



Shell Oil Company
Interoffice Memorandum

MARCH 21, 1984

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PLAINTIFF'S EXHIBIT

SH-2525

FROM: SENIOR INDUSTRIAL HYGIENIST, HEALTH & SAFETY, MFG. & TECH.
TO: SEE ATTACHED DISTRIBUTION LIST
SUBJECT: EMERGENCY TEMPORARY STANDARD FOR ASBESTOS

The attached summarizes the decision by the Fifth Circuit Court of Appeals to strike down the OSHA Emergency Temporary Standard (ETS) for asbestos. We will continue to keep you apprised of further developments.

J. D. Ransdell
J. D. Ransdell *BD*

JDR:bjd

Attachment

cc: B. F. Aurelius
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723 Toxicity
Asbestos

LAM 001391

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LAM 001392



Shell Oil Company
Interoffice Memorandum

MARCH 14, 1984

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FROM: B. F. AURELIUS, ATTORNEY
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SUBJECT: ASBESTOS INFORMATION ASSOCIATION V. OSHA
(EMERGENCY TEMPORARY STANDARD FOR ASBESTOS)

LAM 001393

ASBESTOS INFORMATION ASSOCIATION V. OSHA
(EMERGENCY TEMPORARY STANDARD FOR ASBESTOS)

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DPMC-17091

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DAILY LABOR REPORT

FULL TEXT
SECTIONDECISION OF FIFTH CIRCUIT IN ASBESTOS INFORMATION ASSOCIATION v. OSHA
(TEXT)IN THE UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUITNos. 83-4687, 83-4688, 83-4689
No. 83-4711ASBESTOS INFORMATION ASSOCIATION/
NORTH AMERICA, et al.,
Petitioners,

versus

OCCUPATIONAL SAFETY AND HEALTH
ADMINISTRATION, et al.,
Respondents.EAST TEXAS SERVICE CORPORATION, et al.,
Petitioners,

versus

OCCUPATIONAL SAFETY AND HEALTH
ADMINISTRATION, et al.,
Respondents.Petitions for Review of an Order of the
Occupational Safety and Health Administration

(MARCH 7 , 1984)

Before CLARK, Chief Judge, RUBIN and JOLLY, Circuit
Judges.

E. GRADY JOLLY, Circuit Judge:

The Asbestos Information Association (AIA), an organization of American and Canadian manufacturers of asbestos products, asks this court to determine whether the Occupational Safety and Health Administration (OSHA) properly by-passed normal notice-and-comment rule-making procedures in favor of creating an Emergency Temporary Standard (ETS) lowering workers' permissible exposure level (PEL) to ambient asbestos fibers from 2.0 fibers per cubic centimeter (f/cc) to 0.5 f/cc. We hold that OSHA did not invoke its ETS powers properly.

I.

Congress passed the Occupational Safety and Health Act (the Act) in 1970, codified at 29 U.S.C. §§651-678, to assure safe and healthful working conditions for the nation's work force and to preserve the nation's human resources. 29 U.S.C. §651 (1976). Toward that goal, the Act allows the Secretary of Labor (the Secretary), after public notice and opportunity for comment by interested persons, to promulgate rules and standards for occupational safety and health. *Id.* at §655(b). The Act also allows the Secretary to by-pass these normal procedures in favor of promulgating an ETS to take effect immediately upon publication in the Federal Register if he determines 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 also determines "that such emergency standard is necessary to protect employees from such danger." 29 U.S.C. §655(c)(1). The ETS statute further provides that the ETS as published shall serve as a proposed rule, and that the Secretary shall act on the rule no later than six months after publication.¹

¹ The full text of the statute says:

Any standard, including an ETS, properly imposed under the Act has the force of law because the Act imposes upon every employer "the duty to 'comply with occupational safety and health standards promulgated under this chapter' or face civil and criminal penalties." 29 U.S.C. §654; *Florida Peach Growers Association v. Department of Labor*, 489 F.2d 120, 123 (5th Cir. 1974).

On November 4, 1983, acting pursuant to its ETS enabling statute, OSHA published in the Federal Register an ETS lowering the time-weighted average PEL for ambient asbestos fibers from 2.0 f/cc that are 5 microns or more in length to 0.5 f/cc. 48 Fed. Reg. 51,086-51,140 (1983). See also 29 C.F.R. §1910.1001 (1983) (text of current rule). In the November 4 publication, the Secretary also included a statement of reasons to support his action as he is required by law to do. 29 U.S.C. §655(c). See also *Dry Color Manufacturers' Association v. Department of Labor*, 486 F.2d 98 (3d Cir. 1973) (applying §655(c) to ETS promulgations).

The ETS allows "any practical combination" of engineering controls, work practices and personal protective equipment to meet the lower PEL. The ETS also requires training to begin within thirty days for all employees whose exposure is "reasonably expected" to be at or above the PEL. Training must cover respirator fitting and use, asbestos handling, medical information, and the relationship between smoking, lung cancer and asbestos-related diseases. 48 Fed. Reg. 51,139-51,140 (1983) (text of ETS). Finally, the Agency announced it would increase enforcement efforts in workplaces where asbestos is handled. *Id.* at 51,087.

(1) 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.

(2) Such standard shall be effective until superseded by a standard promulgated in accordance with the procedures prescribed in paragraph (3) of this subsection.

(3) Upon publication of such standard in the Federal Register the Secretary shall commence a proceeding in accordance with subsection (b) of this section, and the standard as published shall also serve as a proposed rule for the proceeding. The Secretary shall promulgate a standard under this paragraph no later than six months after publication of the emergency standard as provided in paragraph (2) of this subsection.

29 U.S.C. §655(c).

² The Act defines an employer as "a person engaged in a business affecting commerce who has employees, but does not include the United States or any State or political subdivision of a State." 29 U.S.C. §652(5).

³ As much as 98% of ambient asbestos fibers may be less than 5 microns long, and, given the sophistication of measuring devices, too small to regulate. 48 Fed. Reg. at 51,096, 51,092 (1983).

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The AIA immediately petitioned OSHA to stay the effective date of the ETS pending judicial review of whether OSHA's action is a proper application of its ETS statute. The Agency refused the stay.

Subsequently, on November 17, 1983, the AIA petitioned this court for an emergency stay pending judicial review of OSHA's action, arguing that its members would suffer irreparable harm if the stay were not granted, and arguing its likely ultimate success on the merits. After reviewing the arguments of both the AIA and OSHA, analyzing them according to well-established legal criteria for determining when a court should grant equitable interim relief, and balancing the equities involved,¹ this court granted the stay but expedited full hearing on the merits. We now hold that OSHA did not properly act pursuant to its ETS enabling statute and that the standard in question, therefore, should not become effective absent notice-and-comment rulemaking.

II.

OSHA has regulated asbestos since 1971. Its first asbestos PEL was 12.0 f/cc. In 1972 OSHA reduced this standard to 5 f/cc,² and in 1976 OSHA again reduced the standard to the currently effective 2 f/cc. In 1975 OSHA proposed to reduce the standard to 0.5 f/cc, but founded its proposal on a policy to set PEL's for carcinogens as low as technologically and economically feasible. The Agency did not act quickly and, in 1980, the Supreme Court rejected the proposition that such a general policy may serve as the basis for any rule, and held that OSHA must make an actual finding that the workplace is unsafe before it promulgates a standard. *Industrial Union of Department v. American Petroleum Institute*, 448 U.S. 601, 100 S.Ct. 3844, 65 L.Ed.2d 1010 (1980). OSHA bases its 1983 promulgation of an ETS lowering the PEL to 0.5 f/cc, however, on specific data compiled and analyzed by OSHA that lead it to conclude that a "grave danger" exists, necessitating immediate action. 48 Fed. Reg. at 51,088.

No new data or discovery leads OSHA to invoke its extraordinary ETS powers and lower the asbestos PEL. Rather, OSHA bases its conclusion that a grave danger

To obtain equitable relief pending further judicial action on the merits, an applicant must establish (1) a substantial likelihood of success on the merits; (2) danger of irreparable harm if the court denies interim relief; (3) that other parties will not be harmed substantially if the court grants interim relief; and (4) that interim relief will not harm the public interest. *Virginia Petroleum Jobbers Ass'n. v. Federal Power Commission*, 104 U.S.App.D.C. 106, 259 F.2d 921, 925 (1958). In *Taylor Diving & Salvage Co. v. Department of Labor*, 537 F.2d 819, 821 n. 8 (5th Cir. 1976) this court applied *Virginia Petroleum Jobbers'* four criteria to application for stay pending review of an OSHA ETS.

Subsequent interpretations of the four legal criteria de-emphasize the likelihood-of-success criteria and emphasize balancing the equities of the situation. *United States v. Baylor University Medical Center*, 711 F.2d 38 (5th Cir. 1983).

OSHA adopted the 12.0 f/cc PEL by adopting a national consensus standard existing in 1971, the year the Occupational Health and Safety Act became effective. Section 6 of the Act explicitly allowed OSHA to adopt national consensus standards, and directed the agency to establish standards "as soon as practicable." 20 U.S.C. §655(a). On December 7, 1971, OSHA lowered the 12.0 f/cc standard to 5.0 f/cc by using, for the first time, its ETS powers. The action was not challenged, and in June of 1972, it became a permanent standard through normal notice-and-comment procedures. 48 Fed. Reg. at 51,087.

exists on quantitative risk assessments, which are mathematical extrapolations, to the likelihood of contracting an asbestos-related disease at various levels of exposure to asbestos particles. The risk assessment, which OSHA completed in July of 1983, and a meeting a few months earlier between the Assistant Secretary of Labor and a recognized expert in the asbestos epidemiology field, heightened OSHA's awareness of the asbestos situation and precipitated the ETS.

OSHA calculated the likelihood of developing lung cancer, mesothelioma,³ and gastrointestinal cancer due to contact with ambient asbestos fibers at different exposure levels. By applying its calculations to an estimated working population exposed to asbestos, OSHA claims that 210 lives eventually can be saved from cancer by lowering the PEL to 0.5 f/cc for six months. 48 Fed. Reg. at 51,086. These figures include deaths that will occur at OSHA's estimated current actual exposure levels and include employees working in environments where the density of ambient asbestos particles is 20 f/cc, ten times the current PEL. Even if, however, OSHA removes from the computation those employees who do not enjoy the benefit of the current 2.0 f/cc PEL because it is not enforced in their work place, and counts only those employees who are exposed to ambient asbestos between the levels of 2.0 f/cc and 0.5 f/cc, OSHA estimates it can save 80 lives by lowering the PEL for six months.⁴

OSHA calculated the number of lives saved by first deriving a mortality rate, which is the number of excess deaths⁵ because of exposure to ambient asbestos particles at different levels.⁶ It then multiplied the number of

Mesothelioma is an incurable cancer infecting the mesothelium, a layer of flat cells lining the membranes enclosing the heart, abdominal cavity, and thoracic cavity and lungs.

OSHA's own data, however, indicates that the actual number of asbestos-related cancer deaths prevented by a 0.5 f/cc standard would be approximately 40 for six months. Approximately 71% of the benefits of OSHA's ETS accrue in the drywall construction industry where demolition and other activities generate large amounts of ambient asbestos particles. OSHA specifically estimates it could save 57 lives in that industry by lowering the PEL for six months, assuming the entire industry currently complies with the 2 f/cc standard. 48 Fed. Reg. at 51,097 (Table 4). Its estimate of employee exposure, however, indicates that of all 51,621 employees estimated to be working in that industry, 38,666 or approximately 75% currently are exposed to only 0.2 f/cc. *Id.* at 51,094 (Table 1). Consequently, these workers would not benefit by lowering the standard to 0.5 f/cc. Reducing OSHA's calculations by 75% indicates that approximately 14 drywall construction workers will benefit from the ETS. Stated differently, approximately 43 of the 57 workers already are exposed to levels below that which the ETS would permit.

Excess deaths are those that would not occur in a control group not exposed to asbestos. 48 Fed. Reg. at 51,101. For mesothelioma, the number of excess deaths projected due to asbestos exposure also is the total number of deaths, because mesothelioma almost never occurs in someone not exposed to asbestos. *Id.* at 51,089.

Because of the latency period for most asbestos-related cancers, OSHA had no observations for asbestos-related deaths under the current 2 f/cc PEL. OSHA calculated a mortality rate for the 2 f/cc PEL by estimating the cumulative number of particles to which a worker will be exposed over varying lengths of time at 2.0 f/cc, and then applying the mortality rate to higher exposures over a shorter period of time. For example, a worker exposed to 0.2 f/cc for ten years would be as likely to develop cancer as a worker exposed to 0.4 f/cc for five years. The validity of this calculation depends on the as-

workers currently exposed at those levels by the mortality rate. Finally, to obtain a projected number of lives saved, it subtracted the number of deaths that it estimates will continue to occur even at the new PEL from the number of deaths likely to occur at the higher levels of exposure, which resulted in 210 deaths for six months exposure. 48 Fed. Reg. at 51,095-51,097 and Chart 4.

The underlying data base from which OSHA derived its mortality rates consists of eleven epidemiological studies which OSHA felt contained sufficient data to allow computation of quantitative risk assessments for lung cancer. Four of these studies OSHA decided also provide sufficient data to compute risk assessments for mesothelioma. These eleven studies observe a total of approximately 53,000 workers in several countries and in a wide range of occupations. The studies include insulation workers, production workers, maintenance employees, textile workers, miners, and millers. They observe a variety of exposure levels, and include workers exposed to the three commonly occurring asbestos fiber types." 48 Fed. Reg. at 51,101-51,105.

JRB Associates, a private research firm, actually performed the mathematical computations to estimate the benefits of reducing the asbestos PEL from 2.0 f/cc to 0.5 f/cc. Additionally, JRB Associates estimated the number of workers currently exposed to asbestos, relying on 1980 worker population estimates made by Research Triangle Institute (RTI). JRB updated the RTI estimates to incorporate more recent employment statistics. *Final Report, Benefits Assessment of Emergency Temporary and Proposed Asbestos Standards*, JRB Associates (1983) (Record Exhibit 84-393). OSHA evidently also estimated the number of workers currently exposed to asbestos, by updating the 1980 RTI figures to reflect data it had accumulated over the past three years enforcing the 2.0 f/cc PEL. 48 Fed. Reg. at 51,092.

Finally, OSHA had its conclusions reviewed by several experts. Most of these reviews are favorable, at least regarding OSHA's mathematical methodology and overall conclusions."

sumption accepted by most, but not all, researchers that the likelihood of developing asbestos-related cancer varies directly with the number of fibers inhaled, and is not independently affected by intensity or duration of exposure.

"The three fiber types are crocidolite, amosite and chrysotile. OSHA concluded that three should be subject to a uniform regulation, partially for practical reasons. Inconclusive evidence, however, suggests that some fiber types are more harmful than others. 48 Fed. Reg. at 51,115-51,121.

"OSHA first submitted, by motion to amend the record, only the seven peer reviews on which it claimed to rely to support its ETS. This court granted that motion prior to oral argument, over the petitioners' objection. The petitioners informed the court that other, unfavorable peer reviews existed. At oral argument the court requested that OSHA either produce the unfavorable reports or explain their absence from the record. OSHA subsequently complied with the request. It also acknowledged that it considered all peer reviews, both favorable and unfavorable. Because of the extraordinary posture of the court reviewing an ETS, made more extraordinary by the statutory requirement that we review it under a substantial evidence standard, 29 U.S.C. §665(f), we also considered the unfavorable reviews as well as the favorable ones to aid us in our understanding of this technologically complex case. To do otherwise "would convert the reviewing process into an artificial game." *Amoco Oil Co. v. EPA*, 501 F.2d 722, 729 n.10 (D.C. Cir. 1974) (admitting evidence accumulated after rule promulgation to assess validity of pre-rule predictions).

III.

We note at the outset of our analysis that immediately after its November publications, OSHA commenced regular notice-and-comment rulemaking to decide whether to impose a new permanent PEL for asbestos. The statute requires that the Secretary promulgate a permanent standard no later than six months after publication of the ETS. 29 U.S.C. §655(c)(3). At oral argument OSHA's counsel stated that OSHA could complete full notice-and-comment rulemaking within one year, presumably even without the impetus of the ETS requirement that it do so within six months." Consequently, the practical effects of our decision on the regulations enforced in the workplace will endure only a short time. We are, however, concerned not only with practical implications, but also with the legal issue of the extent of the Secretary's power to determine when an emergency situation exists and his power to act in such a situation.

The standard under which we review OSHA's new PEL is whether the Agency's action is "supported by substantial evidence in the record considered as a whole." 29 U.S.C. §655(f). This court's decision in *Florida Peach Growers v. Department of Labor* holds that an ETS is like any other OSHA regulation under pre-enforcement judicial scrutiny for purposes of imposing the statutorily prescribed substantial evidence standard. 489 F.2d at 127-28. Consequently, we must take a "harder look" at OSHA's action than we would if we were reviewing the action under the more deferential arbitrary and capricious standard applicable to agencies governed by the Administrative Procedure Act."

Even though we must apply the substantial evidence test, OSHA urges us to apply it less rigorously in reviewing an informally promulgated ETS than we would in reviewing a standard imposed after formal notice-and-comment rulemaking procedures. Indeed, the anomaly of being required to make a searching review of the evidence, but being provided only with a record of a volume and technical complexity that would tax the competency of any court, forces us to concede the Agency's contention to a degree. The record fills nine large boxes, and contains years' worth of accumulated asbestos reports and studies from all over the world. It also includes mathematical and statistical computations, and letters and memoranda to, from and between government agencies.

We recognize that the general rule is that court cannot consider evidence not relied on by the agency in reviewing agency action. *Motor & Equipment Mfrs. Assn, Inc. v. EPA*, 627 F.2d 1095, 1105 (D.C. Cir. 1979); *Dry Color Mfrs. Ass'n v. Dept. of Labor*, 486 F.2d 98, 104 n.8 (3d Cir. 1973). This case does not create an exception to that rule, nor present the question whether a court may consider evidence not relied on by the agency, but merely submitted by one of the parties after ETS promulgation.

"At oral argument OSHA intimated that even with the ETS requirement that it promulgate a permanent standard within six months, the complexity of the data in this case might make impossible such rapid action. We note, however, that the statute says the agency "shall promulgate a standard no later than six months after publication." 29 U.S.C. §655(c)(3). The statute does not contemplate the agency's allowing the new rule to lapse.

"See 5 U.S.C. §706. See also *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 549, 98 S.Ct. 1197, 1214, 55 L.Ed.2d 460 (1978); *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 91 S.Ct. 814, 28 L.Ed.2d 136 (1971); *Texas Independent Ginners Ass'n v. Marshall*, 630 F.2d 389, 405 (5th cir. 1980).

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The type of administrative proceeding giving rise to the regulation, and the form of the record it produces, inevitably influences judicial review. A record like the one before us cannot be reviewed as a record in which adversary proceedings have narrowly focused the facts and issues in dispute. *Florida Peach Growers*, 489 F.2d at 129-39. While we do not question risk assessment as a valid means of satisfying the substantial-evidence requirement, OSHA's reliance on several studies to compute a mathematical quantitative risk assessment, and its reliance on the 1983 JRB Report for its estimations of the population at risk, which in turn relies on the 1980 RTI report, makes the evidence supporting OSHA's action elusive indeed.

While the ultimate question is whether the record contains "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion," *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229, 59 S.Ct. 206, 217, 83 L.Ed. 126, (1938), the nature of the evidence in this case requires that we inquire into whether OSHA "carried out [its] essentially legislative task in a manner reasonable under the state of the record before [it]." *Aqua Slide 'n' Dive Corp. v. Consumer Product Safety Commission*, 589 F.2d 831, 838 (5th Cir. 1978) (quoting *Florida Peach Growers*, 489 F.2d at 129). In making this inquiry, we must, of course, defer to OSHA's fact-finding expertise. *Aqua Slide 'n' Dive Corp.*, 589 F.2d at 838. See also *Industrial Union Department*, 448 U.S. at 652, 100 S.Ct. at 2870, 65 L.Ed.2d at _____. The extent to which the supporting evidence has survived public and scientific scrutiny, however, will affect the weight given to it by an inexperienced judiciary." *Aqua Slide 'n' Dive*, 589 F.2d at 838.

The Agency's essentially legislative task, moreover, necessarily requires that it make two types of determinations. In *Industrial Union Department, AFL-CIO v. Hodgson*, 499 F.2d 467 (D.C. Cir. 1974), the United States Court of Appeals for the District of Columbia reviewed an asbestos PEL set by the Secretary after notice-and-comment rulemaking procedures. In discussing application of a substantial-evidence standard of review to an informal, essentially legislative proceeding, the court recognized that only some of the Agency's decisions are capable of being reviewed under the usual substantial-evidence standard. The Agency makes these reviewable decisions primarily by "evaluating the data and drawing conclusions from it," and the court "can review that data in the record and determine whether it reflects substantial support for the Secretary's findings." *Id.* at 474. To speak of substantial evidence review with respect to other determinations, however, is anomalous, because these determinations involve policy choices or factual determinations so much "on the frontiers of scientific knowledge" that they resemble policy determinations more than factual ones. *Id.* Judicial review inherently legislative decisions of this sort is obviously an undertaking of different dimensions," *Id.* at 475, and requires deference to the Agency that is furthering goals that Congress thought to be salutary. Thus, with "a due respect for the boundaries between the legislative and the judicial function," we "approach our reviewing task with a flexibility informed and shaped by sensitivity to the diverse origins of the determinations that enter into a legislative judgment" made by an agency. *Id.*

"When new data or, as in this case, new mathematical extrapolations, provide the basis for the new rule, independent peer reviews may be extraordinarily helpful to the court. See *supra* note 11. Precisely because the data has not been scrutinized, however, the court has particular interest in having access to both favorable and unfavorable peer reviews.

In reviewing the ETS, we also must remain aware that the plain wording of the statute limits us to assessing the harm likely to accrue, or the grave danger that the ETS may alleviate, during the six-month period that is the life of the standard. OSHA urges us to assess the harm likely to accrue over at least a year, even though the ETS expires six months from its promulgation. At oral argument OSHA said that even if the ETS lapsed before OSHA promulgated a permanent regulation, the benefits of the ETS likely would continue because employers will have expended the resources to comply with the new lower standard and would have no incentive to revert to old practices. These post hoc rationalizations cannot be accepted as basis for our review; first, because the ETS statute does not contemplate the Secretary's allowing an ETS to lapse before he promulgates a permanent standard, and second, because to assume that the employers will not revert to less exacting standards is pure speculation. The opposite is equally plausible, especially given that OSHA allows compliance with the ETS through methods as simple as wetting floors or wearing respirators. See 48 Fed. Reg. at 51,086.

In its November 4 publication OSHA partially justified its decision to issue an ETS on the fact that notice-and-comment rulemaking often takes several years to complete, excluding possible subsequent postponements of the effective date caused by court-ordered stays pending judicial review. 50 Fed. Reg. at 51,089. OSHA apparently would have us assess benefits in this light. We cannot do so. As noted earlier, OSHA concedes that it can complete rulemaking within one year. Additionally, as its legislative history makes clear, the ETS statute is not to be used merely as an interim relief measure, but treated as an extraordinary power to be used only in "limited situations" in which a grave danger exists, and then, to be "delicately exercised." *Public Citizen Health Research Group v. Aucter*, 702 F.2d at 1150 (D.C. Cir. 1983). See also *Taylor Diving & Salvage v. Department of Labor*, 537 F.2d 819, 820-21 (5th Cir. 1976); *Florida Peach Growers*, 489 F.2d at 129; *Dry Color Manufacturers' Ass'n* 486 F.2d at 104 n. 9a (3d Cir. 1973). The Agency cannot use its ETS powers as a stop-gap measure. This would allow it to displace its clear obligations to promulgate rules after public notice and opportunity for comment in any case, not just in those in which ETS is necessary to avert grave danger. See 29 U.S.C. §655(b).

IV.

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A.

The AIA urges us to hold that OSHA must have new information before it promulgates an ETS. "An 'emergency' cannot exist, it argues, when the Agency has

"The AIA argues that OSHA's successful invocation of its ETS powers are distinguishable from its unsuccessful uses on the basis of the existence of new information. We do not wholly agree. Certainly, OSHA has used its ETS powers successfully to address a situation that recently came to light. In 1974 OSHA issued an ETS for vinyl chloride within weeks after learning that workers' deaths were attributable to exposure to that substance. No one contested the Agency's action. See 39 Fed. Reg. 12,342 (1974). See also *Society of Plastics Industries, Inc. v. OSHA*, 509 F.2d 1301 (2d Cir. 1975) (upholding final rule). Similarly, in 1977 OSHA issued an ETS for 1,2 Dibromo-3-Chloropropane (DBCP), after having become aware in just a few months that exposure to even small amounts of the chemical caused sterility. See 42 Fed. Reg. 45,536 (1977). In 1971, however, OSHA used its ETS powers to lower the asbestos PEL from 12 f/cc to 5 f/cc, having concluded only that asbestos presented a "grave danger." The 1971 action was not challenged.

known for years that asbestos constitutes a serious health risk and, in fact, has had all the data it uses to support its November 4 action at hand, but nevertheless failed to act on it. Although new information may be a sound basis for an ETS, we decline to hold that OSHA cannot issue an ETS in its absence. As OSHA admits, the Agency's failure to act may be evidence that a situation is not a true emergency, but we agree with OSHA that failure to act does not conclusively establish that a situation is not an emergency.

The ETS statute itself, allowing the Secretary to promulgate an ETS in response to "grave danger . . . or . . . new hazards," precludes our imposing a "new information" requirement on OSHA. Additionally, to impose such a requirement would imprudently circumscribe the Secretary's ability to act in response to serious situations. If exposure to 2.0 f/cc of asbestos fibers creates a grave danger, to hold that because OSHA did not act previously it cannot do so now only compounds the consequences of the Agency's failure to act.

OSHA should, of course, offer some explanation of its timing in promulgating an ETS, especially when, as here, for years it has known of the serious health risk the regulated substance poses, and has possessed, albeit in unrefined form, the substantive data forming the basis for the ETS. In this case OSHA says it acted in response to new awareness of the danger of asbestos and in response to extrapolated data that did not become available until July of 1983, four months before it promulgated the ETS. We are not prepared to say that such heightened awareness cannot justify the Secretary's action.

Additionally, even if adequately explained, an ETS must, on balance, produce a benefit the costs of which are not unreasonable. The protection afforded to workers should outweigh the economic consequences to the regulated industry. *American Petroleum Institute v. OSHA*, 581 F.2d 493, 502-03 (5th Cir. 1978) *aff'd sub nom Industrial Union Department v. American Petroleum Institute*, 448 U.S. 607, 100 S.Ct. 2844, 65 L.Ed.2d 1010 (1980); *Florida Peach Growers*, 489 F.2d at 130. OSHA con-

Other invocations of the ETS power have failed. None, however, has failed solely because the Agency did not act pursuant to newly acquired information. See *American Petroleum Institute v. OSHA*, 581 F.2d 493, 503 (5th Cir. 1978) *aff'd sub nom Industrial Union Dept. v. American Petroleum Institute*, 448 U.S. 607, 100 S.Ct. 2844, 65 L.Ed.2d 1010 (1980) (benzene ETS failed for lack of substantial evidence); *Taylor Diving and Salvage Co., Inc. v. Dept. of Labor*, 537 F.2d 819, 821 (5th Cir. 1976) (temporary stay granted because petitioners showed likelihood of success on the merits and irreparable harm); *Florida Peach Growers Ass'n., Inc. v. Dept. of Labor*, 489 F.2d 120, 129 (organophosphorus pesticides ETS failed for lack of substantial evidence); *Dry Color Mfrs. Ass'n., Inc. v. Dept. of Labor*, 486 F.2d 98 (3d Cir. 1973) (fourteen carcinogens ETS failed for failure to adequate state reasons).

OSHA completed a risk assessment in 1981 that concluded that between 8 and 260 deaths per year would occur at the 2.0 f/cc PEL. At oral argument, counsel for OSHA said the Agency did not act then because it considered the data to be too unrefined.

Although in this case the agency conducted a formal cost-benefit analysis, we do not imply that the Occupational Safety and Health Act requires the agency to do so before it promulgates an ETS. Indeed, in true "emergency" situations, that the agency would have time to conduct such an analysis is unlikely. The *American Petroleum Institute* and *Florida Peach Growers* cases require only that in reviewing whether the agency's action was reasonable under the circumstances, we analyze the anticipated benefit of the ETS in light of its probable consequences.

ducting a benefits analysis prior to promulgating the ETS, and concluded that the cost of compliance with the lower PEL is reasonable compared to total industry sales volume. Further, OSHA concluded that the costs are fairly distributed, because the industries in which asbestos-related risks currently are greatest are the industries that must spend the most to comply with the lower standard. In no industry does the compliance cost exceed 7.2 cents per dollar of sales, and in most industries, the cost of compliance is less than one cent per dollar. 48 Fed. Reg. at 51,136-51,137 and Tables 17 and 18. We cannot say that the cost of compliance is unreasonable if the ETS in fact alleviates a grave danger.

The AIA does not complain of the cost of compliance with the new PEL, however, as much as of the anticipated ripple effects that OSHA's action will have on the asbestos products market. The AIA argues that asbestos users will substitute other products for asbestos because of the alarm the ETS causes throughout the industry in labeling the situation as an emergency. Indeed, such considerations are not insignificant. As this court has noted, "It is essential that employees be protected against exposure to highly toxic materials, but this should be done without eliminating the [asbestos industry] and the associated jobs." *Florida Peach Growers*, 489 F.2d at 130. The industry, however, already will have felt any ripple effects precipitated by OSHA's declaration of an emergency, and our holding today cannot undo whatever harm has been done, especially in light of the fact that the ETS now is a proposed permanent standard. The AIA, moreover, fails to convince us that the ETS seriously jeopardizes the asbestos industry, or even that the harm due to lost sales will be significant.

The ETS statute requires that the Secretary issue an ETS only after he finds substantial evidence indicating both that a "grave danger" exists and that an emergency standard is "necessary" to protect workers from such danger. Thus, the gravity and necessity requirements lie at the center of proper invocation of the ETS powers. No one doubts that asbestos is a gravely dangerous product. The gravity we are concerned with, however, is not of the product itself, but of six months exposure to it at 0.5 f/cc, as compared with six months exposure at 2.0 f/cc. Our inquiry, then, is a narrow one, and requires us to evaluate both the nature of the consequences of exposure, and also the number of workers likely to suffer those consequences.

According to the Secretary, the consequences of exposure to significant amounts of asbestos are likely to be fatal. Victims of lung cancer, mesothelioma, and gastrointestinal cancer have poor survival rates. Additionally, workers exposed to significant amounts of asbestos run a

"For the six months the ETS remains in effect, the average cost per worker of compliance is \$708. The construction industry cost per worker is \$973, the highest of any industry segment. The automotive aftermarket industry has the lowest cost per worker at \$251. 48 Fed. Reg. at 51,137, Table 17. The estimated employee exposure in the automotive aftermarket currently is less than 0.1 f/cc for the vast majority of employees. *Id.* at 51,093, Table 1.

OSHA itself noted that "the nature of the action itself, and the accompanying enforcement program will undoubtedly boost the incentives to comply with all protective provisions of the asbestos standard." 48 Fed. Reg. at 51,098. Exactly what OSHA intended by this remark is unclear from the context of the publication. Certainly, for OSHA to use its ETS powers expressly to alarm the industry is illegitimate, and would count against the Agency in a judicial challenge.

risk of developing asbestosis, a serious condition caused by the accumulation of asbestos fibers in the lungs. The symptoms of asbestosis range from shortness of breath in mild cases to respiratory failure and death in serious cases. Counsel for the petitioners at oral argument agreed that asbestos, at some level of exposure, will cause cancer and asbestosis, and, indeed, the number of asbestos-related personal injury cases on the federal docket almost makes the fact one appropriate for judicial notice. Thus, we do not have a situation in which the symptoms of exposure are "easily curable and fleeting." See generally *Florida Peach Growers*, 489 F.2d at 132. Nor do we have a situation in which the danger of developing a serious disease is speculative. See generally *Dry Color Manufacturers Association* 489 F.2d at 106.

OSHA claims that by permanently lowering the present 2.0 f/cc PEL to 0.5 f/cc, it will save sixty-four lives per one thousand workers over a working lifetime of forty-five years. See 48 Fed. Reg. at 51,100. Over six months, this works out to eighty lives out of an estimated worker population of 375,399.² 48 Fed. Reg. at 51,094-51,095. As the Supreme Court has noted, the determination of what constitutes a risk worthy of Agency action is a policy consideration that belongs, in the first instance to the Agency. *Industrial Workers Union*, 448 U.S. at 656, n. 62; 100 S.Ct. at 2871; 65 L.Ed.2d at _____. "Some risks are plainly acceptable and others are plainly unacceptable." *Id.* at 655; 100 S.Ct. at 2870; 65 L.Ed.2d at _____. The Secretary determined that eighty lives at risk is a grave danger. We are not prepared to say it is not.

The Agency need not support its conclusion "with anything approaching scientific certainty." *Id.* at 656, 100 S.Ct. at 2871; 65 L.Ed.2d at _____. Additionally, so long as the Agency supports its conclusion with "a body of reputable scientific thought," it may "use conservative assumptions" to support that conclusion. *Id.* The Agency also has a prerogative to choose between conflicting evidence of equivalent quality, and a court will consider a finding consistent with one authority or another to be supported by substantial evidence. *American Petroleum Institute*, 581 F.2d at 507.

The Secretary must, however present a statement of the reasons for his action. 29 U.S.C. §655(e). It is axiomatic that the reasons the Agency gives at the time it acts form the actual basis for the Agency's action. See, e.g., *Industrial Union, AFL-CIO v. American Petroleum Institute*, 100 S.Ct. 2844, 2858 n.31 (1980) (plurality):

As we have often held, the validity of an agency's determination must be judged on the basis of the agency's stated reasons for making that determination. See *SEC v. Chenery Corp.*, 318 U.S. 80, 95 S.Ct. 454, 462, 87 L.Ed. 626 ("[A]n administrative order cannot be upheld unless the grounds upon which the agency acted in exercising its powers were those upon which its action can be sustained"); *FPC v. Texaco Inc.*, 4178 U.S. 380, 397, 94 S.Ct. 2315, 2326, 41 L.Ed.2d 141; *FTC v. Sperry & Hutchinson Co.*, 405 U.S. 233, 249, 92 S.Ct. 898, 907, 31 L.Ed.2d 170.

See also *Citizens to Preserve Overton Park v. Volpe*, 91 S.Ct. 814, 825 (1971).

OSHA has made the number of deaths avoided — at least 80 — the basis for its rulemaking. Yet it is apparent from an examination of the record that the actual number of lives saved is uncertain, and is likely to be substantially

less than 80.³ Both the gravity of the risk as defined by OSHA and the necessity of an EST to protest against it are therefore questionable.

Additionally, although risk assessment analysis is an extremely useful tool, especially when used to project lifetime consequences of exposure, the results of its application to a small slice of time are speculative because the underlying database projects only long-term risks. Epidemiologists generally study only the consequences of long-term exposure to asbestos. Indeed, OSHA concedes some unreliability and uncertainty to be inherent in risk assessment generally. Applying the risk assessment process to a period of six months, one-ninetieth of OSHA's estimated working lifetime, only magnifies those inherent uncertainties.

By holding as we do in this case, however, we do not intimate at all that risk-assessment analysis is inappropriate evidence on which to base any standard, temporary or permanent. We say no more than that evidence based on risk-assessment analysis is precisely the type of data that may be more uncritically accepted after public scrutiny, through notice-and-comment rulemaking, especially when the conclusions it suggests are controversial or subject to different interpretations.

Even assuming that OSHA's projected benefits would accrue from the ETS, however, we hold that OSHA's action must fail for another reason. The Agency has not proved that the ETS, OSHA's most dramatic weapon in its enforcement arsenal, is "necessary" to achieve the projected benefits.

As OSHA concedes, the probable practical effect of the ETS, which allows compliance through "any feasible combination of engineering controls, work practices, and personal protective equipment and devices," would be that employers would require employees to wear respirators. Current regulations already require employers to outfit workers with respirators that can provide up to one hundred-fold protection. 29 C.F.R.

§§1910.1001(c)(2)(iii), (d)(2)(ii), and (d)(2)(iii).⁴ Yet OSHA did not include in its calculations the effect of enforcing the current standard by requiring employers in the drywall construction and demolition industry to furnish these respirators. Counsel for OSHA informed the court at oral argument that the Secretary considers the regulation requiring construction and demolition workers to wear respirators to be unenforceable absent actual monitoring to show that ambient asbestos particles are so far above the permissible limit that respirators are nec-

² See *supra* note 8.

³ 29 C.F.R. §§1910.1001(d)(ii) and (iii) provide (emphasis added):

(ii) *Powered air purifying respirators.* A full face-piece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in paragraph (d)(2)(iii) of this section, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) *Type "C" supplied-air respirators, continuous flow or pressure-demand class.* A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average air-borne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

⁴ In the November 4 publication, OSHA stated that 210 lives will be saved over six months. The Agency, however, concedes that this figure is inflated because it includes those lives that OSHA could save by enforcing its current 2.0 f/cc standard. See *supra* note 8 and accompanying text.

essary to bring the employees' exposure within the PEL of 2.0 f/cc. Fear of a successful judicial challenge to enforcement of OSHA's permanent standard regarding respirator use hardly justifies resort to the most dramatic weapon in OSHA's enforcement arsenal.* Thus, lacking a satisfactory explanation why the ETS is a necessary means to achieve the added saving obtainable by application of the current regulations, we must assume that OSHA's claimed benefit should be discounted by some additional, uncertain amount.

OSHA also attempts to justify the ETS by emphasizing that the ETS does more to protect worker's health than simply lowering the asbestos fiber PEL. An ETS, however, is not necessary to achieve these ancillary benefits. The ETS requires employers to educate employees concerning the risks of asbestos exposure and the proper steps necessary to minimize exposure. While education is a worthy objective, OSHA could achieve it without invoking its extraordinary ETS power. Indeed, current regulations provide for worker training and education. *Id.* at §1926.21. Similarly, OSHA supports its action by arguing that it plans to increase enforcement efforts, with the aim of encouraging greater compliance with the new standard than it estimates currently exists under the present standard. Increasing enforcement is another worthy objective; but it likewise cannot justify

* Indeed, Occupational Safety and Health Review Commission decisions do not support the Secretary's interpretation. See *Anaconda Aluminum Co.*, OSH Dec. (CCH) §25,300 (1981) (§1910.1001 applies to all workers, not merely those exposed to concentrations of asbestos fibers greater than the allowable limit). The regulations themselves appear to authorize Type C respirators at 10 times the current PEL. See *supra* note 23.

use of the ETS power, especially when, as in this case, much of the claimed benefit could be obtained simply by enforcing the current standard.

In sum, although asbestos doubtless may present a grave danger to workers, the record considered as a whole does not substantially support OSHA's conclusion that an ETS lowering worker PEL from 2.0 f/cc to 0.5 f/cc is necessary to alleviate a grave risk of worker deaths during its six-month term. This court, in ruling on a challenge to an ETS, has "reject[ed] any suggestion that deaths must occur before health and safety standards may be adopted," *Florida Peach Growers Association*, *supra* at 132, and we make no such suggestion here. Additionally, we do not decide whether the record would support a conclusion that some threat to workers' health of a magnitude substantially less than 80 deaths during the ETS period constitutes a grave danger necessitating an ETS of 0.5 f/cc. Gravity of danger is a policy decision committed to OSHA, not to the courts. We hold only that an ETS that lacks support in the record for the basis OSHA has articulated must be declared invalid.

V.

OSHA may, of course, continue its plan to increase enforcement of the current PEL. If danger is imminent, it should complete notice-and-comment rulemaking as quickly as possible to determine if a new standard lowering the PEL to 0.5 f/cc, or even lower, is appropriate. Our finding here that substantial evidence does not exist to support a six-month ETS should not be construed as a prediction that a lower asbestos PEL would fail under judicial scrutiny if OSHA promulgates it pursuant to proper notice-and-comment rulemaking procedures.

We determine the Emergency Temporary Standard to be invalid because the record, considered as a whole, does not indicate that the risk the ETS seeks to eliminate is "grave," as OSHA itself has defined it, or that the ETS is "necessary," as those terms are used in the ETS statute.

ENFORCEMENT OF EMERGENCY TEMPORARY STANDARD STAYED.

— End of Text —

— End of Section D —

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