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REPORT TO THE CONGRESS

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BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

Better Data On Severity And Causes Of Worker Safety And Health Problems Should Be Obtained From Workplaces

Occupational Safety and Health Administration
Department of Labor

The Labor Department needs specific data on the causes and potential causes of death and seriously disabling injury and illness. This report describes the type of data the Department has compiled and analyzed and contains recommendations for (1) improving the program for obtaining injury and illness data and (2) setting up a new program to obtain data from employers on employee exposure to and the effects of toxic chemicals and other health hazards.



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WASHINGTON, D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

This report points out that the Department of Labor needs better data from workplaces on the severity and causes of worker safety and health problems. It discusses the need for Labor to (1) improve the program for obtaining injury and illness data and (2) set up a new program to obtain data from employers on employee exposure to and the effects of toxic chemicals and other health hazards.

The Occupational Safety and Health Act of 1970 (29 U.S.C. 651) is intended to insure, to the extent possible, a safe and healthful work environment. The act authorizes the Secretary of Labor to require employers to report injury and illness and accident data. We evaluated the actions Labor was taking to obtain and use injury and illness data to determine whether the actions would provide adequate information for administering effective occupational safety and health activities.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies of the report are being sent to the Director, Office of Management and Budget; the Secretary of Labor; and the Secretary of Health, Education, and Welfare.

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Comptroller General
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C o n t e n t s

		<u>Page</u>
DIGEST		i
CHAPTER		
1	INTRODUCTION	1
	Purpose of Federal legislation	1
	Injury and illness data	2
	Issues raised previously on injury and illness data	3
	Scope of review	3
2	WHY BETTER DATA IS NEEDED	5
	Standards development	5
	Enforcement	6
	Selecting workplaces for inspec- tion	7
	Inspecting specific hazardous conditions	7
	Assessing penalties and setting abatement periods	8
	Information and education	10
3	SEVERITY AND CAUSES OF INJURIES AND ILLNESSES NOT ADEQUATELY IDENTIFIED	11
	Annual survey of injuries and ill- nesses	12
	Summaries of State workmen's compen- sation records	14
	Special supplementary studies	17
	Data from accident investigations	17
	Accident causes not identified and related to standards	18
	Results of States' accident inves- tigations not compiled	19
	Serious injuries not investigated	20
	Special effort to determine causes of injuries on mechanical power presses	20
	Conclusions	24
	Recommendations to the Secretary of Labor	24
	Agency comments and our evaluation	25
4	DIFFICULTY IN OBTAINING DATA ON HEALTH HAZARDS	27
	Existing data systems not reliable for health hazards	27

	<u>Page</u>
Magnitude of health hazard problem	28
Testimony by OSHA and NIOSH on Kepone	30
OSHA not fully using authority to obtain data from employers and protect employees	33
Conclusion	36
Recommendations to the Secretary of Labor	37
Agency comments and our evaluation	37

APPENDIX

I	Letter dated June 4, 1976, from the Assistant Secretary for Administration and Management, Department of Labor	40
II	Letter dated May 5, 1976, from the Assistant Secretary, Comptroller, Department of Health, Education, and Welfare	51
III	Principal officials of the Department of Labor responsible for administering activities discussed in this report	52

ABBREVIATIONS

BLS	Bureau of Labor Statistics
CDC	Center for Disease Control
GAO	General Accounting Office
NCI	National Cancer Institute
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
TLV	threshold limit value

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

BETTER DATA ON SEVERITY AND CAUSES
OF WORKER SAFETY AND HEALTH PROBLEMS
SHOULD BE OBTAINED FROM WORKPLACES
Occupational Safety and Health
Administration
Department of Labor

D I G E S T

B
C According to the Department of Labor's latest estimate, 5,900 private industry workers died from work-related injuries and illnesses in 1974, while another 5.9 million had nonfatal work-related injuries and illnesses. (See p. 1.)

C The Occupational Safety and Health Act of 1970 and its legislative history show that the Congress wanted Labor to give priority to the most serious safety and health hazards to eliminate or reduce problems that cause or can cause the most deaths and seriously disabling injuries. The act authorizes Labor to obtain from employers and other sources the information needed for doing so. (See pp. 1 and 2.)

In 1975 Labor told the Senate Committee on Labor and Public Welfare that it did not yet have adequate data for directing Federal and State activities to those hazards posing the greatest threats to worker safety and health. (See p. 3.)

fc
C Better data on the causes and severity of safety and health problems is needed for each of three activities of the Occupational Safety and Health Administration and States under the 1970 act: developing and modifying standards to administer the act (see p. 5); insuring enforcement of, and compliance with, the act (see p. 6); and employer-employee information and education activities. (See p. 10.)

C Basic questions remain unresolved because of the lack of sufficient data:

--Are the thousands of existing standards needed and are they adequate for preventing

injuries they were established to deal with?
(See p. 5.)

--What relative priorities should be given to developing standards on thousands of safety and health hazards not covered by standards?
(See p. 5.)

--Are the Occupational Safety and Health Administration and State compliance inspections directed first to the workplaces most likely to have specific hazardous conditions that can cause death or seriously disabling injuries and illnesses? (See p. 7.)

--During their inspections, do the Occupational Safety and Health Administration and State inspectors emphasize specific conditions that can cause death and seriously disabling injuries and illnesses? (See p. 8.)

--Do penalties and correction deadlines for violations found during inspections consider adequately the seriousness of the hazards as required by the act and Labor procedures?
(See p. 8.)

--Are the levels and direction of information and education efforts proportionate with the potential for reducing to a minimum serious safety and health problems? (See p. 10.)

LABOR'S DATA ON INJURIES AND ILLNESSES NOT SPECIFIC ENOUGH

Although Labor has made and is continuing costly efforts to obtain data for directing activities under the act, the information compiled and analyzed was too vague to identify the hazards that can cause death and seriously disabling injury and illness. The data did not provide an adequate basis for deciding what should be done in standards development, enforcement inspections, and information and education efforts to minimize such hazards.

This problem exists even though (1) Labor requires employers to keep detailed records describing the severity and causes of each injury

and illness and (2) Labor and the States have investigated thousands of accidents to ascertain their causes.

Labor agreed with GAO on the type and source of needed injury and illness data but had not resolved several issues on how to obtain it. (See p. 25.) For GAO's recommendations, see pages 24 and 25.

DIFFICULTY IN OBTAINING HEALTH
HAZARD DATA

Labor's data on work-related injuries and illnesses as reported by employers, even if improved as recommended by GAO, would not be adequate for directing efforts to protect workers from toxic chemicals and other health hazards. The reasons are:

- Problems in associating illnesses with working conditions result in understating the extent of the hazards.
- Many workers can be exposed to a health hazard many years before the resulting illness shows up as a reported case. This means that the data may be accumulated too late to be of maximum value in preventing illnesses.

According to the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, an estimated 16,500 chemicals are toxic, of which about 1,500 are suspected carcinogens (capable of causing cancer).

About 600 of the toxic chemicals are covered, at least to some degree, by existing Labor standards. The rest of the chemicals are not yet covered and thousands of new chemicals are introduced each year, many of which may be harmful to workers. At the current rate of standards development, it may take 100 years or more to develop needed health standards.

The magnitude of the health hazard problem makes it imperative that Labor establish a program to obtain needed data on employers'

use of toxic chemicals and other hazardous substances, the numbers of workers exposed, and the effects of such exposure on worker health.]

[Labor has more authority to obtain such data than it has used to date.] It should review data on toxic substances and other harmful agents to identify those that warrant reporting by employers. The program should include, as appropriate:

- Provisions for obtaining information from employers on the employees' exposure to such substances and agents and the exposure's effects on employee health.
- Requirements for employers to provide periodic medical examinations to exposed employees where a possible risk of harm exists and such other protective measures as may be prescribed on the basis of available data.
- Not only those substances and physical agents not covered by standards but also those that are covered by standards which do not require employer reports on exposure and effects on worker health.
- Monitoring, recording, and reporting of exposure levels. (See pp. 36 and 37.)

Putting GAO's recommendations into practice would

- provide Labor with essential data for directing standards development efforts on toxic chemicals and other health hazards;
- be useful in directing Labor and State workplace inspection and information and education efforts; and
- provide some degree of worker protection from toxic substances, pending development of comprehensive standards which, as noted, could take a century or more at the current pace of development.

Labor, influenced by its interpretation that GAO advocated issuing one standard for all or "a subset" of the most hazardous toxic substances, disagreed with GAO's recommendations. (See pp. 37 to 39.)

The Department of Health, Education, and Welfare said that the program recommended by GAO should be conducted in consultation with the Department's National Institute for Occupational Safety and Health. (See p. 37.)

CHAPTER 1

INTRODUCTION

The Department of Labor estimates that (1) 5,900 workers in private industry died during 1974 of work-related injuries and illnesses and (2) almost 6 million other workers--about one-tenth of the private industry work force--experienced nonfatal injuries and illnesses. The injuries and illnesses resulted in about 31 million lost workdays and billions of dollars in lost production, medical expenses, and workmen's compensation. The Department of Health, Education, and Welfare believes the estimate of deaths is exceptionally low in view of certain industry studies, other Labor reports, and National Safety Council data.

PURPOSE OF FEDERAL LEGISLATION

The Congress passed the Occupational Safety and Health Act of 1970 to assure, so far as possible, safe and healthful working conditions for every worker in the Nation. Labor was given primary responsibility for administering the act. It delegated that responsibility to the Occupational Safety and Health Administration (OSHA), which was created on April 28, 1971. The act also established the National Institute for Occupational Safety and Health (NIOSH) in the Department of Health, Education, and Welfare to fulfill certain research and training functions.

OSHA has authority to establish national occupational safety and health standards, promote compliance with the standards through employer and employee information and education programs, and enforce the standards through workplace inspections with citations and penalties for violations. The act also provides for (1) States to assume responsibility for developing and enforcing standards under OSHA-approved plans and (2) grants to help them carry out their plans. During fiscal year 1975, 26 States were operating OSHA-approved plans with grants totaling about \$28 million.

Recognizing that the magnitude of occupational safety and health responsibilities--covering about 5 million establishments and some 60 million workers--far exceeds resources, both the act and congressional committee reports accompanying it indicate the need for what OSHA has termed a "worst-first" approach. For example, section 6(g) of the act states that in developing occupational safety and health standards, the Secretary of Labor should give due regard to the urgency of need in particular industries,

trades, crafts, occupations, businesses, workplaces, or work environments.

Similarly, House Report 91-1291 states that the primary intent of the act is death and disability prevention. Both the House report and Senate Report 91-1282 state that OSHA's limited inspection resources should initially be directed to those industries or occupations where the need to assure worker safety and health is the most compelling.

INJURY AND ILLNESS DATA

Congressional committee reports also indicate that effective administration of the act is dependent on full and accurate information on occupational injuries and illnesses. They noted, however, that data on the frequency, severity, and causes of occupational injuries and illnesses was inadequate. To correct the situation, several sections of the act provide for obtaining injury and illness data needed to direct Federal and State operations.

- Under section 8(c), employers are required to maintain records of, and make periodic reports on, work-related deaths, injuries, and illnesses and to keep and make available any other records which the Secretary of Labor may prescribe for enforcing the act or for developing information on the causes and prevention of occupational injuries and illnesses.
- Section 24(a) and (b) requires the Secretary to develop and maintain an effective program of collection, compilation, and analysis of statistics on all disabling, serious, or significant injuries and illnesses and authorizes him to
 - (1) promote, encourage, or directly engage in programs of studies, information, and communication concerning occupational safety and health statistics;
 - (2) make grants to States or political subdivisions thereof to help develop and administer programs dealing with occupational safety and health statistics; and
 - (3) arrange, through grants or contracts, for research and investigations which would further the objectives of the section.

--Under section 23(a) and (b), grants to States for fiscal years 1971-73 included funds to help States plan systems to collect information on the nature and frequency of occupational injuries and diseases.

--Section 20(a) and (b) authorizes NIOSH, in order to develop needed information regarding potentially toxic substances or harmful physical agents, to prescribe regulations requiring employers to measure, record, and report on employees' exposure to such substances or agents. It also authorizes the agency to establish programs of medical examinations and tests, as necessary, to determine the incidence of occupational illnesses and the susceptibility of employees to such illnesses.

ISSUES RAISED PREVIOUSLY ON INJURY AND ILLNESS DATA

On September 5, 1974, the Subcommittee on Labor, Senate Committee on Labor and Public Welfare, submitted a series of issue papers on several aspects of the Federal occupational safety and health program to the Department of Labor for comment. Included were questions concerning OSHA's use of injury and illness data in implementing the worst-first approach intended by the Congress.

The last of Labor's responses to the issue papers was received by the subcommittee on February 18, 1975. The responses indicated that OSHA needed better methods for obtaining, analyzing, and using data on the frequency, severity, and causes of occupational injuries and illnesses to help direct its efforts in standards development, enforcement, and employer and employee education. Labor outlined several actions OSHA had taken, or was planning, to obtain and use better injury and illness data.

On November 14, 1975, OSHA sent a progress report to the subcommittee on the actions taken and planned in response to the issue papers.

SCOPE OF REVIEW

We reviewed the actions OSHA was taking to obtain and use injury and illness data to determine whether the actions would provide adequate information for administering an effective occupational safety and health program.

Our review included discussions with OSHA, NIOSH, Bureau of Labor Statistics (BLS), and State industrial safety

officials; examination of laws, regulations, and agency procedures and records; and analysis of OSHA's efforts to obtain and use injury and illness data. The review was conducted at OSHA, NIOSH, and BLS headquarters in Washington, D.C.; OSHA's regional office in Seattle, Washington; OSHA's area offices in Bellevue, Washington, and Boise, Idaho; and State industrial safety offices in Oregon, Washington, California, and Idaho.

CHAPTER 2

WHY BETTER DATA IS NEEDED

Because of the questions raised in September 1974 by the Subcommittee on Labor, Senate Committee on Labor and Public Welfare, the Department of Labor acknowledged that the Occupational Safety and Health Administration needed to obtain, analyze, and use better data on the extent, severity, and causes of occupational safety and health problems. Several basic standards development, enforcement, and information and education issues remain unresolved because of inadequate data.

STANDARDS DEVELOPMENT

OSHA is responsible for setting, and revising when appropriate, standards to form the basis for Federal and State administration of the 1970 act. During fiscal year 1975, OSHA spent about \$5.6 million to develop and modify standards. It proposed or set 14 new or modified standards on such hazards as vinyl chloride, mechanical power presses, and noise.

A major problem is that OSHA does not know whether its standards are sufficient to prevent or minimize the specific conditions that cause or could cause the most deaths and serious disabling injuries and illnesses. This problem exists even though OSHA has adopted thousands of national consensus standards and set hundreds of new and revised standards. Thousands of potential safety and health hazards not yet covered by standards have been identified. The Congress and the public are concerned over the need for many existing standards and the adequacy of some standards to prevent injury and illness.

An official of OSHA's Office of Standards Development said that the data obtained by OSHA is not adequate to (1) identify specific hazardous conditions that can cause death and serious disability and (2) evaluate whether existing standards adequately cover these conditions. He also said that, without improved data, OSHA cannot be assured that its efforts to develop new or revised standards are directed to the worst problems first.

According to OSHA officials, decisions to develop new or revised safety standards are based on (1) petitions from industry and labor organizations, (2) OSHA's professional judgment, and (3) compliance and interpretation problems with existing standards. They said that decisions to develop health standards are based on toxicology and cancer research.

ENFORCEMENT

OSHA and the States operating under OSHA-approved plans are responsible for inspecting workplaces to insure compliance with safety and health standards. The 1970 act requires that citations with mandatory abatement periods 1/ be issued to violators. OSHA procedures provide that the seriousness of the hazard should be considered in setting the length of the abatement period. The act also provides for monetary penalties, the amount depending in part on the seriousness of the hazard.

An estimated 5 million workplaces are subject to the 1970 act. OSHA spent about \$71 million on enforcement during fiscal year 1975. Its 1,100 inspectors, operating out of 64 area offices, made about 81,000 workplace inspections. In the same year, the 26 States operating under OSHA grants--totaling about \$28 million--employed about 1,579 inspectors who made about 375,000 workplace inspections. 2/

In about one-fourth of its initial inspections during fiscal year 1975, OSHA did not cite any violations. About 98 percent of the cited violations were classified as non-serious. 3/

Data on the causes or potential causes of death and serious disabling injury and illness is needed to help OSHA and the States insure that:

--Inspections are directed first to the workplaces most likely to have specific hazardous conditions that can cause death or serious disabling injury and illness.

1/That period of time given an employer to correct a hazardous condition for which he has been cited.

2/Labor said that OSHA and States do not count their inspections the same way. They said, for example, that one State would count inspections of certain parts of a workplace as separate inspections, whereas OSHA would count all parts as one inspection.

3/Although the Occupational Safety and Health Act does not define a nonserious violation, it defines a serious violation as one which creates a substantial probability of death or serious physical harm and which the employer knew or should have known about.

--During the inspections, emphasis is placed on the specific conditions that can cause death and serious disabling injury and illness.

--Monetary penalties and abatement periods for violations properly consider the seriousness of the conditions created by the violations.

Selecting workplaces for inspection

OSHA's general policy is that the most dangerous workplaces should be inspected first. Except for accident and complaint investigations, local OSHA and State enforcement personnel select the workplaces for inspection.

OSHA procedures provide that regional enforcement personnel use the Bureau of Labor Statistics national injury and illness survey results to direct inspection efforts to the industries with the highest injury and illness rates. As discussed in chapter 3, the BLS survey contains only vague indications of the severity of injuries and illnesses. Neither this data nor the data being obtained from workmen's compensation records, accident investigations, and special studies provides sufficient information on the specific conditions that can cause death or serious disability.

Improved data on the extent, severity, and causes or potential causes of injuries and illnesses is needed to help OSHA and State enforcement personnel identify the workplaces that should be inspected first. In response to the subcommittee's issue papers, the Department of Labor said that better data on the causes and likely locations of injuries and illnesses would allow OSHA to concentrate its inspections on serious hazards.

Some OSHA and State enforcement personnel were taking steps to obtain more data on the frequency of injuries and illnesses from State workmen's compensation records to schedule for inspection those workplaces with the highest frequency of claims. However, the data obtained did not adequately identify the severity and causes of the injuries and illnesses that result in claims, although Labor said that workers' compensation data could provide causal and severity indications.

Inspecting specific hazardous conditions

OSHA's policy provides that an inspection cover all aspects of the facilities and operations of the workplace. However, except for the hazards cited as violations, the

inspector is not required to record what he looks at and what he finds. To do so would be difficult, if not impossible, because of the full-coverage inspection policy.

If OSHA had better data on the specific conditions that were most likely to cause death and serious disability, it could establish checklists and require the inspector to report how each item was checked out and what was found, regardless of the violations cited. This would insure that inspectors are aware of and specifically seek out the most hazardous conditions. Also, it would help reduce instances when hazardous conditions are not cited.

--During 1974, OSHA personnel accompanying State inspectors in two States found that the inspectors failed to cite many hazards, including some which the OSHA personnel considered serious.

--In a December 1974 report evaluating inspections in one OSHA region, headquarters officials found strong indications that inspectors from at least one area office were overlooking hazards.

Assessing penalties and setting abatement periods

Under the 1970 act, a penalty of up to \$1,000 is mandatory for serious violations and discretionary for nonserious violations. The act further requires that the seriousness of a violation be considered in determining the penalty amount. Also, OSHA procedures provide that the seriousness of a violation be considered in determining a reasonable period for abatement.

To classify violations, assess penalties, and set abatement periods in accordance with the act and OSHA procedures, officials in the many OSHA area offices and States must decide whether violations create a substantial probability of death or serious physical harm. Some of these officials said that data to help make these decisions is frequently inadequate.

The subcommittee's issue papers noted that (1) during fiscal year 1973 OSHA was classifying less than 2 percent of cited violations as serious, (2) the percentages of violations classified as serious varied widely among OSHA field offices, and (3) some field officials tended to cite

serious hazards as nonserious. 1/ The Department of Labor responded that proper classification of violations was crucial to enforcement of the act and that the Congress intent would be frustrated if serious violations were not cited as such. Labor said that OSHA would review the classification decisions of its field personnel and that OSHA was considering the possibility of determining, on the basis of its enforcement and litigation experience, which standards cover hazards that should ordinarily be classified as serious. 2/

Past enforcement and litigation experience is not an adequate substitute for data on specific conditions that cause, or can cause, death or serious physical harm. OSHA area office directors in Idaho and Washington stated that in many cases OSHA's enforcement and litigation experience would not be adequate for classifying violations. They said that, to make such determinations, OSHA would need to obtain data on the kinds of injuries and illnesses caused by various violations. For example, the Idaho area director said that there was a lack of data to determine the height at which a scaffold without proper safeguards should be considered a serious violation.

The Idaho area director mentioned the general lack of data for citing violations as serious when contested by the employer. He said that the causes of serious injuries and illnesses must be analyzed to obtain defensible data.

The same type of data is needed for determining penalty amounts and setting hazard abatement deadlines. For example, such data would be useful in determining whether wide variations in penalties among States and OSHA area offices are justified. In fiscal year 1974, nonserious penalties averaged about \$34 for 6,285 violations cited by OSHA's New York area office but only about \$4 for 2,037 violations for the Idaho area office. Serious penalties in the Tampa, Florida, area office averaged \$738 for four violations, and the Little Rock, Arkansas, area office assessed a \$500 penalty for one violation. In fiscal year 1975, nonserious penalties assessed by California averaged about \$16 for 27,030 violations while those assessed by New Jersey averaged only \$0.56 for 91,814 violations. Penalties assessed by Tennessee for 95 serious violations averaged about \$567, while Oregon averaged

1/Hearings of July 22, 30, 31, and August 13 and 14, 1974; pp. 992-996, Subcommittee on Labor, Senate Committee on Labor and Public Welfare.

2/Subcommittee hearings, pp. 1131-1136.

\$182 for 208 violations. Penalties are not assessed for all violations; the average penalties shown above are for all violations, including those for which no penalties were assessed.

INFORMATION AND EDUCATION

The 1970 act requires that OSHA (1) provide for educating and training employers and employees to recognize, avoid, and prevent unsafe or unhealthful working conditions and (2) consult with and advise employers and employees on effective means of preventing occupational injuries and illnesses. During fiscal year 1975, OSHA spent about \$8.9 million on training, information, and education--providing direct training to about 122,200 employers and employees and issuing informational materials.

Data on the causes and potential causes of death and serious disabling injury and illness is needed for (1) determining the level of information and education needed to help prevent them and (2) directing these activities to the main problems.

OSHA spent about \$71 million on enforcement during fiscal year 1975 and about \$8.9 million on information and education. The causes of many deaths and disabling injuries and illnesses might be better controlled through a combination of information, education, and enforcement. For example, a contractor (see p. 17) reported that inspections in the longshoring industry would not have a major impact because of difficult industrial relations, economic factors, worker habits and attitudes, and inadequate supervision. The report concluded that longshoring injuries and illnesses could best be reduced through research and information and education.

OSHA information and education officials said that the data being obtained does not provide the specific causes which they need to know to determine the conditions most suitable for control through information and education.

CHAPTER 3

SEVERITY AND CAUSES OF INJURIES

AND ILLNESSES NOT ADEQUATELY IDENTIFIED

Since beginning operations in April 1971, the Occupational Safety and Health Administration has tried to obtain data with which to direct and evaluate its activities. But such data has been inadequate for directing its standards development, enforcement, and information and education programs to specific problems that cause, or can cause the most deaths and serious disabilities.

In its responses to the subcommittee's issue papers, the Department of Labor said that the actions taken and planned by OSHA involved obtaining and using data from

- an annual national survey of injuries and illnesses as reported by employers,
- summaries of data on injuries and illnesses obtained from State workmen's compensation records,
- special supplementary studies, and
- investigations of accidents resulting in death or in the hospitalization of five or more workers.

The national survey was designed mainly to provide estimates of injury and illness frequency in various industries. It provides the number of reported injuries and illnesses resulting in death, but the data on nonfatal cases is inadequate for determining the frequency of seriously disabling injuries and illnesses. The survey does not contain information on accident causes and only vaguely indicates illness causes. Even though OSHA regulations require all employers to record in detail the nature and cause of each work-related injury and illness, OSHA does not require employers to report such detailed information under the national survey.

Although the studies of State workmen's compensation records were made to obtain data on injury and illness causes, the data generally did not specify the causes of deaths and the severity and causes of injuries and illnesses.

OSHA had similar problems in its special supplementary studies. The first such study completed was in the longshoring industry under a contract with a consultant. Although one of the objectives was to determine the causes of longshoring injuries, the data obtained was too general.

OSHA officials, recognizing the need for more specific data on the severity and causes of injuries and illnesses, have stated that sometimes such data can be obtained only through investigations at workplaces.

Although OSHA investigated thousands of accidents since its creation in 1971, the data summarized from such investigations did not adequately identify the specific causes. Also, OSHA's investigations do not cover illnesses and, except for catastrophies (accidents resulting in hospitalization of five or more workers), do not include nonfatal, but serious disabling injuries.

States operating under OSHA-approved plans have made thousands of accident investigations, but OSHA has not compiled and analyzed the results.

OSHA needs to (1) better identify the specific occupational hazards and conditions that are most likely to cause death and serious disability and (2) use such data to determine what enforcement, standards development, and information and education are needed to protect employees from such hazards and conditions.

The remainder of this chapter discusses the problems with OSHA's data-gathering programs and what should be done to improve them. Resolution of these problems, however, will not resolve a critical problem OSHA has in obtaining data on such health hazards as toxic chemicals. (See ch. 4.)

ANNUAL SURVEY OF INJURIES AND ILLNESSES

OSHA regulations require employers to record, on OSHA form 101, the following information on each work-related injury or illness.

- What the employee was doing when injured or exposed to something that caused illness. For example, if the employee was using tools or equipment or was handling material, the employer must name them and tell what the employee was doing with them.
- How the accident or exposure to the health hazard occurred. The employer must record fully the events which resulted in the injury or illness. He must record what happened and how it happened and must name any objects or substances involved and tell how they were involved. He must give full details on all causes and contributing factors.

--The object or substance which caused injury or illness. For example, the employer must record the specific machine or thing the employee struck against or which struck him; the vapor or poison he inhaled or swallowed; the chemical or radiation which irritated his skin; or in case of strains, hernias, and other conditions, the object he was lifting, pulling, or otherwise using.

--The nature of injury or illness. The employer must describe the injury or illness in detail and indicate the part of the body affected. Appropriate descriptions, for example, would be "amputation of right index finger at second joint," "fracture of ribs," "lead poisoning," or "dermatitis of left hand."

The requirements appear to provide for recording adequate information on causes; however, no clear statement on the severity of the injury or illness is required. Although any amputation is serious and permanent, the same would not always be true for fractured ribs, lead poisoning, dermatitis, and other conditions.

Employers who do not keep records as required by the regulations are subject to citations and penalties. But, as discussed below, OSHA does not compile and use the data employers must record.

For the national survey for OSHA each year, the Bureau of Labor Statistics compiles and analyzes about 200,000 employer reports and projects injury and illness frequencies in various industries. The States assist BLS and receive Federal grants to cover 50 percent of their costs. During fiscal year 1975, total Federal costs of \$5.9 million included about \$2.5 million in State grants.

The employer reports show the numbers of fatalities, lost-workday cases, and nonlost-workday cases. Except for fatalities, the information on severity is vague. To be counted in the lost-workday category, an injury or illness needs only to result in one lost workday; included would be minor sprains, cuts, bruises, and skin irritations. Nonlost-workday cases can include injuries and illnesses that are more severe than some lost-workday cases; for example, amputation of part of a finger may result in no loss of worktime beyond the day of the accident.

The latest BLS survey showed that in 1974 there were an estimated 5.9 million injuries and illnesses. The only indications of severity were that an estimated 5,900 were

fatalities and 2 million were lost-workday cases, resulting in a total of 31 million lost workdays.

The purpose of the BLS survey is to provide national estimates of injury and illness frequency in various industries. The employer reports used in the survey do not specify workplace hazards or causes of the injuries and illnesses. All injuries are reported in one category called "occupational injuries." Illness categories are

- skin diseases or disorders,
- dust diseases of the lungs,
- respiratory conditions due to toxic agents,
- poisoning,
- disorders due to physical agents,
- disorders due to repeated trauma, and
- all other occupational illnesses.

These categories are too broad to indicate the specific causes. For example, the category dust diseases of the lungs includes silicosis, asbestosis, byssinosis, and other diseases. The category poisoning includes poisoning by lead, mercury, and other metals; carbon monoxide, hydrogen sulfide, and other gases; and by chemicals such as arsenic, formaldehyde, plastics, and resins.

The scope of the national survey and the wide variety of causes may make it impractical to modify the survey to provide all of the detailed information that might be needed on specific causes. It seems practical, however, to modify the survey to provide more useful data on causes and more meaningful data on the severity of injuries and illnesses. Such data could help identify problem areas for more indepth studies, if warranted, to ascertain specific causes.

SUMMARIES OF STATE WORKMEN'S COMPENSATION RECORDS

OSHA obtains its basic data on the causes of injuries and illnesses through a BLS-directed study of workmen's compensation records maintained by the States. States compile data and submit it to BLS and receive Federal grants to cover 50 percent of their costs. In fiscal year 1975, 27 States and the District of Columbia participated in the program and received grants totaling about \$922,000.

Data compiled under the workmen's compensation studies is obtained from initial injury or illness reports which are usually prepared and submitted to the States by employers. Labor said that, in many instances, the State systems were based on the same data that OSHA regulations require employers to keep on OSHA form 101. (See p. 12.) From these reports, the States compile data on the accident type, nature of injury or illness, part of body affected, and source of the injury or illness. BLS has required the States to group the data for various industries under the following categories.

Categories Specified by BLS for Use in
Reporting Injury and Illness Characteristics Under
State Workmen's Compensation Studies

<u>Accident type</u>	<u>Nature of injury or illness</u>
Struck against or by Fall (or slip) Caught in, under or between Overexertion (or strain) Contact with temperature extremes Inhalation, injestion, absorption Contact with electric current Motor vehicle accidents Other accident types Type unclassified or not reported	Amputation or enucleation Strain, sprain, dislocation, hernia Cut, laceration, puncture Contusion, crushing, bruise Fracture Burn or scald Dermatitis, poisoning, pneumoconiosis, radiation effects Other nature--injury Other nature--illness or disease Nature unclassified or not reported
<u>Part of body</u>	<u>Source of injury or illness</u>
Head, neck Eye(s) Upper extremities Finger(s) Trunk Back Lower extremities Other body parts Body part unclassified or not reported	Machines Handtools Hoisting apparatus, convey- ors, elevators Working surfaces Chemicals, heat, heating equipment Ladders Boxes, barrels, containers packages (empty or full) Wood items, not elsewhere classified Other sources (agency) Other source (agency) unclas- sified or not reported

These categories do not reveal the specific causes of deaths and the causes and severity of disabling injuries and illnesses. For example, the data does not show what caused employees to be "struck against or by," the specific types of machines involved in injuries, or the severity of cuts, lacerations, and punctures.

OSHA and State officials said the categories were too broad to indicate causes. For example, they said data showing that most injuries in a given industry involve machines provides no indication of specific causes and could only serve as a basis for further investigations to identify the type of machines involved. Also, as shown in the following table, data on source of injury or illness reported by seven States indicates that use of these categories results in nearly half of the cases being listed as "other" or "unclassified."

	<u>Total injuries and illnesses reported</u>	Number for which source was reported as other or <u>unclassified</u>
Alaska	4,264	1,478
Iowa	16,134	8,561
Missouri	113,429	43,158
Nebraska	57,210	35,013
Tennessee	13,182	7,124
Virginia	2,989	1,746
Wisconsin	<u>51,547</u>	<u>26,855</u>
Total	<u>258,755</u>	<u>123,935 (47.9%)</u>

Note: All data is for calendar year 1974 except for Virginia, which is for calendar year 1973.

The practicality of modifying the workmen's compensation studies to provide detailed information on specific causes and severity depends upon whether the source records contain adequate information. California and Idaho officials said that the source records usually contained only brief statements on injury or illness causes and did not identify specific causes.

Moreover, the workmen's compensation studies might not be necessary if OSHA modified the BLS national survey and the accident investigation program (see pp. 17 and 18) to obtain the needed information on severity and cause from the workplaces where injuries and illnesses occur.

SPECIAL SUPPLEMENTARY STUDIES

OSHA conducts special industry studies to supplement the injury and illness data from the BLS national survey, workmen's compensation records, and accident investigations. The first of these studies--in the longshoring industry--was completed in August 1975 under contract with a consultant.

The objectives were to (1) examine OSHA's effectiveness in reducing the high injury rate in the longshoring industry, (2) determine the causes of longshoring injuries, and (3) make specific recommendations to improve OSHA's standards, enforcement, and employee and employer education programs. To determine the causes of longshoring injuries, the contractor reviewed employers' injury and illness reports; interviewed employees, employers, union leaders, industry representatives, and OSHA field personnel; and reviewed existing studies and statistics.

The contractor's report summarized information obtained from employers' injury and illness forms, including data on the type of accident, nature of injury, primary source of injury, and primary cause of the accident. Some of the major categories reported are shown in the following table.

<u>Type of accident</u>	<u>Nature of injury</u>
Cut or struck against object	Contusion/swelling
Slipped, tripped on same level	Sprain/strain
Hit by falling object	Laceration/abrasion
<u>Primary source of injury</u>	<u>Primary cause of accident</u>
Cargo	Unsafe procedure--injured
Vehicle	Unsafe procedure--others
Other (not classified)	Poor housekeeping

This data has the same limitation as that provided by the national survey and State workmen's compensation studies discussed earlier. It is too broad to indicate causes of deaths and disabilities. For example, it fails to show how serious the contusions were, how cargo was involved in the injuries, or the specific unsafe procedures that caused workers to be hurt.

DATA FROM ACCIDENT INVESTIGATIONS

Accident investigations at workplaces are needed to determine the specific causes of injuries. OSHA has investigated thousands of accidents and has helped finance thousands

of accident investigations by States. We identified the following limitations of accident investigation data.

- The data summarized by OSHA from the investigations does not adequately identify specific accident causes and relate them to existing standards.
- OSHA does not compile and analyze States' accident investigation data.
- Accident investigations generally are limited to fatalities. Data on accidents resulting in nonfatal but serious injuries is not obtained.

For one category of accident--mechanical power presses--OSHA made a special effort to get specific data on severity and causes of injuries. It required employers to report to OSHA on all injuries on mechanical power presses. OSHA inspectors made onsite investigations of a selected number of reported cases involving serious injury. The employers' reports and the OSHA investigations provided much better data on the severity and causes of the injuries than that obtained under the national survey, workmen's compensation program studies, and the special supplementary studies. The data enabled OSHA to relate the causes of mechanical-power-press injuries to OSHA's standards and showed the need for enforcement and information and education efforts.

Accident causes not identified and related to standards

Regulations require that in States not operating under OSHA-approved plans, employers must notify the nearest OSHA area office within 48 hours of any job-related accident that results in a death or catastrophe (hospitalization of five or more employees).

The OSHA compliance operations manual requires that investigations of the reported accidents be given priority second only to imminent danger situations and be made before other compliance inspections. The purposes of accident reports and investigations are to (1) correct hazards causing the accidents and (2) provide data on accident causes.

During fiscal year 1975, OSHA investigated 1,883 accidents. OSHA's summaries of data obtained during the investigations group the accidents into type of accident and source of injury. Some of the major types of accidents and sources of injuries summarized for fiscal year 1975 are shown in the following tables.

<u>Type of accident</u>	<u>Number of occurrences</u>	<u>Percent</u>
Struck by	459	21
Caught in or between	421	19
Fall from elevation	317	15
Shock	278	13
Inhalation	238	11

<u>Source of injury</u>	<u>Number of occurrences</u>	<u>Percent</u>
Electrical apparatus/wiring	306	14
Materials handling equipment	185	9
Fire/smoke	151	7
Buildings/structures	130	6
Chemical liquids/vapors	120	6
Working surface	117	5
Hoisting apparatus	116	5
Machine	102	5

This data does not adequately identify the specific causes of the accidents. For example:

- The data on source of injury does not show the specific types of materials handling equipment involved in the 185 accidents or how or why the accidents occurred.
- The data on accident type does not show what specific hazardous conditions caused the 317 employees to fall from elevations.

OSHA also summarizes data from its accident investigations showing the violations of standards cited for each accident, if any. This data indicates which accidents were related to established standards but does not show the specific requirements that were violated nor whether compliance could have prevented the accidents. The data shows which accidents were related to recognized hazards not covered by standards, but does not show what the hazards were. It also shows which accidents were related to neither established standards nor recognized hazards, but does not identify the specific hazardous conditions that caused the accidents.

Results of States' accident investigations not compiled

Generally, in States operating under OSHA-approved plans, employers must notify the State agency within 48 hours of any job-related accident that results in a death or catastrophe.

The approved plans provided that the States give high priority to investigating these accidents.

During fiscal year 1975, States operating under OSHA-approved plans investigated 3,668 accidents. Although one of the two purposes of the investigations is to obtain causal data, OSHA does not compile and analyze the State investigation results.

OSHA officials said that, in many States, OSHA makes few if any accident investigations itself but relies on the States to do so. As a result, there are some geographic areas from which OSHA does not obtain investigative data. For example, although 98 logging fatalities were reported during 1973 in 4 western States, OSHA made very few accident investigations in those States and did not compile data on State investigations of the accidents.

Serious injuries not investigated

Because employers' accident reports are usually limited to fatalities and catastrophes, they do not include accidents that cause nonfatal but serious injury to less than five employees. Therefore, investigations are not made of some serious accidents which involve causes quite different from the causes of deaths and catastrophes. For example, certain saws, conveyors, and other machines that cause amputations or crushing injuries seldom, if ever, cause deaths or multiple-employee injuries.

Special effort to determine causes of injuries on mechanical power presses

In December 1974 OSHA revised its standard on mechanical power presses to require employers to report all "point of operation" injuries on such presses. OSHA supported this requirement by stating in the record (Federal Register) that data on such injuries was limited and that more data was needed to monitor the effectiveness of the standard. Questions on the type of standard needed to prevent injuries on the presses were raised 2 years earlier when OSHA was petitioned to revoke certain parts of the standard. Employers were to report on the type of press involved, the safeguards in use, and the cause of the injury.

In July 1975 OSHA headquarters determined, through analyzing employers' reports on mechanical-power-press injuries during a 3-month period, that (1) more comprehensive data was needed on injury circumstances and (2) the data was obtainable only by investigating accidents at workplaces. The headquarters office directed area offices to investigate 50

reported amputations on mechanical power presses as soon as possible and provided detailed instructions for investigating the causes of the injuries.

The field investigations of the 50 cases were completed by September 1975. OSHA headquarters compliance personnel analyzed the investigation reports and summarized the causes of the 50 accidents as follows.

	Number of <u>cases</u>
No safeguards provided	20
Safeguards nullified by employee	11
Clearing scrap on jammed parts without handtools or with power on	9
Pullouts (hand restraints which automa- tically pull the hand out of the hazard area) not in use	5
Poorly maintained equipment	4
Sweep (a mechanical device which pushes the hands out of the hazard area) cir- cumvented	<u>1</u>
Total	<u>50</u>

Compliance personnel reviewed the causes in the 50 cases and concluded that the following safety problems could be identified in the workplace.

- Violations of OSHA standards requiring safeguards on presses.
- Actions by employees to circumvent safeguards.
- Lack of training of employees to properly use safety equipment and safeguards.
- Failure to maintain equipment and safeguards in good working order.
- Failure of supervisors to enforce company safety procedures.

OSHA headquarters officials prepared a final report on the 50 cases in November 1975. The report contained a detailed analysis of accident causes and said that:

- Employer reports of injuries on mechanical power presses provided new data on the frequency and severity of such injuries. The data was most useful in confirming the effectiveness of past revisions to OSHA's standards.
- The analysis enabled OSHA's inspectors to better recognize and understand the hazards of power presses. OSHA accident prevention efforts could be guided by further efforts of this type.
- The need to consider standards' revisions regarding control system, supervision, and training was indicated.
- OSHA should make a greater effort to make the standards more available and comprehensible to workers. Interviews with workers and supervisors showed minimum awareness of OSHA standards on mechanical power presses.
- Feedback was valuable to employers to help them improve workplace safety. Several workplaces had no mechanical power press safety rules or training.

In January 1976 OSHA headquarters prepared a report on its analysis of employers' reports of 306 mechanical-power-press injuries from July through December 1975. Concerning the severity of the injuries reported, 75 percent of the 306 cases probably resulted in permanently disabling injuries.

	<u>Number of cases</u>	<u>Percent</u>
Cuts and bruises--employees will probably heal and regain full capabilities	76	25
Fracture and crushing--probably permanent impairment of joint and muscle action	78	25
Amputations of fingers, hands, and arms	<u>152</u>	50
Total	<u>306</u>	100

The January 1976 analysis by OSHA headquarters showed the following causes for the 306 injuries.

	<u>Number of cases</u>
No safeguards provided	65
Handtools not used to feed, clear, or unjam machines	57
Safeguards provided were inadequate	41
Defective electrical or mechanical controls	40
Defective protective devices (note a)	22
Protective devices not used properly (note a)	19
Safeguards had been removed from machines	19
Machine controls had been altered	13
Protective devices did not function (note b)	9
Other (note c)	28
Second party (note d)	<u>6</u>
Total (note e)	<u>319</u>

a/Devices worn by workers to automatically pull their hands from the hazard area.

b/Devices that sweep workers' hands from hazard area; no additional information was presented on why they did not function.

c/According to the OSHA analysis report, conclusions on causes in these cases could not be drawn without further investigation.

d/Includes cases where (1) a worker not normally involved in production, and without safeguards, is injured and (2) helper or supervisor caused accident.

e/Totals more than 306 because some cases involved more than one cause or contributing factor.

Severity and causal information of the type included in the OSHA analyses appears more meaningful than the data accumulated under the BLS national survey and workmen's compensation record studies. The BLS survey shows nonfatal cases as lost-workday or nonlost-workday cases; all 306 cases cited above could have been counted as lost-workday cases, with no information to distinguish between permanent and temporary disability cases. The BLS survey provides little or no data on causes.

The workmen's compensation program data does not show the relative severity of injuries and contains only vague information on causes.

CONCLUSIONS

OSHA requires employers to keep records describing the severity and causes of work-related injuries and illnesses. OSHA and States investigate thousands of accidents at workplaces each year to ascertain the causes of accidents resulting in (1) death or (2) the hospitalization of five or more employees. However, OSHA has not used employers' records and accident investigation results to adequately identify severity and specific causes of injuries and illnesses.

The data compiled under the annual national survey of injuries and illnesses as reported by employers, the studies of workmen's compensation records, special supplementary studies, and accident investigations have not adequately identified the severity and causes of injuries and illnesses and, therefore, does not give OSHA a good basis for directing its safety and health activities to the most important problems.

The special effort OSHA made to obtain data on mechanical-power-press injuries provided more specific and usable data on severity and causes. This effort involved (1) obtaining specific severity and causal data from employers by requiring them to report to OSHA and (2) investigating a selected number of reported cases to obtain information not otherwise obtainable. The data enabled OSHA to relate the causes of the injuries to OSHA's standards and showed specific needs for enforcement and for information and education.

RECOMMENDATIONS TO THE SECRETARY OF LABOR

To provide the data OSHA needs to better direct its standards development, enforcement, and information and education activities toward reducing hazards that can cause death or seriously disabling injury and illness, we recommend that OSHA be directed to:

- Give high priority to (1) resolving the issues on how to obtain the data it needs from employers on the severity and causes of injury and illness and (2) establishing a system for obtaining and using the data.
- Modify the accident investigation program to (1) compile and analyze data on the specific causes of injuries and illnesses, (2) include the results of accident investigations by States, and (3) include, where necessary for getting additional causal data, investigations of nonfatal but serious accidents which are shown by other data to occur frequently.

- After establishing an adequate system for getting data from employers and improving the accident investigations program, reconsider the need for such other efforts as supplementary studies and limit such efforts to obtaining specific data that is needed but not obtainable under the system and the accident investigations programs.
- Evaluate the data on causes of death and serious injury and illness to determine what standards development, enforcement, and information and education efforts are needed to eliminate or reduce such causes.

AGENCY COMMENTS AND OUR EVALUATION

The Department of Labor, in a June 4, 1976, letter (see app. I) agreed with our assessment of the type and source of needed injury and illness data. Rather than modifying the BLS national survey to obtain from employers the detailed data OSHA regulations require them to record, Labor favored improving State workmen's compensation records and reports to obtain the data.

If the data can be obtained from State workmen's compensation systems, we have no reason to favor modifying the BLS national survey. However, in its June 4, 1976, letter Labor said that much needs to be done to enable OSHA to get adequate data from workmen's compensation records. Labor said that it needed to:

- Assess the feasibility of mandating a single first-report-of-injury form with a uniform definition for recordable injuries and illnesses to effect a single recordkeeping system for employers in all States.
- Develop existing workmen's compensation data into an integrated information system using data from the 15 States that will have data available during 1976.
- Assess the need for expanding the 15-State system to include all States and to include only sample data from a sample of the States and to outline problems, feasibility, probability, budget requirements, and general resource requirements.
- Assess the degree to which the resultant data system satisfies the needs of standards development, training and education program development, and enforcement planning and scheduling.

Because of the importance of adequate data in directing and evaluating OSHA's operations and because OSHA has operated for more than 5 years without adequate data, Labor should decide whether the data can be obtained through workmen's compensation programs or whether another method, such as modifying the BLS national survey, is necessary.

Concerning accident investigations, Labor suggested that our recommendations be revised as follows: (1) modify the program to assure that accurate causal factors are properly recorded, compiled, analyzed, and integrated into program development activities, (2) assess the feasibility of broadening the program to include more severe injuries and illnesses which occur frequently, and (3) broaden the program to include the results of State accident investigations. Except for the second item, such action would be consistent with our recommendations. On the second item, the feasibility of investigating more severe nonfatal accidents was demonstrated by OSHA's experience with mechanical-power-press injuries.

Regarding our recommendation on reconsidering the need for supplementary studies, Labor suggested that it be revised as follows:

"Review the conceptual framework and objectives of supplemental studies to determine the OSHA/NIOSH interface, to establish clear cut procedures for their conduct and to integrate study results into program actions."

Such action would be consistent with our recommendation, provided that the studies are limited to obtaining specific data that is needed but not obtainable under OSHA's basic system for getting data from employer records and accident investigations.

CHAPTER 4

DIFFICULTY IN OBTAINING DATA ON HEALTH HAZARDS

The Occupational Safety and Health Administration's data systems are based on work-related injuries and illnesses reported by employers. However, many workers can be exposed to a health hazard for many years before the resulting illness shows up as a reported case. Adequate data has not been available concerning the relative significance of health hazards and for directing a program to protect employees from such health hazards.

Although the 1970 act authorizes OSHA to obtain from employers whatever data it deems necessary for worker protection, OSHA has not obtained adequate data. The magnitude of potential health problems related to employee exposure to toxic substances and harmful physical agents makes it imperative that OSHA obtain information from employers on (1) their use of potentially hazardous substances, (2) the number of employees exposed to such substances, and (3) the effects of such exposure on employee health.

Such information is important so that OSHA can establish priorities and set standards for the thousands of toxic substances not now covered by standards. Developing comprehensive standards on such substances, at the current rate of development, could take 100 years or more. The information would also be useful in directing OSHA and State inspections and information and education.

EXISTING DATA SYSTEMS NOT RELIABLE FOR HEALTH HAZARDS

Occupational illnesses from exposure to toxic substances and other health hazards in the workplace can be more difficult to detect than injuries. Because of the problem of detecting illnesses and associating them with workplace conditions, the OSHA data systems based on injury and illness cases reported by employers understate occupational illnesses.

According to National Institute for Occupational Safety and Health officials, any system which depends upon employers' reports will significantly understate the frequency of work-related illnesses. A study funded by NIOSH showed that only about 2 percent of the probable work-related illnesses detected by medical examinations at worksites had been recorded in the employers' logs of injuries and illnesses. Such logs are used by employers for reporting to the Bureau of Labor Statistics under the national survey.

The records used in workmen's compensation studies are completed by employers and, to some extent, by physicians who may be involved in the cases. Thus, the accuracy of illness frequency data from workmen's compensation records depends upon the employers' and physicians' recognition and reporting of illnesses as work-related.

OSHA officials have stated that (1) links between cause and effect can be established only through exhaustive indepth studies of a particular workplace for a particular occupation, (2) indepth studies could not reasonably be made nationwide for all affected occupations and all workplaces, and (3) it is possible, however, to collect data from a variety of sources and to infer possible cause and effect relationships.

Even if illnesses could be readily associated with working conditions, relying solely on data derived from reported illnesses could fail to reveal serious health hazards until the effects of exposure show up as causes of reported illnesses. Because the effects of some hazards may not show up for several years, many workers might be exposed for a long time before preventive action would be taken.

MAGNITUDE OF HEALTH HAZARD PROBLEM

NIOSH is required by the 1970 act to publish, at least annually, a list of all toxic substances and the concentrations at which such toxicity is known to occur. The first such list was published in 1971.

In June 1975 NIOSH published a list 1/ containing 16,500 different chemicals which had been demonstrated to be toxic. 2/ The list cited at least 1,545 of these chemicals as

1/"Registry of Toxic Effects of Chemical Substances," 1975 edition.

2/HEW said that including a chemical or substance on the NIOSH list does not automatically imply that it is hazardous in common usage. According to NIOSH, a listing does mean that the chemical or substance has the documented potential of being misused and, therefore, care must be exercised to prevent tragic consequences.

suspected carcinogens. 1/ It indicated also that 15,900 of the chemicals were not yet covered by OSHA standards. NIOSH officials have said that standards are needed on at least 2,000 of these substances.

Of the 600 substances listed by NIOSH as covered by an existing OSHA standard, 17 were covered by standards set by OSHA since it began operations in 1971. The standards on the remaining substances were merely threshold limit values (TLVs) that existed before the act's passage and were adopted by OSHA pursuant to the act.

OSHA's current standards development effort includes (1) establishing comprehensive work practices, engineering controls, and other requirements for about 400 substances covered by TLVs and (2) establishing TLVs and comprehensive work practices, engineering controls, and other requirements for about 20 to 30 substances for which there are no TLVs. Establishing TLVs and comprehensive work practices and controls requires extensive indepth study and research into the effects of the substances on workers and how to limit exposure.

At the past rate of progress, it could take OSHA 100 years or more to establish standards for toxic chemicals not yet covered. The problem is further compounded because several thousand new substances are introduced into industry each year, many of which may be harmful and require standards.

A basic problem inherent in this situation is the lack of data upon which to base priorities for standards development. To give priorities to those toxic substances that pose the greatest danger, OSHA needs information on the relative effects of such substances and the numbers of workers being exposed.

To date, OSHA has not developed a reliable source or method for getting such data. OSHA has not fully used its authority for obtaining needed data directly from the employers who manufacture, distribute, or use the substances.

1/NIOSH stated that (1) these chemicals were identified as having carcinogenic activity as reported in the literature, (2) no critical evaluation of test protocol or derived data had been performed, (3) the actual presence of the chemicals in the workplace had not been determined, and (4) the list may not include all demonstrated carcinogenic substances.

The situation, regarding known toxic substances and the rate that new substances are being introduced, makes it imperative that OSHA initiate strong actions to find out which employers are using known toxic substances in their workplaces, the number of employees exposed, and the effects of such substances on employee health.

Recent testimony by OSHA and NIOSH officials indicate that action is needed not only to provide data for directing standards development efforts but also to provide at least some degree of worker protection from the substances not yet covered by standards until comprehensive standards can be set. Workplace data is needed also for substances that are covered by standards to help OSHA direct workplace inspection efforts. Information and education efforts would benefit from such data, regardless of whether the substances are covered by standards.

TESTIMONY BY OSHA AND NIOSH ON KEPONE

Kepone is the trade name of a chlorinated insecticide, decachloro-otahydro-1,3,4,-metheno-2H-cyclobuta(cd)pentalen-2-one, which is commonly called chlordecone. The compound was first introduced in 1958 and has been used as an insecticide against leaf-eating insects, ants and cockroaches, and as a larvicide against flies. Kepone has been on NIOSH's toxic substances list since 1971.

In July 1975 the Department of Health, Education, and Welfare's Center for Disease Control (CDC) received a blood sample from a physician in Hopewell, Virginia, with the request that it be analyzed for Kepone. The sample was from an employee of a Kepone plant who had symptoms of weight loss, tremor, twitching eyes, and nervousness. The analysis of the blood showed a high level of Kepone--7.5 parts per million.

A total of 148 workers had worked at the plant since it opened in March 1974. Studies of 113 of those workers showed that over half had symptoms of Kepone poisoning, which the employer called the "Kepone shakes." Symptoms included nervousness, tremor, twitching of the eyes, lack of coordination, weight loss, chest and joint pain, and skin rash. The symptoms began to appear about 6 weeks after employment and persisted for as long as 6 months after employment ended. At the urging of the Virginia State Department of Health, the plant was closed on July 26, 1975.

The ultimate effects of exposure to Kepone are not known. CDC, NIOSH, and State officials plan to continue

surveillance of the exposed workers. Open to question is whether there are delayed effects of Kepone, particularly carcinogenicity in people. A study report released by the National Cancer Institute (NCI) in January 1976 showed that Kepone induces a significant incidence of liver cancer in rats and mice.

During hearings on January 27, 1976, before the Subcommittee on Agricultural Research and General Legislation, Senate Committee on Agriculture and Forestry, the Assistant Secretary of Labor for Occupational Safety and Health said:

"Mr. Chairman, you have every right to ask whether we can guarantee that future incidents of this nature will not occur. My response is and must be that we can make no such guarantee. OSHA, and all those concerned with the welfare of America's working men and women, remains susceptible to the tragic revelations of deleterious workplace chemicals and substances which we have experienced in recent years. If I may be permitted an analogy, attempting to ferret out the location of each and every toxic substance used in the workplaces of America and to ensure that employees are adequately protected is akin to locating a single element of a kaleidoscope which is constantly shifting and changing its nature.

* * * * *

"* * * Our toxicological information resources are inadequate. * * *" (Underscoring supplied.)

During hearings on January 30, 1976, before the Subcommittee on Manpower, Compensation, and Health and Safety, House Committee on Education and Labor, the NIOSH Director stated:

"* * * Why is it that only after workers had been heavily exposed to Kepone did we learn that it may be a human carcinogen? * * * Kepone was one of 17,000 chemicals on our list of toxic substances. In determining which of those substances will be chosen for the 24 criteria documents we can develop each year, we must rely heavily on information available in published studies. We attempted to supplement that information last June by publishing in the Federal Register a list

of 1500 suspected carcinogens and requested all available information on them, including any toxicologic studies. Over a 7 month period we have received only 36 responses. Of these, only 20 contained some new information. As is too often the case, only in our search for information after the Hopewell Kepone plant was closed did we learn of the Allied Chemical Company studies completed in 1960 and 1961 implicating Kepone as a carcinogen. * * *

* * * * *

"Unfortunately, the tragedy that occurred here in Hopewell probably is not an isolated incident. There are approximately 100 pesticide manufacturers in the United States, about 3000 formulating operations, and tens of thousands of applicators. Although there is ample information on the effects of pesticides on pests and some information on the acute effects on man, little is known about chronic effects of human exposure to most pesticides. Inconclusive data suggest, however, that many pesticides in addition to Kepone may be carcinogenic in man. It is important that such pesticides be identified and controlled as soon as possible. * * *

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"In reviewing the events surrounding this tragedy, it is obvious that we at NIOSH and others in public health need better access to information about potential health hazards * * *." (Under-scoring supplied.)

On January 27, 1976, after NCI released its study report, NIOSH recommended to OSHA that a standard be set to limit worker exposure to Kepone to 1 microgram per cubic meter of breathing zone air for up to a 10-hour day, 40-hour week, over a working lifetime. NIOSH recommended also that employers using Kepone be required to:

- Provide periodic medical examinations and maintain medical records for 30 years.
- Display labels and signs warning employees that Kepone may cause cancer and permanent nerve damage.

- Insure that protective clothing be changed at least daily at the end of the shift, and that Kepone-contaminated work clothing not be worn home.
- Prevent the discharge of Kepone into municipal waste treatment systems.
- Provide approved respirators to employees.
- Inform employees of the hazards of Kepone, the relevant signs and symptoms of overexposure, appropriate emergency procedures, and proper conditions and precautions for safe use.
- Provide special washing facilities, food facilities, and clothing and locker room facilities.

As of March 1976, OSHA had not issued a standard on Kepone. However, it has sent guidelines for protecting workers to establishments processing Kepone. The guidelines contained most of NIOSH's recommendations. OSHA was revising its instructions to inspectors for inspecting for Kepone to incorporate NIOSH's recommendations.

OSHA NOT FULLY USING AUTHORITY TO
OBTAIN DATA FROM EMPLOYERS AND
PROTECT EMPLOYEES

OSHA needs data on the locations of workplaces using toxic substances, the number of employees exposed, and the effect of such exposure on employee health.

Without such data, OSHA does not know (1) which of about 16,500 known toxic substances--including at least 1,500 that may cause cancer--warrant comprehensive standards or (2) what relative priorities to assign to developing these standards. This problem gets larger each year as thousands of new chemical compounds are introduced.

The same problem exists for many of the toxic substances covered by existing standards. Without data on workplaces using such substances, the number of employees exposed, and the effects of exposure on the employees, OSHA has difficulty identifying the substances that pose the most significant threat to worker health and deciding where to direct inspection efforts.

OSHA's present systems for obtaining data on injuries and illnesses have not provided the needed data. Moreover, OSHA's present procedure of establishing TLV's, comprehensive

work practices, and engineering controls before promulgating standards--a procedure requiring extensive months or years of indepth study and research--may result in long-term exposure of employees to toxic substances which can cause death or serious illness.

We believe that, pending development of more comprehensive standards, OSHA has authority under section 6 of the Occupational Safety and Health Act to promulgate standards based on information available where such standards are needed to protect employees from possible work hazards and to obtain critical data.

OSHA has not made full use of its authority to (1) meet its needs for data on the exposure of workers to known toxic substances or (2) provide as much worker protection as possible against such exposure, pending the development of more comprehensive standards.

Section 6(b)(5) of the act provides:

"The Secretary [of Labor], 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." (Underscoring added.)

Section 6 requires only that the standard be based on the "best available evidence." It is clear that the Congress did not intend for any standard to represent for all time the means by which to provide safe or healthful employment. The Senate Committee on Labor and Public Welfare in its report to the Senate on the bill stated: "* * * it

is essential that such standards be constantly improved and replaced as new knowledge and techniques are developed." (S. Rep. No. 91-1282 (1970)).

The act thus provides that standards may be modified or revoked in accordance with the rule-making procedures of section 6. Also, OSHA is given the authority to promulgate emergency temporary standards under section 6(c) where employees are being exposed to grave danger.

Standards, under section 6(b)(7), shall prescribe the use of labels or other appropriate forms of warning as are necessary to insure that employees are apprised of all hazards to which they are exposed, relevant symptoms and appropriate emergency treatment, and proper conditions and precautions of safe use or exposure.

Where appropriate, a standard shall also prescribe suitable protective equipment and control or technological procedures to be used in connection with such hazards and shall provide for monitoring or measuring employee exposure as may be necessary for employee protection. Also, this section states that a standard, where appropriate, shall prescribe the type and frequency of medical examinations or other tests, which shall be made available to employees exposed to such hazards, to most effectively determine whether their health is adversely affected by such exposure. In the event such medical examinations are in the nature of research, as determined by the Secretary of Health, Education, and Welfare, they may be furnished at his expense.

Section 8(c)(1) provides that each employer shall make, keep and preserve, and make available to OSHA or NIOSH such records regarding his activities relating to this act as the Secretary of Labor, in cooperation with the Secretary of Health, Education, and Welfare, may prescribe by regulation as necessary or appropriate for enforcement of the act or for developing information regarding the causes and prevention of accidents and illnesses.

Section 8(c)(3) provides that the Secretary of Labor, in cooperation with the Secretary of Health, Education, and Welfare, shall issue regulations requiring employers to maintain adequate records of employee exposure to potentially toxic materials or harmful physical agents which are required to be monitored or measured by standards issued under section 6. Such regulations shall provide employees or their representatives with an opportunity to observe such monitoring or measuring and to have access to the records which will indicate his own exposure to toxic materials or harmful

physical agents. Each employer shall promptly notify any employee who has been or is being exposed to toxic materials in concentrations or at levels which exceed those prescribed by a standard and shall inform any employee who is being thus exposed of the corrective action being taken.

Thus, we believe that OSHA has authority to issue standards which require any employer who is using a known toxic substance in his workplace to report to OSHA on his use of such substance, the number of workers exposed, and the effects of such exposure on employee health.

Concerning the effects of exposure to toxic substances, the act authorizes OSHA to require, in any standard promulgated under section 6, periodic medical examinations and related recordkeeping. To date, OSHA has required medical examinations, monitoring, and recordkeeping for only about 16 substances for which it has issued comprehensive standards.

CONCLUSION

Of an estimated 16,500 chemicals known to be toxic--about 1,500 of which are suspected carcinogens--only about 600 are covered to some degree by existing standards. At the current rate of standards development, it may take 100 years or more to develop needed health standards. In order to ascertain which toxic substances warrant comprehensive standards, to protect employees from possible risks or hazards, and to develop priorities in developing comprehensive standards OSHA should, under its existing statutory authority, initiate a program to obtain the information it needs from employers. Such a program should provide for OSHA, in consultation with NIOSH, to review existing standards and related data, NIOSH's listing of toxic substances, and other appropriate data to identify the substances which warrant required reporting by employers.

For each substance or group of substances so identified, OSHA should set a standard based on information available requiring each employer who has employees exposed to such substance or substances to report to OSHA the locations of the workplaces and the number of employees exposed. The regulation should require, where appropriate and feasible, monitoring, recording, and reporting of exposure levels. The employer should be required to provide periodic medical examinations of exposed employees where a possible risk of harm exists and to maintain records of such examinations for reporting to OSHA upon request. Such a standard should prescribe appropriate safety measures to the extent feasible.

Such a program should (1) provide OSHA with essential data for better directing its standards development efforts, (2) be useful in OSHA's workplace inspection and information and education programs, and (3) provide at least some degree of worker protection from toxic substances pending the development of more comprehensive standards, which, at the current rate of development, could require 100 years or more.

RECOMMENDATIONS TO THE SECRETARY OF LABOR

We recommend that the Secretary of Labor direct OSHA to initiate a program, in consultation with NIOSH, for reviewing existing standards and related data, NIOSH's listing of toxic substances, and other appropriate data to identify the toxic substances and harmful physical agents which warrant reporting by employers. The program should require the promulgation of standards, on the basis of information available, that shall include as appropriate:

- Provisions for obtaining from employers information on employees' exposure to such identified substances and physical agents and on the effects of the exposure on employee health.
- Requirements for employers to provide periodic medical examinations to exposed employees where a possible risk of harm exists and such other protective measures as may be prescribed on the basis of available data.
- Not only those substances and physical agents not covered by standards, but also those that are already covered that do not require employer reporting on exposure and effects on worker health.
- Monitoring, recording, and reporting of exposure levels.

AGENCY COMMENTS AND OUR EVALUATION

The Department of Labor disagreed with our recommendations. (See app. I.) The Department of Health, Education, and Welfare stated that OSHA should conduct the recommended program in consultation with NIOSH. (See app. II.)

Labor said that:

- Our interpretation of OSHA's legal authority was not consistent with Labor's interpretation.

--The recommended actions would have severe economic impacts, require additional staff resources, and would be contrary to present efforts to minimize the paper-work burden on employers.

Labor's comments were influenced by its interpretation that we advocated issuing one standard for all or "a subset" of the most hazardous toxic substances.

We recognize that such a broad standard may not be possible or practical. This is why we stated on pages 36 and 37 that the recommended program should provide for OSHA to (1) identify, based on available data and in consultation with NIOSH, substances which warrant required reporting by employers and (2) issue a regulation for each substance or group of substances so identified. Grouping more than one substance under one regulation may be desirable for similar substances, substances common to a particular type of workplace, substances that cause similar illnesses, or for other reasons. For example, OSHA issued one standard covering 14 carcinogenic chemicals.

Concerning our interpretation of OSHA's legal authority, Labor said that:

--The provisions in section 8 of the act for requiring employers to record employee exposures are applicable only to substances required to be monitored or measured under section 6.

--Since no mention is made of recordkeeping for monitoring exposure or conducting medical examinations for substances not covered by section 6, OSHA's authority to issue regulations as recommended is not clearly established.

--Issuing standards under section 6 requires OSHA to demonstrate the need for and effectiveness of the standard in safeguarding worker safety and health.

In our opinion, OSHA has ample authority, as cited on pages 33 to 36, to issue standards to require any employer who is using a known toxic substance in his workplace to report to OSHA on his use of such substance, the number of workers exposed, and the effects of such exposure on employee health. We believe also that OSHA has authority to set standards requiring periodic medical examinations and related recordkeeping.

We agree that OSHA must demonstrate the need for standards and we recognize that the ability to do so may vary with the adequacy of data available on given substances. In our opinion, section 6 recognizes that available data may not support an ideal, all-inclusive standard and provides flexibility to set whatever standards may be supported by available data. For example, if available data shows that a substance is toxic or potentially toxic to people but is not adequate to support an exposure limit, OSHA could use the authority in section 6 to set a standard requiring such other protective measures as can be supported by the evidence. Supportable measures may include reporting, exposure monitoring, medical examinations, warning labels, and employee information.

Although it commented on economic impact, the size of the data-collection effort, and the paperwork burden on employers, Labor did not say whether or not our recommended actions or other actions were needed to protect workers from the thousands of health hazards involved.

U.S. DEPARTMENT OF LABOR
OFFICE OF THE ASSISTANT SECRETARY FOR ADMINISTRATION
WASHINGTON, D.C. 20210



4 JUN 1976

Mr. Gregory J. Ahart
Director
Manpower and Welfare Division
United States General Accounting
Office
Washington, D. C. 20548

Dear Mr. Ahart:

Enclosed, as requested, is the Department's response to the draft GAO report "Better Data on Severity and Causes of Worker Safety and Health Problems Should be Obtained from Workplaces."

Sincerely,

Fred G. Clark
FRED G. CLARK
Assistant Secretary for
Administration and Management

Enclosures

SECTION I: INTRODUCTION AND SUMMARY

1.0 Introduction

The draft GAO report entitled "Better Data on Severity and Causes of Worker Safety and Health Problems Should Be Obtained From Workplaces" (hereinafter, the Report) summarizes a number of data-related issues which were raised in the Senate Oversight Hearings held in 1974. The consensus opinion, as indicated in the Report, is that OSHA needs better data to improve its ability to evaluate program effectiveness and to enhance its ability to determine appropriate policy changes.

The conclusions and recommendations presented in Chapter 3 and 4 of the Report reflect an incomplete understanding of some program activities and an incomplete review of other related activities. Nevertheless, the Report does reflect a good understanding of OSHA's basic data requirements and, with some revisions, the recommendations would, if acted upon, greatly improve program performance.

1.1 Summary

It is believed that the recommendations in Chapter 3 should be revised to reflect OSHA's hierarchy of data needs. In short, revisions to the BLS survey to reduce the recordkeeping burden on employers have already been made. OSHA and BLS are currently working together to improve the quality, quantity and uniformity of workers' compensation data to assure that adequate descriptive and severity information is obtained. ^{1/} And, OSHA needs to further clarify the role of and procedure for developing supplementary studies.

The basic recommendation in Chapter 4 is somewhat unrealistic in that it raises serious questions concerning: OSHA's legal authority to set a broad recordkeeping and monitoring standard; and the general feasibility of implementing a program to accommodate the resultant data which would be generated, and thus need to be collected, processed, analyzed and acted on.

Suggested revisions to the Report's recommendations are included in the subsequent sections. Clarifications of statements in the Digest and Chapters 1 and 2 of the Report are included in Appendix A.

^{1/} The intent is to assure that OSHA has access to data equivalent to the OSHA 101 with added information on compensation and medical costs.

**SECTION II: RESPONSE TO CHAPTER 3: SEVERITY AND CAUSES OF
INJURIES AND ILLNESSES NOT ADEQUATELY IDENTIFIED****2.0 Summary of Chapter 3**

There are several recommendations in Chapter 3 of the Report. Basically, the recommendations may be categorized in three areas:

- (1) Broaden the annual BLS survey to obtain data on severity, degree of disability and causality by revising the Recordkeeping Requirements including OSHA Forms 100, 101, and 103;
- (2) Broaden the accident investigation program to cover a greater number of severe injuries and illnesses; to obtain better data on causality; and to obtain similar data from plan States;
- (3) Evaluate both current data and new data to determine the need for workers' compensation data and the special supplementary studies.

These recommendations were based on conclusions drawn from a limited review of: the current annual BLS survey; summary data from selected States' workers' compensation data systems prepared by BLS (referred to as the Supplementary Data System); special supplementary studies such as the longshore study and the power press study; and the general accident investigation activities including the review, analysis and interpretation of the resulting data for program use. In general, the Report's conclusions indicated that each of these activities was deficient in satisfying OSHA's program requirements.

2.1 Discussion of Chapter 3 Conclusions and Recommendations

The conclusions and recommendations reflect an incomplete understanding of the comprehensive data plan which was provided to GAO informally in September 1975. Thus the conclusions and recommendations do not reflect a complete review of all of the data-related activities underway in OSHA and in BLS. Essentially, there appear to be two defects in the Report's conclusions and recommendations in Chapter 3.

First, no apparent attempt was made to review detailed data available in workers' compensation first-reports-of-injury (FRI). This omission led to the conclusion on page 38 which states:

"With some modifications, the annual national survey and the accident investigation program could provide the information OSHA needs and could eliminate or reduce the need for continuing the studies of workmen's compensation records and special supplementary studies."

A comprehensive review of the workers' compensation systems would yield just the opposite conclusion. In fact, it would appear that the best and most detailed data would be available through the workers' compensation systems, which in many instances, are based on the OSHA 101 data recording/reporting requirements. The FRI includes basic descriptive information such as: nature of injury; part of body injured; agency of injury; and type of injury; in sufficient detail to categorize injuries in frequency distributions which will aid OSHA's standards development, training program development and enforcement activities. In addition, "severity" data such as lost workdays, compensation costs, medical costs and degree of disability are included. Other worker characteristics such as age, time in occupation, occupation, average weekly wage and average hours worked per week are provided. It should be pointed out that, while this data is quite promising, much needs to be done to enable DOL/OSHA to fully benefit from its potential to satisfy present needs.

Secondly, special supplementary studies should be viewed in a broader conceptual framework as indicated in the data plan mentioned previously. OSHA perceives its data needs in a hierarchical framework. Although the hierarchy is similar for safety and health data, the hierarchy described herein pertains to safety data and that health data available through current data-gathering mechanisms. The first level in the hierarchy is the annual BLS survey data which provides broad national indicators of frequency and severity which enable OSHA to determine where to look, and in what relative priority. The second level in the hierarchy is the workers' compensation data which describes work-related injuries and illnesses in general terms and provides detailed individual characteristics. The third level in the hierarchy is the special supplementary studies which are designed to more fully assess the true causal factors relating specific hazards to frequent and severe injuries and illnesses.

While several of OSHA's special supplementary studies were reviewed in the Report, there was no mention of the current studies for the lumber and wood products industry or the National Emphasis Program (NEP). The NEP is OSHA's first attempt to formulate a comprehensive compliance strategy and would appear to embody many of the necessary activities which will relate better data gathering and analysis to improved program actions. [See GAO note below]

2.2 Suggested Revisions to Chapter 3 Conclusions and Recommendations

BLS and OSHA have been working together to modify the Recordkeeping Requirements for the annual BLS survey and to improve the uniformity and availability of workers' compensation data. It is suggested that the recommendations pertaining to the revisions to the annual BLS survey be replaced by the following recommendations:

- Assess the feasibility of mandating a single first-report-of-injury form (OSHA 101 Equivalent) with a uniform definition for recordable injuries and illnesses in order to effect a single recordkeeping system for employers in all States;
- Develop existing workers' compensation data into an integrated information system using data from the 15 States that will have data available during 1976 to improve program development and to enable more effective program evaluation efforts;
- Assess the need for expanding the 15 State system to include all States and to include only sample data from a sample of the States; outline problems, feasibility, probability, budget requirements and general resource requirements;
- Assess the degree to which the resultant data system satisfies the specific needs of standards development, training and education program development and enforcement planning and scheduling.

OSHA recently completed a study of its accident investigation inspection activity. This study confirms the need for more systematic procedures and more formal training for field staff in the conduct of accident

GAO note: These were not included in our review because a final report on the lumber and wood products industry had not been received and the NEP plan had not been implemented.

investigation inspections. While this finding is consistent with the recommendation in the GAO Report to broaden the accident investigation program, it is suggested that the recommendation be revised and expanded as follows:

- Modify the accident investigation program to assure that accurate causal factors are properly recorded, compiled, analyzed and integrated into program development activities;
- Assess the feasibility of broadening the accident investigation program to include more severe injuries and illnesses which occur on a frequent basis;
- Broaden the accident investigation program to include the results of accident investigations in plan States.

OSHA's supplemental study activities have been designed to examine a particular industry's overall worker safety and health programs and the respective roles of management, unions, workers and OSHA in improving these programs. With the availability of the more detailed workers' compensation data, these studies can be directed to more specific hazards, occupations and general conditions which appear to result in frequent and severe injuries and illnesses. These studies provide the judgmental dimension which is essential in establishing the salient "causal" factors which may be responsive to standards, training and education, and enforcement actions. It is suggested that the recommendation to limit supplemental studies be revised as follows:

- Review the conceptual framework and objectives of supplemental studies to determine the OSHA/NIOSH interface, to establish clear cut procedures for their conduct and to integrate study results into program actions.

SECTION III: RESPONSE TO CHAPTER 4: DIFFICULTY IN OBTAINING
DATA ON HEALTH HAZARDS3.0 Summary of Chapter 4

The Report recommends that DOL/OSHA fully implement its authority to collect data concerning worker exposure to all toxic substances in the workplace. Specifically, the Report recommends the initiation of a broad new program which requires employers to:

- (1) monitor all toxic substances in the workplace whether covered by a standard or not;
- (2) record and report worker exposure levels and the effects of exposure on worker health;
- (3) provide periodic medical examinations for workers exposed to specific substances.

This recommendation is based on: the growing number of toxic substances in the workplace; the current rate of promulgating health standards; the recent statements made in connection with the Kepone hearings; and the general consensus opinion that occupational illnesses are under-reported through existing systems (the BLS Annual Survey and Workers' Compensation). Further, the report concludes that OSHA is not fully exercising its authority to obtain data as specified in Sections 6 and 8 of the OSH Act.

3.1 Discussion of Chapter 4 Conclusions and Recommendations

The recommendation in Chapter 4 is based on: an interpretation of Sections 6 and 8 of the OSH Act which is inconsistent with the current Departmental interpretation and suggests an incomplete understanding of the standard promulgation activities currently underway in OSHA. OSHA is currently in the process of promulgating revisions to approximately 400 health standards (the Standards Completion Project) under the general provisions outlined in Section 8 of the OSH Act. Further, OSHA is also in the process of promulgating 20-30 health standards according to the provisions outlined in Section 6 of the OSH Act.

[See GAO note below]

GAO note: OSHA's current standards development efforts are discussed on page 29 of this report.

Essentially, the general provisions in Section 8 enable OSHA to:

"... issue regulations requiring employers to maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under Section 6."

Since no mention is made of recordkeeping for monitoring activities or for conducting medical examinations for substances not covered by Section 6, OSHA's authority to promulgate the recommended regulation under Section 8 of the OSH Act is not clearly established.

On the other hand, according to Section 6 of the OSH Act, OSHA may promulgate standards:

"... based upon research, demonstrations, experiments, and such other information as may be appropriate."

This requirement amounts to a "substantial evidence" test which requires that OSHA demonstrate the need for and effectiveness of the recommended regulation in safeguarding worker safety and health. In OSHA's opinion, the recommended regulation would have an extremely low probability of being promulgated and would require substantial resource commitments to go through the formal rulemaking process.

3.2 Suggested Revision to Chapter 4 Recommendations

The recommended regulation raises serious questions of legality and general feasibility. Issuing such an all encompassing regulation would have severe economic impacts and require an extremely large data collection effort on the part of the Government. In addition, OSHA does not now possess the qualitative or quantitative staff resource to design, plan and administer such an effort. Such a regulation is also contrary to present efforts to minimize the paperwork burden on employers. It is suggested that the recommendation be revised as follows:

- Investigate the legal and technical problems of issuing a broad regulation requiring employers to keep records on employee exposure to all or a subset of the most hazardous toxic substances occurring in the workplace and provide medical examinations where appropriate.

APPENDIX I

APPENDIX I

APPENDIX A

Clarification Suggested For Draft Report

Digest

Chapter 1

Chapter 2

Digest

(1) Page 2 - line 5-6

Labor appears to have broader authority to obtain data from employers than it has exercised to date.

Chapter 1

(1) Page 5 - line 1

It is apparent from the Report that several important activities were omitted in the overall review. Perhaps some clarification is required in the Scope statement.

Chapter 2

(1) Page 8 - line 6

The indication in this paragraph is that plan State compliance officers do about three times as many inspections as Federal compliance officers. Inspections are defined differently in each State; e.g., when the New York plan was in effect, an inspection of an elevator was recorded as a single inspection. A clarification is required.

(2) Page 8 - line 7

The same problem with the number of initial inspections exists as noted in (1) above.

(3) Page 10 - line 4-6

This statement should be revised since it can be shown that the workers' compensation data can provide causal and severity indications.

GAO note: Page numbers referred to may not correspond to those of the final report.



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20201

MAY 5 1976

Mr. Gregory J. Ahart
Director, Manpower and
Welfare Division
U.S. General Accounting Office
Washington, D.C. 20548

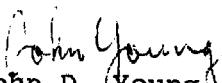
Dear Mr. Ahart:

The Secretary asked that I respond to your request of March 30 for our comments on your draft report, "Better Data on Severity and Causes of Worker Safety and Health Problems Should be Obtained From Workplaces." Although no recommendations were directed to the Department in this report, the one appearing on page 55 does involve the National Institute for Occupational Safety and Health (NIOSH), an Institute within our Center for Disease Control (CDC). CDC agrees that the recommended review program be conducted by the Occupational Safety and Health Administration in consultation with NIOSH. In addition, CDC offers the following technical comments which you may want to consider in developing the final version of your report:

1. On pages iv, 43, and 53, the report references "16,500 known toxic chemicals." The report should also state that the listing of a substance in the NIOSH "Registry of Toxic Effects of Chemical Substances" does not automatically imply that the substance is a hazard in common usage.
2. On page 1 of the draft report statement is made that, "The Department of Labor estimates that about 5,900 workers in private industry died in 1974 as a result of work-related injuries and illnesses." CDC states that the number appears exceptionally low in view of studies of certain industries, other Bureau of Labor statistics reports, and National Safety Council data.

We appreciate the opportunity to review this draft report before its publication.

Sincerely yours,


John D. Young
Assistant Secretary, Comptroller

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DISCUSSED IN THIS REPORT

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	<u>From</u>	<u>To</u>
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John T. Dunlop	Mar. 1975	Jan. 1976
Peter J. Brennan	Feb. 1973	Mar. 1975
James D. Hodgson	July 1970	Feb. 1973
ASSISTANT SECRETARY FOR OCCUPATIONAL SAFETY AND HEALTH:		
Morton Corn	Dec. 1975	Present
Vacant	July 1975	Dec. 1975
John H. Stender	Apr. 1973	July 1975
Vacant	Jan. 1973	Apr. 1973
George C. Guenther	Apr. 1971	Jan. 1973

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