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Occupational Noise: A Watershed Issue for OSHA

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OSHA has maintained that industry must utilize engineering controls wherever feasible to meet the agency's occupational noise level standards. OSHA's very broad interpretation of "feasibility" has met resistance from the courts and from the agency's own review commission, which have tended to apply a cost-benefit approach. In part as a result of this resistance, the attack on OSHA's noise regulation scheme has been broadened to encompass the agency's requirement that engineering controls be given priority in abating occupational noise. The author presents the arguments on both sides of these issues, and concludes that OSHA's construction of feasibility is erroneous. The author also finds that the agency's position on engineering control priorities is particularly vulnerable on the noise regulation question, and could endanger OSHA's entire regulatory scheme.

I. INTRODUCTION

Speaking before a House subcommittee, Congressman William A. Steiger, co-author of the Occupational Safety and Health Act, stated that the controversy over the Occupational Safety and Health Administration's (OSHA) workplace noise standard could be responsible for "making or breaking" the act. The Congressman elaborated, stating that while he believed OSHA could formulate a workable standard, "this very complex standard must . . . be handled with great prudence by the Department of Labor and if done well can assure a stronger agency. If not done responsibly it can assure the destruction of the whole effort." Apparently, OSHA concurs with Congressman Steiger's appraisal of the importance of the occupational noise standard, identifying it as the "watershed issue for the Agency," one that has "engendered major controversy."
Paragraph (b)(1) of the current OSHA occupational noise standard, 29 C.F.R. section 1910.95 states:

[w]hen employees are subjected to sound exceeding those listed in Table G-16, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table. 6

The controversy over section 1910.95 has been joined largely over two rather closely intertwined issues, both of which are raised by the language employed in paragraph (b)(1) of section 1910.95. The first issue concerns the meaning of the word “feasible,” the definition of which has been contested primarily in the courts and before the Occupational Safety and Health Review Commission. The second issue concerns the priority afforded to “administrative and engineering controls.” The present occupational noise regulation permits the use of personal protective equipment, only where administrative and engineering controls are not sufficient or feasible. The debate over these priorities has in large measure been conducted in hearings and comment periods on OSHA’s proposed new occupa-

6. 29 C.F.R. § 1910.95(b)(1) (1976). Table G-16 lists the permissible exposures as a function of time and noise level:

<table>
<thead>
<tr>
<th>Duration: hours per day</th>
<th>Sound level dBA slow response</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>90</td>
</tr>
<tr>
<td>6</td>
<td>92</td>
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<tr>
<td>4</td>
<td>95</td>
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<td>3</td>
<td>97</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>1 1/2</td>
<td>102</td>
</tr>
<tr>
<td>1</td>
<td>105</td>
</tr>
<tr>
<td>1/2</td>
<td>110</td>
</tr>
<tr>
<td>1/4 or less</td>
<td>115</td>
</tr>
</tbody>
</table>

The present section 1910.95 noise exposure standard was first promulgated in 1969 (41 C.F.R. 50-204) under the authority of the Walsh-Healey Public Contract Act, 41 U.S.C. § 35 (1970). Under the Walsh-Healey Act, the regulation was applicable only to those firms having supply contracts with the government in excess of $10,000. On May 29, 1971, the standard was established under the Occupational Safety and Health Act, specifically under section 655(a) of title 29 of the United States Code, which permits the Secretary of Labor to promulgate through OSHA any established federal standard. According to OSHA guidelines, [Reference File] Noise Reg. Rep. (BNA) 41:3003, 04, engineering controls include: substitution of manufacturing processes, substitution of machinery, vibration dampening, reducing sound transmission through solid objects, various sound muffling devices, baffles, completely enclosing individual machines and insulating rooms. Administrative controls include performing high noise operations at night or between shifts, rearranging work schedules, rotating employees and operating machines for less than a full business day.
tional noise standard, which was first introduced in October, 1974.7

As will be shown, the controversy over section 1910.95(b)(1) is a microcosm of the controversy over the Occupational Safety and Health Act itself. Accordingly it brings to light many competing policy considerations, and challenges many of the assumptions which have affected judicial and administrative interpretation and rulemaking under the Act.

II. THE CONSTRUCTION OF "FEASIBLE"

The conflict over the meaning of "feasible", as it appears in section 1910.95(b)(1), has centered on the question of whether economic,8 as well as technical, feasibility is denoted. OSHA contends9 that "feasible" means anything that is technically feasible or possible:

[t]he Department of Labor considers 'feasible' to mean the following, as stated in the Oxford-English and Merriam Webster dictionaries: 'capable of being done, accomplished or carried out; capable of being dealt with successfully.'11

The Occupational Safety and Health Review Commission disagrees with this position. In a 2-1 decision, the Commission in Continental Can Co.12 held: "as used in the Act, 'feasibility' contemplates economic as well as technological feasibility."13 In reaching its conclusion, the Commission relied on Industrial Union Department, AFL-CIO v. Hodgson,14 and AFL-CIO v. Brennan.15 Both of these cases construed "feasible", as it appears in section 655(b)(5) of the Act16

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9. Id.
12. Continental Can Co., 4 Occ. Saf. & Health Cas. 1541, 1546 (OSHRC 1976). OSHA petitioned the Ninth Circuit Court of Appeals for review of this decision. See 64 Noise Reg. Rep. (BNA) A-15 (Oct. 25, 1976). On April 26, 1977, OSHA withdrew its petition. However, the Seventh Circuit Court of Appeals has adopted the Commission's approach in Continental Can. In Turner Co. v. Secretary of Labor, 561 F.2d 82 (7th Cir. 1977), the court, citing Continental Can, held that section 1910.95(b)(1) contemplated economic, as well as technical feasibility. In so doing the court reversed a decision handed down by the Commission the same day as Continental Can. Unlike the Seventh Circuit, the Commission had found Turner factually distinguishable from Continental Can. Thus the Commission's espousal of an economic feasibility standard has yet to be specifically affirmed by an appeals court.
15. 530 F.2d 109 (3d Cir. 1975).
to require the consideration of economic consequences in determining feasibility. In his dissent in *Continental Can* Commissioner Cleary argues that the statutory language relied on appears to be restricted to the promulgation of *new* standards, whereas the occupational noise standard was introduced under section 655(a) which provides for promulgation of *previously existing* Federal Standards. This position ignores a number of crucial factors. It disregards that explicit in the AFL-CIO and Industrial Union courts' construction of "feasible" was an interpretation of Congressional intent as to the scope and function of the Act itself:

"[t]here can be no question that OSHA represents a decision to require safeguards for the health of employees even if such measures substantially increase production costs. This is not, however, the same thing as saying that Congress intended to require immediate implementation of all protective measures technologically achievable without regard for their economic impact. To the contrary, it would comport with common usage to say that a standard that is prohibitively expensive is not 'feasible.'"

As both courts also point out, an expansive interpretation of the application of "feasible" is mandated by the expressly evidenced intent of Congress, as vocalized by Senator Javits, whose amendment inserted the "feasible" language into the Act:

"[a]s a result of this amendment the Secretary, in setting standards, is expressly required to consider the feasibility of proposed standards. This is an improvement over the Daniels bill, which might be interpreted to require absolute health and safety in all cases, regardless of feasibility, and the Administration bill, which contains no criteria for standards at all."

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 available 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. (emphasis added).

17. 4 Occ. Saf. & Health Cas. 1541, 1551 (OSHRC 1976).
18. See note 6 supra.
Given that both the courts and the Congress have enunciated a broad policy consideration for requiring that standards be "feasible," logic dictates that what is "feasible" within the meaning of section 655(b)(5) of the Act is also what is "feasible" under section 1910.95(b)(1) of the regulations. To argue that "feasible" means something radically different in a regulation, merely because the regulation is promulgated under a section of the Act where "feasible" does not appear, seems absurd. It would be more consistent to argue that no feasibility, rather than a different standard of feasibility, be required. Both arguments should fail since the inherent importance of the concept of feasibility to the Act renders it highly unlikely that Congress intended that already existing federal standards re-promulgated under section 655(a) be less "feasible" than new standards promulgated under section 655(b).

Commissioner Cleary also argues that the Act should be construed as a "technology forcing" piece of legislation:

[In the area of safety, we wish to emphasize that the Secretary is not restricted by the status quo. He may raise standards which require improvements in existing technologies or which require the development of new technology, and he is not limited to issuing standards based solely on devices fully developed.]

The rationale behind this technology forcing policy is that one goal of the Act is the permanent improvement of working environments and that standards which necessitate technological improvement are an effective means to this end. Commissioner Cleary maintains that since the purpose of the Act is to provide permanent improvement in working conditions, economic factors should only be considered in determining the time period within which compliance will be required. Although the Commissioner argues that requiring economic as well as technical feasibility completely "emasculates" the technology forcing policy of the Act, it is unlikely that the concept of economic feasibility would be carried that far. Indeed, the majority in Continental Can stated: "controls may be economically feasible even though they are expensive and increase production costs." The court in Industrial Union Department v. Hodgson went even

24. Id. at 1549-50.
25. Id. at 1547. See also Arkansas-Best Freight Sys., Inc. v. OSHA, 529 F.2d 649, 653 (8th Cir. 1976).
further, stating that standards might be economically feasible even though they are financially burdensome, and even though they might force out of business laggard employers who have fallen behind the rest of the industry in meeting standards. 26

In Society of Plastics Industries v. OSHA, 27 a case heavily relied upon by Commissioner Cleary in his argument against economic feasibility, the OSHA standard concerned exposure to vinyl chloride, a known carcinogen. The employer was required to utilize all feasible engineering controls and, in addition, to supply personal protective equipment entailing the distribution of respiratory devices to all employees exposed to even a slight concentration (one part per million) of vinyl chloride. While the majority in Continental Can did not compare the costs and benefits of providing respiratory equipment to all employees exposed to greater than one part per million vinyl chloride, versus that of providing ear plugs to those employees of Continental Can exposed to noise in excess of Table G-16 28 limits, the court did distinguish the type of hazard posed:

[t]hus the hazard is not life threatening in this case and although it will produce serious loss of hearing in some cases we must consider the fact that the harm in other cases will be little if any hearing loss. The situation, therefore, is distinguishable from life threatening hazards such as those posed by carcinogenic substances. 29

The court went on to expound a balancing of costs and benefits: "in our view resources should be allocated on a priority basis to obtain the benefits that may be achieved by eliminating life threatening hazards first and lesser hazards second. And by saying 'second' we do not mean second in time but rather second in priority for allocation of resources." 30 This cost-benefit balancing test was sharply criticized by Commissioner Cleary: "[w]hile this approach seems logical, I submit that a better deaf-than-dead concept is too Draconian to be consistent with the statutory purpose of providing a safe and healthful workplace." 31

This conflict over application of a cost-benefit analysis to OSHA standards appears to lie at the very heart of the occupational noise controversy. This is evidenced both in the feasibility question

26. 499 F.2d at 478 (D.C. Cir. 1974).
27. 509 F.2d 1301 (2d Cir. 1975).
28. See note 6 supra.
30. Id. (emphasis added).
31. Id. at 1552.
discussed above, and in the debate over the proposed new occupational noise regulation, to be discussed below. Those who agree with Commissioner Cleary would argue that the function of OSHA is to force technology to permanently improve the workplace environment, that no price can be put on safety and health, and that economic criteria may only be utilized to determine enforcement timetables. Those who agree with the majority in Continental Can would argue that employers have finite resources which necessitate the making of hard choices, and thus the imposition of a cost-benefit analysis. Moreover, it might be observed that the “technical feasibility only” position implies a cost-benefit analysis which concludes that the costs of technically feasible protection are always outweighed by the benefits. It also assumes that given unlimited resources, the horizons of “technical” feasibility would expand infinitely.

To date, the courts have not found it necessary to deny the separability of technical feasibility from economic feasibility. Instead, they have been content to hold merely that the concept of feasibility includes economic considerations. In so doing, the Continental Can court seemed to imply that a cost-benefit analysis should be employed to determine economic feasibility. Under the present occupational noise standard, however, once it has been determined that engineering or administrative controls are economically and technically feasible, then, although they may be more expensive, they must be implemented in lieu of personal protection controls. Section 1910.95 quite clearly sets this priority, and a cost-benefit analysis may not be further applied to determine whether personal protection controls might be used instead. On the other hand, a showing that the cost of technically feasible engineering controls greatly exceeds the cost of personal hearing protection may result, in some instances, in a finding of economic infeasibility. Strong arguments have been made in the debate over the proposed new regulation that personal protection controls not automatically be disallowed wherever engineering or administrative controls are feasible, but rather, that the cost-benefit analysis be extended to determine at the outset which approach should be utilized.

III. THE PROPOSED NEW OCCUPATIONAL NOISE REGULATION

On October 24, 1974, prior to the Continental Can decision, OSHA proposed a new occupational noise exposure regulation to

32. See id.
33. Id. at 1548.
replace the present section 1910.95. The proposal has been the subject of numerous hearings and comments since that date, and remains an unresolved and controversial issue. Perhaps because the adverse ruling on economic feasibility in *Continental Can* was not anticipated, the proposed regulation does not attempt to reflect OSHA's present position on feasibility by specifically limiting the term to technical feasibility. Instead, it retains the broader language of the present regulation. Thus, rather than settling the feasibility controversy, *Continental Can* has served to fuel the debate over economic feasibility. It has encouraged certain industrial interests to propose that the engineering and administrative control priorities appearing in both the present and proposed regulation be scrapped in favor of a straight cost-benefit approach, while motivating employee groups and other interests to suggest that the effect of *Continental Can* be limited or eliminated altogether.

It should be noted that in addition to requiring economic feasibility, *Continental Can* places the burden of proving feasibility upon OSHA. In a policy paper prepared for the incoming Carter administration, OSHA indicated that it is considering modifying the proposed regulation to shift this burden back to the employer. This would reduce considerably the impact of *Continental Can*. It is possible that OSHA may consider going even further and essentially overrule *Continental Can* by defining "feasible" to preclude economic considerations. Such a hard line policy is suggested by the wording of the OSHA policy paper referred to above, and by the remarks of at least one administration official.

However, given the language of *AFL-CIO v. Brennan*, and *Industrial Union Department v. Hodgson*, which construe economic feasibility to be an underlying policy consideration of the Occupational Safety and Health Act itself, it would seem that any attempt by OSHA to eliminate economic feasibility criteria by regulation would be successfully challenged in the courts. Furthermore, due to the very substantial policy pressures that have been generated to extend the cost-benefit rationale of *Continental Can* to replace the priority presently accorded to engineering and administrative controls, OSHA may find it imprudent to attempt the complete elimi-

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36. *id*.
37. *Continental Can Co., 4 Occ. Saf. & Health Cas. at 1548. See also Love Box Co., 4 Occ. Saf. & Health Cas. 1138 (OSHRC 1976).*
nation of economic feasibility criteria.

Throughout the hearings and comments on OSHA's proposed new occupational noise regulation, a considerable number of groups and agencies have supported revisions which would permit the employer to choose between engineering and administrative controls or providing personal hearing protection for employees, especially with regard to presently existing machinery and facilities. Industry is virtually unanimous in support of this position.\textsuperscript{41} This is also the view of the Council on Wage and Price Stability, which has stated its belief that the present OSHA proposal is inflationary and that the use of ear protection devices would accomplish the objectives of the regulation at a significantly lower cost.\textsuperscript{42} The Small Business Administration is of the view that the cost of engineering controls may be beyond the reach of many small businesses, thus resulting in the denial of market entry to small firms unable to do the research and development necessary to comply.\textsuperscript{43} In addition, Congressman William Steiger, co-author of the Act, has recommended that OSHA consider "grandfathering" existing conditions.\textsuperscript{44} There is no doubt that implementation of engineering controls on a nationwide basis would involve very substantial expense. A study commissioned by OSHA has estimated that the cost of implementing the present ninety decibel standard in all workplaces within the purview of the Act would be $11.4 billion, and that engineering controls to reduce noise to eighty-five decibels\textsuperscript{45} would cost $19.9 billion.\textsuperscript{46} Other cost estimates have ranged from $8 to $30 billion.\textsuperscript{47} It is generally acknowledged that personal protective controls, consisting essentially of ear plugs and ear muffs, are far less expensive. In Continental Can the court found that the cost of Continental Can's

\begin{itemize}
\item 45. OSHA has also considered lowering the 90 dBA threshold to 85 dBA. See 70 Noise Reg. Rep. (BNA) A-12 (Jan. 17, 1977).
\item 46. Id. at A-15.
\end{itemize}
compliance through use of engineering controls would require a capital expenditure of approximately $33,230,000, with upkeep expenses of $175,000 annually, while the total cost of implementing personal protection would be $100,000 annually. These starkly contrasting figures lend powerful support to the arguments of those favoring a straight cost-benefit determination of occupational noise abatement procedures.

Support for continued emphasis on engineering controls has come from various labor groups, the Environmental Protection Agency, and OSHA itself. These entities have espoused the position, as did Commissioner Cleary in his dissent in Continental Can, that the purpose of the Act is to force new technological developments in order to provide a permanent improvement in workplace safety, and that this justifies requiring engineering controls although they may be far more expensive than personal protective controls. Their feeling is that if engineering controls are not required wherever feasible, there will be no incentive to develop noise suppression technology which could be utilized more economically as new plants are built. Closely related is the argument that the Act places primary responsibility for maintaining a safe workplace upon the employer, and that permitting the use of personal protective equipment shifts the burden to the employee. In support of this position, it has been argued that personal hearing protective devices are uncomfortable, that they make communication difficult, that they do not always fit properly so as to provide the necessary protection, and that, as a result, workers may not always wear them, or if they do, they may not be receiving sufficient protection.

52. See Anning-Johnson Co. v. Occupational Safety & Health Review Comm'n, 516 F.2d 1081, 1088 (7th Cir. 1975).
IV. Conclusion

It is clear that, at least in the abstract, there are both sound policy grounds and judicial support for each of the propositions advanced in favor of maintaining the engineering control priority. Nevertheless, it is submitted that when applied specifically to the occupational noise controversy, these general considerations fail to provide a reasonable basis for continuing the engineering controls policy, at least as presently constituted. There is no doubt that one function of the Occupational Safety and Health Act is to force technological advances to improve workplace safety. This would seem to be a necessary and laudable purpose of the Act, which states in part:

The Congress declares it to be its purpose and policy . . . to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources—

. . . by encouraging employers and employees in their efforts to reduce the number of occupational safety and health hazards . . .

. . . by building upon advances already made through employer and employee initiative for providing safe and healthful working conditions;

. . . by developing innovative methods, techniques, and approaches for dealing with occupational safety and health problems . . . .

The courts have interpreted this language to mandate technological improvement in certain circumstances: "at least to a limited extent, OSHA is to be viewed as a technology forcing piece of legislation." It remains uncertain, however, whether the policy in question could be considered an "innovative method, technique [or] approach" under the Act. Further, this technology forcing goal could be accomplished far less expensively by requiring engineering controls wherever feasible in the construction and installation of new plants and machinery. A number of industries highly critical of the present OSHA approach have proposed such a solution.

The social utility and policy considerations inherent in placing the primary burden of making the workplace safe on the employer, rather than the employee, is also clear. To hold otherwise would tend to encourage the continuation of dangerous conditions by employers since they could argue that "employees should be more careful." Also, as at least one court has pointed out, employers have primary control over the workplace environment and should be responsible on this basis. Further, in American Smelting and Refining Co. v. OSHA, the court held that the employer could not rely on respirators furnished to protect employees from airborne lead where it was reasonably foreseeable that the respirators were awkward and uncomfortable, and would not be properly worn. It should be noted however, that in American Smelting the personal protective equipment (respirators) was so uncomfortable and awkward that, when an unannounced inspection was made, only one employee in the plant was found to be properly wearing a respirator. In Continental Can the court found evidence that with a properly administered and supervised program, personal ear protectors can provide effective protection to most employees. In addition, in American Smelting there was no comparison between engineering and personal protection costs, a comparison which has been made with reference to noise abatement and which reveals rather dramatic contrasts. Finally, while the hazard contemplated by the occupational noise standard is some degree of hearing loss, the hazard involved in American Smelting was airborne lead, a poisonous and potentially lethal agent. This last distinction calls for the balancing test which the majority in Continental Can applied in determining the benefit side of the cost-benefit equation. While Commissioner Cleary in his dissent derisively termed this a "better deaf-than-dead" approach, it is submitted that this is a reasonable and necessary approach to governmental regulation in a resource-finite society. It is further submitted that the noise regulation question presents an unusually compelling set of circumstances which virtually mandate such an approach, and for precisely this reason, presents a "watershed issue" for OSHA, and a powerful challenge to the

60. 501 F.2d 504 (8th Cir. 1974).
61. Id. at 515.
62. See text accompanying note 31 supra.
63. See note 4 and accompanying text supra.
engineering control priorities under which the agency has operated to date.

The occupational noise debate involves a hazard which, viewed coldly but realistically, is relatively minor. At the same time, the cost of abatement of this hazard through engineering controls is enormous, while personal protective controls are quite inexpensive. Furthermore, while there are some problems with the comfort and convenience of personal protective devices, and, in very limited situations, problems with their effectiveness, it would seem that with proper supervision, a personal protection hearing program will provide very nearly all of the noise abatement benefits that engineering controls would afford, and might in many instances reduce noise exposure far below the levels proscribed by OSHA. Thus, the additional benefits provided by engineering controls are relatively small, and, at least as to existing plants, pale in comparison to the additional costs involved. The very real technology-forcing benefits of requiring engineering controls may be maintained by requiring such controls, where feasible, for new plants and machinery. It is further argued that the real long-term benefits to occupational safety and health may not be well served by criteria which ignore cost-benefit factors, since such criteria may eventually result in a hardpressed society reducing the level of worker protection it chooses to afford. These extrinsic factors have already manifested themselves, perhaps most concretely in criticism of the entire OSHA regulatory scheme in Congress, where a number of bills to repeal the Act altogether are currently pending.

In analyzing the noise regulation controversy, it cannot be ignored that inflation and resource shortages have substantially altered perceptions of the extent to which social engineering can realistically be undertaken by society. Within the OSHA context, these broad social, economic and political concerns have coalesced around the noise regulation controversy, which, it is submitted, presents a factual situation that virtually demands a reappraisal and modification of the engineering control priority in OSHA's present regulatory scheme.