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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

STATEMENT OF

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BEFORE THE
SENATE COMMITTEE ON LABOR AND HUMAN RESOURCES

APRIL 2, 1980

I am pleased to be here today to present the Public Health Service's view that American workers are better protected than they were before the Occupational Safety and Health Act was passed nearly 10 years ago. That Act is among the most important public health laws of the last two decades. I will not deny that implementation of the Act has created its share of controversy. Any program dealing directly with vital problems affecting millions of lives as well as millions of dollars could be expected to create controversy. What is often overlooked is that along with that controversy has come a substantially increased awareness of job hazards among workers, employers and the general public.

The Occupational Safety and Health Act established a legal framework within which awareness of problems could be translated into action to eliminate them. That legal framework gave NIOSH and OSHA the following separate but complementary responsibilities which contained the key elements of a preventive program:

1. Identification of occupational safety and health problems
2. Evaluation of existing measures to control workplace exposures
3. Development of new standards
4. Enforcement of standards
5. Training and education of workers, employers, and safety and health professionals

The independent research capacity of the Public Health Service, the open standard setting process in the Department of Labor and a responsive and targeted enforcement system are all contributing to making the law work. In the last year, these have been supplemented by the NIOSH Planning Group in the Department of Labor which makes it possible for OSHA, the Mine Safety and Health Administration and the Employment Standards Administration to lay out

their needs for NIOSH help. We have built their requests into our planning process.

The Public Health Service has been conducting occupational health research and providing technical assistance to employers in reducing occupational hazards since 1914. Our scientists have long known about the effects of many of the most serious occupational hazards, including silica, lead, arsenic, radon daughters, and coal combustion by-products. It was not until the Act was passed, however, that NIOSH could work closely with an agency with the power to translate its research into enforceable standards.

Since then NIOSH has made considerable progress in developing recommended standards for some of the most serious occupational health hazards. More than 100 documents recommending new standards for substances such as asbestos, silica, lead, mercury, coke oven emissions, and benzene have been transmitted to the Department of Labor.

It was not until the Act was passed that NIOSH investigators had the right to enter the workplace and examine pertinent records without agreeing to keep the identity of the hazardous workplace secret. These rights, which have been upheld in subsequent court decisions, have enabled NIOSH to conduct a more vigorous research program and to be more responsive to workers in our health hazard evaluation program.

Let me give you an example of how investigations were conducted in the same plant--one before the Occupational Safety and Health Act was passed and one after.

In 1967, scientists from the Division of Occupational Health, a predecessor of NIOSH, conducted a research investigation at an asbestos insulation plant in Tyler, Texas. Although many of the air samples collected

exceeded the existing threshold limit value, plant management and workers were not informed that a health hazard might exist at the plant and no recommendations were made to correct the conditions. Because the Division of Occupational Health had no right of entry and no mandated relationship with an enforcement agency, it was often necessary to assure plant management that the identity of the plants studied would be kept secret before occupational health officials would be permitted to visit the plant.

Contrast this with the investigation conducted at the same plant by NIOSH in 1971 immediately after the Act was passed. Upon discovering dangerously high levels of asbestos in the plant, the NIOSH team made recommendations for improving work practices and notified OSHA. OSHA inspected the plant and found violations that required immediate corrective action and improvement in ventilation and dust control. This example illustrates how workers are better protected when scientists do not have to make compromises to gain access to a plant and when they can call on an enforcement agency to assure that hazards are eliminated.

Today when our investigators go into the workplace to conduct research and make recommendations for preventing exposures, they see a changed climate. There is increased knowledge, responsiveness and concern among workers and most employers. Although there are many reasons for this changed climate, we believe one of the most important to be the existence of a strong OSHA enforcement program.

The NIOSH health hazard evaluation program is a research and service mechanism by which the fruits of an 80 million dollar research effort can be applied to help solve public health problems quickly and effectively at workplaces across the nation. At the request of an employer or authorized

employee representative, NIOSH will conduct an on-site evaluation of po... health hazards. Requests for health hazard evaluations are up 35 percent over last year and we hope that by reducing the average time needed for each evaluation we will complete approximately 190 HHE's this year as compared with 132 last year.

NIOSH recently asked an independent contractor to conduct an evaluation of the effectiveness of the Health Hazard Evaluation program in reducing workplace hazards. Telephone interviews were conducted with both worker representatives and employers at 200 workplaces where NIOSH did HHE's between 1978 and 1979. Questions were asked about the timeliness and adequacy of NIOSH findings and about any resulting improvements in workplace conditions. In approximately 60 percent of the completed HHE's workers were found to be exposed to serious hazards. Over 90 percent of employees and employers interviewed reported either total or partial compliance with NIOSH's recommendations for controlling the hazard. Total compliance was reported in at least a third of the interviews. Partial compliance was reported for 61 percent of the interviews. Eight percent of the respondents reported no compliance.

Compliance is dependent on the cost to the employer as well as the effectiveness of preventive measures. Both workers and employers agreed that those recommendations which were the least costly were most frequently implemented. These were: Continuation of present control efforts, changes in employee work practices, provision of protective equipment and clothing, administrative and procedural changes, upgrading of ventilation systems, and improved equipment maintenance and repair. Those recommendations which were most costly, such as introducing engineering controls to reduce hazard levels,

implementing continuous environmental monitoring and sampling systems, and conducting follow-up medical or environmental studies were least frequently implemented. These are often the most effective preventive efforts and should not be resisted for cost reasons alone.

We believe that enforcement has encouraged compliance and the continued pressure from enforcement is needed to effectively prevent disease and injury.

This evaluation project demonstrated that in at least 400 hazardous workplaces studied by NIOSH to date, the Act has resulted in perceived improvements in workplace conditions. Visits to these workplaces are needed to confirm that the preventive efforts have eliminated exposures. Last year OSHA changed their procedures so that they now routinely follow-up HHE's to insure that the identified hazards have been eliminated. This should result in an increase in the extent to which NIOSH recommendations are implemented in the future.

We feel that the willingness of employers to implement changes in workplace conditions is a function of a number of factors: 1) The extent to which employers and workers recognize that a serious problem exists, 2) the amount of pressure applied by workers to implement recommended changes, 3) the costs to the employer of the recommended changes, and 4) the probability that the employer would be subsequently cited for having a hazardous workplace. Thus, voluntary compliance depends in part on the possibility of subsequent enforcement action.

Achieving the goal of safe and healthful workplaces requires the combined efforts of government agencies, employers, workers, and safety and health professionals. I would like to mention a number of areas where we see a need

for greater effort from each sector of the occupational safety and health community:

1. Workers need to continue to become better informed about workplace hazards so that they can insist on the elimination of hazards to which they are exposed. The Supreme Court recently affirmed the right of workers to refuse a task that could lead to death or serious injury. We see increased demand for dissemination of NIOSH research findings following creation of the OSHA New Directions program.
2. Employers need to fully accept responsibility for protecting employees. Our researchers who are working to identify and study the control of disease and injury are sometimes confronted by employers who refuse to participate in our studies. For example, we decided to study the tire industry because of reports about carcinogenic exposures in the manufacturing process. We wanted to learn whether any of the manufacturers knew how to protect workers from these exposures. All the manufacturers we contacted invited us into their plant, with one exception. Michelin consciously chose not to contribute to this preventive effort.
3. NIOSH and universities must assure an adequate supply of occupational safety and health professionals. This includes encouraging scientists from other fields to focus their studies on occupational safety and health problems.
4. NIOSH and OSHA must work together to assure that occupational safety and health research is applicable to the real problems of the workplace.

Because this series of oversight hearings has tended to focus on safety, not health issues, I would like to comment on the current state-of-the-art of safety research. At NIOSH, as at most universities, safety research is considerably less sophisticated than health research. There is no adequate unifying theory for accident causation, but there are promising leads. Finnish scientists are working on a predictive system that dissects a job and tries to predict injury rates based on an analysis of the job. If this theory is confirmed empirically, it may some day be possible to predict where injuries will occur. At present, we often must wait until workers are injured before we become aware of unsafe jobs.

In 1977 NIOSH created a special Division of Safety Research in Morgantown, West Virginia. This year the division is implementing a safety initiative to focus our research efforts on types of injuries which account for the greatest annual compensation costs. Research on hazard controls is also directed to accident types of highest priority. Transferring NIOSH results to the workplace will be a major component of the program. A portion of our resources will also be directed toward supporting OSHA's short-term needs in addressing urgent problems, such as the grain elevator explosions and collapse of scaffoldings.

It would seem plausible that safety statistics would be better than health data. The recording of injuries does not suffer from the difficult problem of latency--the long time between exposure and many occupational diseases. But safety statistics suffer from other problems. They are gathered for other purposes and reflect the bias and needs of these systems. State workers' compensation data systems, for example, differ from state to state. We believe that when there are economic consequences from using

statistical information these biases must be understood and the statistics cannot readily be substituted for data acquired for specific research purposes. Finally, until safety statistics relate the injury to its cause, they do not adequately guide prevention efforts.

It is often only during long-term studies that excess mortality from illness and disease becomes apparent. In an epidemiologic study conducted between 1973-1976, NIOSH found that workers exposed to cadmium had an excess risk of death from prostate cancer, respiratory disease and heart disease. It also showed an excess of workplace accidents. Similarly, a 1973 NIOSH study found that asbestos workers had a statistically significant excess of death from suicides. These epidemiologic studies traced the cause of death of a group of exposed workers over a period of 20 to 30 years and compared it with that of the general population. An analysis conducted in one workplace over a one-year period would probably not have shown that workers were at excess risk of dying from accidents.

New industrial and construction processes which may bring with them new sources of injury and disease are not quickly picked up by statistical reporting systems. The Scandinavian countries have started to protect their workers by new source controls. NIOSH is attempting to expand its system to detect "emerging problems" so that we can provide this information to OSHA for targeting their enforcement program.

Most students of accidents have used BLS-style data. Recently NIOSH researchers have started to look at long-term disability statistics from the Social Security Administration. These data are by occupational class rather than industry code or workplace. They describe the disease and/or injury. If these data are developed to indicate relationships between disease-caused and

injury-caused disability they may help us propose new strategies for preventing injuries. They may also help us with the complex interaction between environmental exposures and workplace accidents.

It is not always easy to draw the line between health and safety hazards. There are many chemicals, including toluene, trichloroethylene, perchloroethylene, methylene chloride and carbon monoxide, and physical agents, such as noise, which affect the central nervous system. The resulting changes, which are often very subtle, include decreased alertness, slowed reaction time, and impaired coordination. Such subtle impairments may have little consequence in normal day-to-day activities, but become manifest when work demands increase or when sudden events require an immediate response. Such factors undoubtedly contribute to accidents and yet are not perceived in accident statistics. For example, when a roofer who uses solvents near the edge of a roof inhales the intoxicating solvent and falls off the roof--was it a safety or health problem? Without the services of a trained investigator the true cause of accidents may never be known.

NIOSH and OSHA are working together to evaluate current theories of accident causation and to sponsor research to improve accident investigation methodologies. Prevailing theories of accident causation tend to focus on the worker, without examining in sufficient detail the relationship between workers, their environment, and their tools and machines. Development of a broader theory of causation should produce additional strategies for accident reduction.

Much remains to be done before we are able to "assure safe and healthful working conditions for working men and women," the goal set by Congress in passing the Occupational Safety and Health Act.

NIOSH has identified seven areas on which to concentrate new activity: control technology, reproductive hazards, radiation, ergonomics, injury prevention, personal protective equipment, and metal and non-metal mining. Our scientists are designing research programs in these areas and grant solicitations are being sent to the scientific community. We believe that we can respond to the demands for practical research. We believe OSHA is now capable of incorporating our recommendations. Above all, we are sure that there is room for public health and prevention by employers, workers, and governments. There are still over 400,000 new cases of occupational disease and 100,000 deaths each year for occupational injuries and diseases.

B198
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50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO.	2.	3. Recipient's Accession No. PB 90 192956 /AS
4. Title and Subtitle NIOSH Testimony on OSH Act of 1970 Results by A. Robbins, April 2, 1980			5. Report Date 80/04/02
			6.
7. Author(s) NIOSH			8. Performing Organization Rept. No.
9. Performing Organization Name and Address NIOSH			10. Project/Task/Work Unit No.
			11. Contract (C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address			13. Type of Report & Period Covered
			14.

15. Supplementary Notes

16. Abstract (Limit: 200 words) This testimony concerned the view of the Public Health Service (PHS) that American workers were better protected currently than they had been before the Occupational Safety and Health Act was passed nearly 10 years ago. The Act established a legal framework within which awareness of problems could be translated into action to eliminate them. The PHS conducted occupational health research and provided technical assistance to employers in reducing occupational hazards since 1914. It was not until the Act was passed that NIOSH investigators had the right to enter the workplace and examine pertinent records without agreeing to keep the identify of the hazardous workplace secret. Examples of how investigations were conducted in the same facility prior to and following the adoption of the Act were presented. Now when NIOSH investigators enter a workplace they see an increased awareness on the part of the workers and most employers regarding responsiveness and concern for the employees. The NIOSH Health Hazard Evaluation Program helped solve health problems quickly and effectively at workplaces across the nation. The effectiveness of this program was evaluated recently and it was determined that in about 63 percent of the cases the workers were found to be exposed to serious hazards. Over 90 percent of those interviewed in this evaluation indicated either total or partial compliance had been made with NIOSH's recommendations following the worksite study. It appears that compliance depends on the cost to the employer as well as the effectiveness of preventive measures. In at least 400 worksites visited by NIOSH thus far, significant improvements have been made in the working conditions.

17. Document Analysis a. Descriptors

b. Identifiers/Open-Ended Terms NIOSH-Publication, NIOSH-Author, NIOSH-Testimony, Robbins-A, Occupational-health-programs, Occupational-safety-programs, Worker-health, Safety-measures

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
	22. Security Class (This Page)	22. Price A03

(See ANSI-Z39.18) *See Instructions on Reverse* OPTIONAL FORM 272(4-77) (Formerly NTIS-35) Department of Commerce