard, which is still in effect, was based on the non-malignant toxic effects of benzene. *See* American Petroleum Inst. v. OSHA, 581 F.2d 493, 498 (5th Cir. 1978). Codified at 29 C.F.R. §1910.1000, Table Z-2 (1977), the standard continues to regulate those substances containing benzene, such as gasoline, which were expressly excluded by the proposed permanent standard. *See* 43 Fed. Reg. 5917, 5918 (1978).

29 U.S.C. §655(a) (1976), which enables OSHA to adopt a consensus standard, provides:

> Without regard to chapter 5 of Title 5 or to the other subsections of this section, the Secretary shall, as soon as practicable during the period beginning with the effective date of this chapter and ending two years after such date, by rule promulgate as an occupational safety or health standard any national consensus standard, and any established Federal standard, unless he determines that the promulgation of such a standard would not result in improved safety or health for specifically designated employees. In the event of conflict among any such standards, the Secretary shall promulgate the standard which assures the greatest protection of the safety or health of the affected employees.

29 U.S.C. §655(a) (1976). *See* 448 U.S. at 617 n.7.

By comparing an earlier view of the permanence of consensus standards with the position adopted by the Supreme Court in the principal case, the burden placed upon OSHA becomes apparent.

In AFL-CIO v. Brennan, 530 F.2d 109, 115 (3d Cir. 1975), the Third Circuit held that Congress intended that national consensus standards adopted pursuant to 29 U.S.C. §655(a) (1976) be viewed as interim measures providing uniform minimum national standards. These standards were subject to constant upgrading in order to reflect advances in science and technology. Even though the *Brennan* case dealt with a safety standard for mechanical power presses, and not with a health standard for toxic substances, the holding did reflect the prevailing legal climate in the Third Circuit when OSHA sought to upgrade current standards for toxic substances. One commentator, however, has taken the view that Congress intended the Act to favor the status quo exposure level absent good reasons for change. *See* McGarity, *Substantive and Procedural Discretion in Administrative Resolution of Science Policy Questions: Regulating Carcinogens in EPA and OSHA*, 67 GEO. L.J. 729, 791 (1979) [hereinafter *Science Policy Questions*]. In the principal case, the Supreme Court adopted the latter position. The Court stated: "[I]t seems manifest that Congress intended, at a bare minimum, that the Secretary find a significant risk of harm and therefore a probability of significant benefits before establishing a new standard." 448 U.S. at 644.

13. Two sections of the Act explain NIOSH's role in formulating standards for toxic substances. 29 U.S.C. §669(a)(3) (1976) states:

> The Secretary of Health, Education, and Welfare, on the basis of such research, demonstrations and experiments, and any other information available to him, shall develop criteria dealing with toxic materials and harmful physical agents and substances which will describe exposure levels that are safe for various periods of employment, including but not limited to the exposure levels at which no employee will suffer impaired health or functional capacities or diminished life expectancy as a result of his work experience.

HEW's obligations under this section have been delegated to NIOSH by 29 U.S.C. §671(a) (1976), which reads:

> It is the purpose of this section to establish a National Institute for Occupational Safety and Health in the Department of Health, Education, and Welfare in order to carry out the policy set forth in section 651 of this title and to perform the functions of the Secretary of Health, Education, and Welfare under sections 669 and 670 of this title.

NIOSH's recommendations have been defined as merely precatory, and therefore not binding on the Secretary of Labor. *See* Industrial Union Dep't, AFL-CIO v.

tial carcinogenic effects of benzene in a 1974 report recommending a permanent standard for benzene, it acknowledged that further studies were necessary before it could recommend a change in the ten ppm standard.[14] Following the publication of additional studies which tended to confirm benzene's carcinogenic potential, NIOSH recommended in 1976 that OSHA issue an emergency temporary standard for benzene.[15] OSHA subsequently issued an emergency standard effective May 21, 1977.[16] The emergency regulation reduced the existing permissible benzene exposure level from ten ppm to one ppm, reduced the ceiling for ten minute exposures from twenty-five ppm to five ppm, and eliminated the peak ceiling concentration level of fifty ppm.[17] Due to a temporary restraining order preventing the emergency standard from taking effect,[18] however, OSHA later abandoned the proposed emergency standard.[19]

Since NIOSH was unable to determine conclusively whether benzene in fact caused leukemia at low levels of exposure, it concluded that no level was safe and that the lowest detectable level of exposure was therefore proper.[20] In line with this reasoning, OSHA, after holding

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Hodgson, 499 F.2d 467, 476-77 (D.C. Cir. 1974); GAF Corp. v. OSHRC, 561 F.2d 913, 917 (D.C. Cir. 1977).

14. 448 U.S. at 618-19.

15. *Id.* at 620-21. 29 U.S.C. § 655(c)(1) (1976) provides:

> The Secretary shall provide, without regard to the requirements of chapter 5 of Title 5, for an emergency temporary standard to take immediate effect upon publication in the Federal Register if he determines (A) that employees are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful or from new hazards, and (B) that such emergency standard is necessary to protect employees from such danger.

16. 29 C.F.R. § 1910.1028 (1980).

17. 448 U.S. at 623.

18. *Id.*

19. *Id.* *See* 42 Fed. Reg. 27452 (1977).

Because of past rulings by the Fifth Circuit, the emergency temporary standard for benzene was apparently doomed. In Florida Peach Growers Ass'n v. Dep't of Labor, 489 F.2d 120, 129-30 (5th Cir. 1974), the use of emergency standards was restricted to instances where OSHA had *empirical evidence* of the existence of a grave danger caused by a toxic substance. *Accord,* Taylor Diving & Salvage v. U.S. Dep't of Labor, 537 F.2d 819, 820-21 (5th Cir. 1976). Since the principal case demonstrates an instance where OSHA could not quantify the risks by factual evidence, the emergency temporary standard would probably have been invalidated by the Fifth Circuit.

The same position has been taken by the Third Circuit as well. *See* Synthetic Organic Chem. Mfrs. Ass'n v. Brennan, 503 F.2d 1155, 1160 (3d Cir. 1974), *cert. denied,* 420 U.S. 973 (1975) (legal criteria for emergency standards distinguished from those of permanent standards). The Third Circuit has noted that emergency temporary standards are easier to issue since they do not require the procedural steps of permanent standards. To block the potential abuse of emergency standards, the Third Circuit has required factual proof of a grave danger before such standards are enacted. *See* Dry Colors Mfrs. Ass'n, Inc. v. U.S. Dep't of Labor, 486 F.2d 98, 102-07 (3d Cir. 1973), *accord,* AFL-CIO v. Brennan, 530 F.2d 109, 116 (3d Cir. 1975).

20. Such a conclusion has been approved of in the past. *See* American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 832 (3d Cir. 1978) (since safe level for carcinogenic agents could not be established by application of present knowledge, no

public hearings on the matter,[21] issued a permanent standard reducing the permissible benzene employee exposure limit effective February 10, 1978. The permanent standard was based on the lowest detectable level of 0.5 ppm as the trigger level for further monitoring and on one ppm as the action level for additional employer controls.

Although OSHA was unable to obtain any empirical evidence to show that the ten ppm level of exposure standard constituted a proven hazard,[22] it justified the new standard by relying on its "special policy for carcinogenic substances."[23] This policy required an exposure limit to be set at the lowest feasible level in the absence of clear proof establishing a safe level of exposure.[24] OSHA therefore reasoned that quantifications either of the risks which the then current ten ppm exposure limit presented or of the benefits which the new one ppm standard would produce were unnecessary.[25]

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level of exposure to a chemical substance could be considered toxicologically insignificant for man).

Notwithstanding this determination, industry witnesses, at the hearings for the proposed permanent standard for benzene, testified that a safe limit for benzene could in fact be established. 43 Fed. Reg. 5918, 5931 (1978). Two schools of thought therefore appear to exist as to whether or not safe levels of exposure to carcinogens can be established. *See* 448 U.S. at 621-38; Synthetic Organic Chem. Mfrs. Ass'n v. Brennan, 503 F.2d 1115, 1158-59 (3d Cir. 1974).

21. 448 U.S. at 625. 29 U.S.C. § 655(b)(c) (1976), which requires the Secretary to follow a specified procedure for the issuance of permanent standards, provides:

> On or before the last day of the period provided for the submission of written data or comments under paragraph (2), any interested person may file with the Secretary written objections to the proposed rule, stating the grounds therefor and requesting a public hearing on such objections. Within thirty days after the last day for filing such objections, the Secretary shall publish in the Federal Register a notice specifying the occupational safety or health standard to which objections have been filed and a hearing requested, and specifying a time and place for such hearing.

22. OSHA, however, did cite studies which it believed sufficient to vindicate its conclusion that the present exposure level did present a risk to employees. Even though the scientific accuracy of these studies was admittedly moot and even though some studies indicated that the 10 ppm level was safe, OSHA believed that doubts should be resolved in favor of overprotection. 43 Fed. Reg. 5918, 5920-41 (1978). *See* 448 U.S. at 634 & n.36.

23. 448 U.S. at 624. *See* American Petroleum Inst. v. OSHA, 581 F.2d 493, 501 (5th Cir. 1978).

OSHA's special policy for carcinogenic substances is the product of the factual uncertainties confronting the Agency when it deals with matters on the frontiers of scientific knowledge. *See Science Policy Questions, supra* note 12, at 801-03.

24. 448 U.S. at 624. The adoption of the new standard was also justified in part by OSHA's customary use of a safety factor of 10-100 or greater when the toxic effects are potentially serious and the nature of the data relied on suspect. 43 Fed. Reg. 5918, 5925 (1978). *See* Society of Plastics Indus., Inc. v. OSHA, 509 F.2d 1301, 1308 (2d Cir. 1975) (use of 100 to one margin of safety level to justify, in part, a one ppm level for vinyl chloride).

25. OSHA contended that the lack of clear data was inconsequential. In its statement of the reasons for issuing the standard, the Agency stated:

> Having determined that the benefits of the proposed standards are likely to be appreciable, OSHA is not obligated to carry out further exercises toward more precise calculations of benefit which would not significantly clarify the ultimate decision. Previous attempts to quantify benefits as an aid to decision making in setting health standards have not proved fruitful.

43 Fed. Reg. 5918, 5941 (1978). *See Science Policy Questions, supra* note 12, at 804-05 (lack of data of no consequence). *See also* 448 U.S. at 634-38.

The new permanent standard required employers, *inter alia*, to prevent any employee from being exposed to an airborne concentration of benzene in excess of one ppm[26] averaged over an eight hour day, to prevent any employee from having dermal contact with liquid benzene,[27] to place caution labels on all packages containing benzene, and to ensure that all labels remained affixed[28] when the product left the employer's workplace.[29]

In response to the occupational exposure limits which the new health standard placed upon them, producers of benzene and benzene-containing products petitioned the United States Court of Appeals, Fifth Circuit, for review of the standard's validity.[30] Petitioners contended that the evidentiary record, taken as a whole, did not offer substantial evidence to support the reduction of the permissible exposure limit, the dermal contact ban, or the labelling requirement as "reasonably necessary and appropriate to provide safe or healthful employment and places of employment" as required by 29 U.S.C. section 652(8).[31] They instead argued that, by the words "reasonably necessary and appropriate," Congress had recognized that safety and health standards were limited by practical considerations.[32] The Act thus required OSHA first to determine the extent to which the standard would in fact benefit workers, and then to determine whether the projected benefits would justify the costs of industry compliance.[33] Since OSHA had failed to make these determinations, petitioners requested that the standard be set aside.[34]

OSHA, on the other hand, contended that the "reasonably necessary and appropriate" language did not impose any substantive obligations on

26. A one ppm level rather than a zero level was chosen for practical reasons. "With respect to benzene, . . . [NIOSH] . . . thought that 1 ppm was an appropriate standard because any lower standard might require the elimination of small amounts of benzene (in some places up to 0.5 ppm) that are normally present in the atmosphere." 448 U.S. at 621 n.14. *See* 43 Fed. Reg. 5918, 5947 (1978).

27. The original draft placed this limit on exposure to liquid benzene other than gasoline storage and distribution facilities. However, OSHA later modified the standard by excluding liquids containing 0.5% benzene, to be reduced to 0.1% after three years. 448 U.S. at 626-27, 626 n.22; 581 F.2d at 496, 496 n.4. *See* 29 C.F.R. § 1910.1028 (1980).

28. The Fifth Circuit subsequently ruled that OSHA was within the purviews of 29 U.S.C. § 655(b)(7) (1976) when it required an employer to assure that the warning labels remained affixed when the product left the employer's workplace. However, this issue was not considered in the principal case. 581 F.2d at 510.

29. *Id.* at 496. The standard was also designed to protect workers from whatever hazards were associated with low level benzene exposure by requiring employers to monitor workplaces to determine the level of exposure, to provide for medical examinations when the level rose above 0.5 ppm, and to institute whatever engineering or other controls were necessary to keep exposures at or below one ppm. 448 U.S. at 627.

30. The Industrial Union Department, AFL-CIO, intervened on behalf of OSHA in support of the standard. 581 F.2d at 499.

31. 448 U.S. at 638; 581 F.2d at 501.

32. 581 F.2d at 501.

33. *Id.*

34. *Id.*

it in promulgating standards.[35] In support of this claim, OSHA argued that section 655(b)(5), which defines those conditions under which standards for toxic substances may be promulgated, overcame any requirement on its part to make a cost-benefit analysis.[36] In other words, OSHA maintained that section 655(b)(5) superceded section 652(8) when permanent standards for toxic substances were involved.[37]

On October 5, 1978, the Fifth Circuit held that the "reasonably necessary and appropriate" language of section 652(8) did indeed limit OSHA's power to enact standards for safe and healthful workplaces.[38] Although the court took notice of earlier decisions from other circuits which had apparently reached a contrary result,[39] the Fifth Circuit nevertheless ruled that OSHA was not authorized to promulgate a permanent standard for toxic substances unless it provided some empirical evidence 1) that the existing limit posed a significant health risk,[40] 2) that the new standard would alleviate that risk,[41] and 3) that the costs of implementing the new standard were reasonably necessary in light of the

35. *Id.* at 502.

36. *Id.*

37. *Id.*

38. *Id.*

39. *Id.* at 505. Related cases are informative. *See* Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467 (D.C. Cir. 1974) (OSHA's policy judgments upheld even though no reliable data presented to justify a low level exposure standard for asbestos dust); Society of Plastics Indus., Inc. v. OSHA, 509 F.2d 1301 (2d Cir. 1975) (OSHA's policy judgments, coupled with data showing a risk of cancer from very high levels of exposure to vinyl chloride, justified a one ppm exposure standard); American Iron & Steel Inst. v. OSHA, 577 F.2d 825 (3d Cir. 1978) (OSHA's policy judgments justified a low level exposure limit for coke oven emissions despite inadequate data for determining a safe level).

Two cases, in particular, involved judicial interpretations of statutes similar to the Act, and appeared to support OSHA's construction of its enabling legislation. In Ethyl Corp. v. EPA, 541 F.2d 1 (D.C. Cir. 1976), *cert. denied,* 426 U.S. 941 (1976), the appellate court noted:

> Where a statute is precautionary in nature (or as in OSHA mandatory in its commands to act), the evidence difficult to come by, uncertain, or conflicting because it is on the frontiers of scientific knowledge, the regulations designed to protect the public health, and the decision of an expert administrator, we will not demand rigorous step by step proof of cause and effect. Such proof may be impossible to obtain if the precautionary purpose of the statute is to be served.

541 F.2d at 28 n.57.

Similarly, in Certified Colors Mfrs. Ass'n v. Mathews, 543 F.2d 284 (D.C. Cir. 1976), the court stated:

> To the extent that the instant case involves questions of statutory construction, our view is guided by the considerable deference traditionally owed the interpretation of a statute by the head of the agency charged with its administration . . . . [W]e believe that the traditional deference is heightened when the statutory interpretation involves a remedial statute designed to protect the public health and principally authored by the implementing agency.

Id. at 294.

40. "29 U.S.C. § 655(b)(5) . . . does not give OSHA unbridled discretion to create absolutely risk-free workplaces." 581 F.2d 493, 502 (5th Cir. 1978).

41. *Id.* at 502-03.

benefits to be attained.[42] In short, the court held that since OSHA's failure to offer substantial evidence in support of the one ppm exposure limit, the dermal contact ban, or the labelling requirements made it impossible to determine whether these standards were "reasonably necessary and appropriate to provide safe or healthful employment and places of employment," the provisions had to be set aside.[43]

According to the Fifth Circuit, OSHA's reliance on mere policy considerations was not enough to justify its promulgation of standards designed to regulate employee exposure to toxic substances. Although the court did note that the "reasonably necessary and appropriate" requirement of section 652(8) could have been satisfied had OSHA made "rough but educated estimates" from existing studies of the benefits expected from the new standard,[44] the court's holding nevertheless appeared to be in conflict with rulings from the Second, Third, and District of Columbia Circuits.[45]

III. ANALYSIS

In a factionated[46] and somewhat indeterminate[47] decision, Justice Stevens announced a judgment affirming the Fifth Circuit's striking down of OSHA's stringent new standard for the control of benzene as

42. *Id.* at 504. The Fifth Circuit justified its departure from earlier precedent by noting that other circuits had not considered the "reasonably necessary" requirement imposed by 29 U.S.C. § 652(8). *Id.* at 505. Although this requirement did not require OSHA to wait until an employee actually died from benzene exposure, *see also* Dry Colors Mfrs. Ass'n, Inc. v. U.S. Dep't of Labor, 486 F.2d 98, 104 (3d Cir. 1973); Florida Peach Growers v. U.S. Dep't of Labor, 489 F.2d 120, 132 (5th Cir. 1974), the court did specify that OSHA must wait either until studies of the effects of human exposure to benzene at higher levels were sufficient to chart a dose response curve (which would show the relationship between different exposure levels and the risk of cancer associated with those exposure levels) or until studies of animal exposure levels to benzene were sufficiently clear to project the risks involved onto low levels of human exposure. 581 F.2d at 504, 504 n.24. *See also* Synthetic Organic Chem. Mfrs. Ass'n v. Brennan, 503 F.2d 1155, 1159 (3d Cir. 1974); *Science Policy Questions, supra* note 12, at 803 n.402; 448 U.S. at 632 n.33.

43. 581 F.2d at 507. In particular, the court found that OSHA's special policy for carcinogenic substances conflicted with the "substantial evidence on the record as a whole" requirement of 29 U.S.C. § 655(f) (1976). As the court stated:

> The general agreement in the scientific community that exposure to carcinogens at low levels is safer than exposure at higher levels permits the further factual deduction that reducing the permissible exposure limit from 10 ppm to 1 ppm will result in some benefit. This finding and deduction, however, does not yield the conclusion that measurable benefits will result, and OSHA is unable to point to any studies or projections supporting such a finding . . . mere rationality is not equivalent to substantial evidence that conditions required by standards are reasonably necessary . . . . Congress provided that OSHA regulate on the basis of knowledge rather than on the unknown.

581 F.2d at 503-04.

44. 581 F.2d at 504. Moreover, even if OSHA were confronted with choosing between conflicting studies, the court might have deferred to OSHA's choice. *Id.* at 507. *See Science Policy Questions, supra* note 12, at 806 n.40.

45. *See* note 39 *supra.*

46. *See* note 2 *supra.*

47. At least three separate analyses were advanced to arrive at the same judgment: 1) Justice Stevens determined that the enabling legislation for OSHA

a toxic substance. The principal issue,[48] as couched by Justice Stevens, concerned the sufficiency of the evidentiary showing made by OSHA in support of its rigorous new standard.

While the plurality agreed that the Secretary of Labor had made an ample showing of the effects of benzene as a toxic substance,[49] it was less than satisfied with the rationale which OSHA then used to arrive at the ultimate standard.[50] The Agency's procedure, in this case, derived its entire force from section 6(b)(5) of the Occupational Safety and Health Act,[51] through which the Secretary had fashioned a special policy on carcinogens.[52] It was this policy which led OSHA to promulgate the benzene standard in question, which set the ppm at the lowest level feasible within technological limits.[53] There was no question, in the context of this case, that section 655(b)(5) did indeed permit the promulgation of drastic standards, for when a substance has been identified as "toxic," the terms of section 655(b)(5) clearly become operative. The chief question, as addressed by the plurality, concerned the interrelationship between sections 655(b)(5) and 652(8). The Secretary applied only section 655(b)(5) to benzene; the Court applied both.

Section 652(8) contains far more general language than does section 655(b)(5); the salient passage of section 652(8) being its "reasonably necessary and appropriate" clause. The plurality construed this language to create a threshold barrier to any and all OSHA standards, including those promulgated for toxic substances under section 655(b)(5). As the Court noted:

> [W]e think it is clear that § 3(8) does apply to all permanent standards promulgated under the Act and that it requires the Secretary, before issuing any standard, to determine that it is reasonably necessary and appropriate to remedy a significant

required a threshold showing under § 652(8) that "the standard is reasonably necessary and appropriate to remedy a significant risk of material health impairment." This applies even if the standard falls under § 655(b)(5), which concerns a toxic material or harmful physical agent (448 U.S. at 639-40); 2) Justice Powell would perhaps require that there be a cost-benefit analysis as well (*id.* at 669-70); 3) Justice Rehnquist would apply the nondelegation doctrine and conclude that § 655(b)(5) was an invalid delegation of congressional authority (*id.* at 687).

48. "The principal question is whether such a showing is a sufficient basis for a standard that places the most stringent limitation on exposure to benzene that is technologically and economically possible." *Id.* at 611.

49. *Id.* at 615-21.

50. In the end OSHA's rationale for lowering the permissible exposure limit to 1 ppm was based, not on any finding that leukemia has ever been caused by exposure to 10 ppm of benzene and that it will *not* be caused by exposure to 1 ppm, but rather on a series of assumptions indicating that some leukemias might result from exposure to 10 ppm and that the number of cases might be reduced by reducing the exposure level to 1 ppm.

Id. at 634.

51. *See* note 6 *supra.*

52. "Whenever a carcinogen is involved, OSHA will presume that no safe level of exposure exists in the absence of clear proof establishing such a level and will accordingly set the exposure limit at the lowest level feasible." 448 U.S. at 624.

53. *Id.*

> risk of material health impairment. Only after the Secretary has made the threshold determination that such a risk exists with respect to a toxic substance, would it be necessary to decide whether § 6(b)(5) requires him to select the most protective standard he can consistent with economic and technological feasibility. . . .[54]

The plurality went on to state that, although OSHA had supported its promulgation of the benzene standard by voluminous data, OSHA had completely ignored section 652(8) in its argument below.[55]

The plurality took specific issue with the rationale applied by OSHA in reducing benzene exposure limits. As Justice Stevens pointed out, the reduction had been based not upon a finding that cancer (leukemia) cases had resulted from exposures at levels within the existing (ten ppm) standard, but upon a series of assumptions[56] made by the Agency. According to the plurality, OSHA had reasoned that because a safe exposure level had not been demonstrated, any exposure level above zero presented some risk of cancer.[57] Therefore, the permissible level of benzene exposure had to be reduced to the lowest feasible one (one ppm). The plurality, however, rejected this approach:

> If the purpose of the statute were to eliminate completely and with absolute certainty any risk of serious harm, we would agree that it would be proper for the Secretary to interpret § 3(8) and § 6(b)(5) in this fashion. But we think it is clear that the statute was not designed to require employers to provide absolutely risk-free workplaces whenever it is technologically feasible to do so. . . .[58]

The plurality thus required that OSHA's rationale be preceded by a threshold analysis under the terms of section 652(8), in order to specifically address the following question: Is a reduced standard reasonably necessary and appropriate to provide safe and healthful employment?[59] The result of this analysis must then meet the test set out by Justice Stevens: "[T]he burden was on the agency to show, on the basis of substantial evidence, that it is at least more likely than not that long-term exposure to 10 ppm of benzene presents a significant risk of material health impairment."[60] Hence, OSHA must identify a significant risk under section 652(8) before applying the more stringent standards of section 655(b)(5).

54. *Id.* at 639-40.
55. *Id.* at 638.
56. *Id.* at 634.
57. *Id.* at 635-36.
58. *Id.* at 641.
59. *Id.* at 639.
60. *Id.* at 653.

Although the plurality seemed to place a harsher burden on OSHA when dealing with toxic materials, this burden was tempered by the Court in its description of the type of showing which would satisfy the threshold requirement. Not only was the actual definition of "significant risk" left to the Agency,[61] but the required evidentiary showing need not have arisen to "anything approaching a scientific certainty." [62] Moreover, the Court acknowledged that perhaps some leeway was necessary for the Secretary to utilize the best available evidence standard when findings draw near to the "frontiers of scientific knowledge." [63] One is left with the impression that perhaps a recasting of the existing data by the Agency, along the lines set out by the plurality, might indeed have satisfied the Court's threshold requirement.

In the three concurring opinions, only Justice Rehnquist appeared dissatisfied with the broad lines of logic drawn by the plurality opinion. Chief Justice Burger, in his concurrence, simply admonished the Secretary to "retrace his footsteps," [64] while Justice Powell believed that, although the Agency's action "necessarily subsumes the conclusion that the health risk is significant," [65] a necessary ingredient to a proper determination of "reasonably necessary and appropriate" was a cost-benefit analysis.[66] Justice Rehnquist, in a well-reasoned but solitary opinion, asserted that the substance of these regulations concerned such a difficult issue [67] as to be rightly within the province of Congress rather than of an administrative agency.[68] Justice Rehnquist would therefore reject section 655(b)(5) as an improper delegation of legislative authority.[69]

In a dissenting opinion, Justice Marshall, joined by Justices Brennan, White, and Blackmun, delivered a scathing and emotion-filled attack

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61. *Id.* at 655.

62. *Id.* at 656.

63. *Id.*

64. *Id.* at 663.

65. *Id.* at 666.

66. Even if OSHA succeeded in selecting the gravest risks for earliest regulation, a standard-setting process that ignored economic considerations would result in a serious misallocation of resources and a lower effective level of safety than could be achieved under standards set with reference to the comparative benefits available at lower cost.

Id. at 670.

67. I believe that this case presents the Court with what has to be one of the most difficult issues that could confront a decision-maker: whether the statistical possibility of future deaths should ever be disregarded in light of the economic costs of preventing those deaths.

Id. at 672.

68. "Especially in light of the importance of the interests at stake, I have no doubt that the provision at issue, standing alone, would violate the doctrine against uncanalized delegations of legislative power." *Id.* at 675.

69. Justice Rehnquist, in applying the nondelegation doctrine, determined that § 655(b)(5) did not reflect any clear congressional policy or standard. As he pointed out, the fact that the Court split on its interpretation of this section and on the legislative intent demonstrated vividly why this particular section failed to pass this test. *Id.* at 676.

on the plurality position.[70] The dissent would more broadly construe section 652(8) to stand for a precatory linkage between the protective purposes of the statute and the regulations promulgated thereunder: that the regulation need only bear a "reasonble relation" to the intent of the statute,[71] rather than a specific threshold showing.[72] Pointing to the seventeen days of hearings and the fifty volumes of data amassed by the Agency, the dissent argued that a reasonable relationship had indeed been demonstrated.[73] Finally, the dissent predicted that the judgment in the instant case would enjoy but short life, since it transcended the very institutional boundaries of the Court's constitutional mandate.[74]

IV. IMPACT OF THE DECISION

In one of the earliest reviews of standards promulgated under the Occupational Safety and Health Act,[75] Judge Friendly, writing for the Second Circuit Court of Appeals, observed that Congress had created an "uneasy partnership" between the administrative agencies and the federal courts when it decided to delegate decision-making of a legislative character to the former, subject to review by the latter.[76] The plurality opinion in *American Petroleum Institute* has not eased the tension in the agency-court balance. On its face, the opinion appears to overrule a significant number of cases from the Second,[77] Third,[78] and District of Columbia Circuits[79] which upheld the validity of similar standards issued by OSHA. However, even though the Fifth Circuit refused to do so,[80] those decisions can be reconciled with the decision against the Secretary in the instant case. Of primary importance in an analysis of those circuit decisions is the fact that none of them addressed the sig-

70. *Id.* at 688.

71. At the outset, it is important to observe that 'reasonably necessary and appropriate' clauses are routinely inserted in regulatory legislation, and in the past such clauses have uniformly been interpreted as general provisos that regulatory actions must bear a reasonable relation to those statutory purposes set forth in the statute's substantive provisions.

Id. at 708.

72. The crux of Marshall's argument concerned the plurality's interpretation that § 652(8) was controlling. As he stated: "[I]t is an odd canon of construction that would insert in a vague and general definitional clause [§ 652(8)] a threshold requirement that overcomes the specific language placed in a standard-setting provision [§ 655(b)(5)]." *Id.* at 709.

73. *Id.* at 696.

74. *Id.* at 723.

75. Associated Indus. v. U.S. Dep't of Labor, 487 F.2d 342 (2d Cir. 1973).

76. *Id.* at 354.

77. 487 F.2d 342; Society of Plastics Indus. v. OSHA, 509 F.2d 1301 (2d Cir. 1975), *cert. denied*, 421 U.S. 992 (1975).

78. American Iron & Steel Inst. v. OSHA, 577 F.2d 825 (3d Cir. 1978), *cert. dismissed*, 448 U.S. 917 (1980); Synthetic Organic Chem. Mfrs. Ass'n v. Brennan, 503 F.2d 1155 (3d Cir. 1974).

79. Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467 (D.C. Cir. 1974).

80. American Petroleum Inst. v. OSHA, 581 F.2d 493, 507 (5th Cir. 1978).

nificance of the "reasonably necessary and appropriate" requirement of section 652(8), which figured so prominently in the plurality opinion in the instant case.[81] Somewhat ironically, those circuits analyzed the standards before them in a manner quite consistent with the plurality's rationale in *American Petroleum Institute.* In those cases,[82] the substantial evidence test was applied to the Secretary's findings that the substance being regulated presented a significant risk at the pre-regulated levels.[83] Since modern scientific techniques were incapable of precisely predicting health effects at lower levels, these courts deferred to the policy judgments of the Agency.[84] In *American Petroleum Institute,* however, the Agency never determined, via substantial evidence, that the ten ppm exposure level presented a significant health risk. Instead, OSHA merely relied upon administrative fiat, which was in turn based on the view that nothing less than absolute safety would be an adequate standard.[85] The Agency apparently applied its policy judgment too early in the regulatory process. Had it relied upon the volumes of evidence it had compiled rather than on an *ipse dixit,* the Agency may have found itself on the favorable side of the plurality opinion.

A close reading of the plurality opinion reveals that the Agency is not foreclosed from employing policy considerations in issuing health standards.[86] The Agency must, however, first make a determination of what it considers to be a "substantial risk." As Justice Stevens pointed out, "[S]ome risks are plainly acceptable and others are plainly unacceptable."[87] In a note to the paragraph containing this language, Stevens indicated that the determination that a particular level of risk is significant will often be based primarily upon policy considerations.[88]

81. 448 U.S. at 639. Perhaps the "reasonably necessary" requirement was not discussed in the other circuit court decisions because such a requirement could be inferred from the substantial evidence supplied by OSHA. *See, e.g.,* Society of Plastics Indus. v. OSHA, 509 F.2d at 1306, where 13 employees in the vinyl chloride industry died of a rare form of liver cancer within three years, and American Iron & Steel Inst. v. OSHA, 577 F.2d at 831, where it was calculated that 21,000 coke oven workers had an annual excess mortality of over 200.

82. *See* notes 77-79 *supra.*

83. The health hazards of asbestos provided part of the impetus for the enactment of the Act. *See* Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d at 471; *see also* Society of Plastics Indus. v. OSHA, 509 F.2d at 1306; American Iron & Steel Inst. v. OSHA, 577 F.2d at 831.

84. Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d at 474; Society of Plastics Indus. v. OSHA, 509 F.2d at 1304; American Iron & Steel Inst. v. OSHA, 577 F.2d at 833.

85. 448 U.S. at 656 n.63.

86. *Id.* at 652-658.

87. *Id.* at 655. Justice Stevens went on to state:

> If for example the odds are one in a billion that a person will die from cancer by taking a drink of chlorinated water, the risk clearly could not be considered significant. On the other hand, if the odds are one in a thousand that regular inhalation of gasoline vapors that are two percent benzene will be fatal, a reasonable person might well consider the risk significant and take appropriate steps to decrease or eliminate it.

Id.

88. *Id.* at 655-56 n.62.

In that same note, the plurality declined to enunciate just what level of scrutiny would be applied to such policy-based determinations, but did seem to indicate, somewhat later in the body of the opinion, that the courts should look for a "rational judgment." [89]

Although the plurality relied upon surprisingly little case law in reaching its decision, its strategic citations to decisions from the Second and District of Columbia Circuits [90] lend support to the interpretation that those decisions, *et alia,* far from being overruled, have instead been tacitly approved. Significantly, it was to these cases which Stevens referred when he reasoned that, in applying the substantial evidence test to the best evidence available, OSHA is given considerable leeway when it must make findings based upon the frontiers of scientific knowledge.[91] Approving reference to these circuit court cases was also made in a note to the plurality's statement that OSHA has, in the past, made rational policy judgments vis-a-vis the relative significance of risks involved with exposures to particular carcinogens.[92]

Justification for the foregoing analysis may perhaps be found in a Third Circuit decision which upheld regulations of coke oven emissions.[93] This decision was cited in a note by the plurality in the instant case [94] to illustrate how OSHA can go about making rational judgments regarding significant risks. In this case, the Third Circuit held that the Agency had established, via substantial evidence, that coke oven emissions were carcinogenic and that no level of exposure was safe.[95] The Secretary's policy decision to set the standard as low as feasible was therefore proper.[96] This analysis seems consistent with the opinions of Justice Stevens, Powell, and Burger.

The *American Petroleum Institute* decision does establish that the Secretary of Labor may not set an exposure level for a toxic substance as low as possible merely because the substance is a carcinogen. In the time which elapsed between the Fifth Circuit and the Supreme Court decisions, however, OSHA issued a new policy for carcinogenic substances.[97] Under the new policy, all potential carcinogenic substances are categorized by their carcinogenic qualities determined either by ani-

89. Stevens used the Secretary's findings in *American Iron & Steel Inst. v. OSHA, Society of Plastics Indus. v. OSHA,* and *Synthetic Organic Chem. Mfrs. Ass'n v. Brennan* to illustrate the "number of ways in which the Agency can make a *rational judgment.*" (emphasis added). 448 U.S. at 656.

90. Of the circuit court cases on the subject of OSHA's regulation of toxic substances, only *Industrial Union Dep't, AFL-CIO v. Hodgson* and *Society of Plastics Indus. v. OSHA* were cited in the body of the plurality opinion. *Id.*

91. *Id.*

92. *Id.* at 657 n.64.

93. 577 F.2d 825.

94. 448 U.S. at 657 n.64.

95. 577 F.2d at 825, 832.

96. *Id.*

97. 29 C.F.R. § 1990 (1980).

mal or human studies. Those which cause an increased incidence of benign or malignant tumors in such tests are placed in a priority category. Although such classification is rebuttable, once it is determined that the substance is properly within the category, permanent standards are issued.[98] This new policy is totally unlike that which the plurality struck down in *American Petroleum Institute,* since any standards promulgated under this new policy will be based on the results of either animal or human studies and will be subject to rebuttal. These procedures should satisfy the Secretary's burden of proving that a substantial risk of harm exists at current exposure levels.

The second step in the Secretary's burden of proving that any standards promulgated under the Act are reasonably necessary is to determine the economic feasibility[99] of implementing such standards.[100] The plurality did not consider this issue in the principal case because the Secretary had failed to make the threshold finding that the standard was reasonably necessary to remedy a significant risk of material health impairment.[101] However, in light of OSHA's new policy for carcinogenic substances, economic feasibility may now be the only remaining ground which affected industries can use to attack OSHA standards.

An economically unfeasible standard has been characterized by the Third Circuit as one which would cause "massive dislocation" of the industry regulated.[102] On the appellate level in the instant case, respondents argued that the feasibility requirement of section 655(b)(5) and the "reasonably necessary and appropriate" language of section 652(8) required the Secretary to quantify both the costs and benefits and find them approximately equal.[103] This approach was approved by the Fifth Circuit.[104]

Even though the plurality did not decide this issue, Justice Powell, in his concurrence, expressed concern because the plurality had not rejected OSHA's claim that it need only consider economic consequences involving massive industry dislocation. In order to rebut this position, he would require the Secretary to make a cost-benefit analysis in the promulgation of future standards.[105]

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98. *Id. See also Science Policy Questions, supra* note 12, at 754-59.

99. The language of § 655(b)(5) mandates that the Secretary set standards which most adequately assure to the extent feasible that no employee will suffer material impairment of health. In *Industrial Union Dept, AFL-CIO v. Hodgson,* Judge McGowan concluded that the phrase included "economic feasibility." 499 F.2d at 477.

100. In the principal case, the government interpreted "feasible" as meaning technologically achievable at a cost that would not impair the viability of the industries subject to the regulation. 448 U.S. at 639.

101. *Id.* at 639-40.

102. *See, e.g.,* AFL-CIO v. Brennan, 530 F.2d 109, 123 (3d Cir. 1975).

103. 448 U.S. at 639.

104. 581 F.2d at 503.

105. 448 U.S. at 666.

V. CONCLUSION

Although *American Petroleum Institute* appears to clarify the question of which decisions in the regulation of toxic substances may be based upon policy considerations alone, the issue may now become irrelevant in light of the Secretary's new policy on carcinogenic substances. If applied, this policy appears to meet the substantial evidence test of significant risk mandated by the Court's holdings. Unfortunately, the plurality opinion leaves unclear just how the reasonable and necessary test will be applied to questions of economic feasibility. Will such feasibility be determined on a cost-benefit basis or only on the basis of severe economic dislocation to affected industries? Unless Congress acts to clarify this issue, any resolution must await the granting of *certiorari* and the handing down of future decisions by the Court.[106]

John G. Malone

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106. *Certiorari* to the Supreme Court has recently been filed in cases dealing with the issue of the economic feasibility of OSHA's lead standards. *See, e.g.*, Lead Indus. Assoc., Inc. v. OSHA, No. 79-1048 (D.C. Cir. filed Aug. 15, 1980, as amended Jan. 30, 1981), *petition for cert. filed*, 49 U.S.L.W. 3532 (1981).