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Report to the Congress; by Elmer B. Staats, Comptroller General.

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Congressional Relevance: House Committee on Armed Services; Senate Committee on Armed Services; Congress.
Authority: Noise Control Act of 1972 (42 U.S.C. 4901-18).

The Department of Defense (DOD) is paying out millions of dollars for employees' job-related hearing losses. In addition, safety regulations have been disregarded and disciplinary actions lacking. A complete and well-defined policy on hearing protection is needed and installation officials should comply with all regulations covering the hearing program. Findings/Conclusions: Hearing loss claims by Government workers, about 95% from DOD, have doubled since 1973. Federal agencies have not agreed on a safe noise exposure level. Recommendations: The Secretary of Defense should have the Navy and Defense agencies, where applicable: adopt an 85-decibel, 8-hour exposure level as the maximum for unprotected workers; issue guidance on work area surveys that will result in better identification of hazardous noise areas; agencies establish a monitoring system to make sure that the required initial and yearly hearing tests are given to all workers assigned to noisy areas; adopt uniform criteria for deciding when engineering controls should be used; and provide guidance on the need to enforce penalties for hearing protection violators under existing regulations and to carry out educational programs on hearing conservation. (Author/SC)

REPORT TO THE CONGRESS

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

Hearing Protection: Problems In The Department Of Defense

The Department of Defense is paying out millions of dollars for employees' job-related hearing losses. A complete and well-defined policy on hearing protection is needed, and installation officials should comply with all regulations covering the hearing program.

SEPTEMBER 15, 1977

LCD-77-308

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-163375

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

This report describes the problems we observed in the military services' hearing conservation programs and in selected installations' conformance with program requirements. We reviewed the programs because of the potential danger to Federal workers' hearing, the large number of claims being submitted, and the amount of compensation being paid.

We made the 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).

We are also sending this report today to the Director, Office of Management and Budget; the Secretary of Defense; the Secretary of Labor; and the Administrator, Environmental Protection Agency.

Comptroller General
of the United States

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

HEARING PROTECTION: PROBLEMS IN THE DEPARTMENT OF DEFENSE

D I G E S T

Aside from the fact that the Department of Defense is paying out millions of dollars for employees' job-related hearing losses, safety rules have been disregarded and disciplinary actions lacking. More needs to be done to protect workers' hearing and to reduce hearing loss claims.

Hearing loss claims by Government civilian workers, about 95 percent from Defense, have doubled since 1973. In 1975, the Office of Workers' Compensation Programs, Department of Labor, received over 7,400 hearing loss claims from Defense workers.

Although GAO does not know how many of the 7,400 claims may be approved and how much they may cost, the Navy told the Congress that 2,520 Navy hearing loss claims paid in 1975 cost about $17 million. In addition, the Veterans Administration estimates that from 1972 to 1975 the annual compensation for hearing loss to former military personnel increased from $53 million to $72 million. (See p. 1.)

Federal agencies have not agreed on a safe noise exposure level. The Occupational Safety and Health Administration set a maximum exposure level of 90 decibels for an 8-hour period while the National Institute for Occupational Safety and Health, the Environmental Protection Agency, and the Office of Workers' Compensation Programs support a level of 85 decibels. (See p. 3.) Even within Defense, permissible noise levels differ. The Navy and Defense Logistics Agency permit exposure to a 90-decibel level, whereas the Army and Air Force permit exposure to an 85- and an 84-decibel level, respectively. (See p. 4.)

Defense has to deal with several problems:

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--A much higher percentage of Defense workers in hazardous noise areas had hearing losses than workers not exposed to hazardous noise. (See p. 2.)

--The hazardous noise areas identified in some surveys were not sufficiently defined. (See p. 4.)

--Installations were not giving hearing tests to all workers either before exposure to hazardous noise or periodically after assignment to such areas. (See p. 6.)

--Criteria were needed for deciding when engineering controls are feasible. (These controls reduce noise intensity at the source by changing or isolating equipment or parts) (See p. 8.)

--Installations were not enforcing the rules or instructing all workers on hearing protection. (See p. 10.)

To protect employees' hearing and reduce or eliminate compensation costs, guidance for the hearing program should be improved until it is complete and well defined, and installation officials should comply with all regulations covering the program.

The Department believes its noise survey and enforcement procedures are adequate. It said that, except for the proposal to establish engineering control criteria, it was already implementing GAO's proposals as Defense policy. However, it did not describe what action, if any, would be taken to improve surveys of work areas, monitor required hearing tests, and establish uniform criteria for engineering controls. (See app. I.)

Accordingly, the Secretary of Defense should (1) have the Navy and Defense agencies, where applicable, adopt an 85-decibel, 8-hour exposure level as the maximum for unprotected workers (see p. 4); (2) issue guidance on

work area surveys that will result in better identification of hazardous noise areas (see p. 5); and (3) have the services and Defense agencies

--establish a monitoring system to make sure that the required initial and yearly hearing tests are given to all workers assigned to noisy areas (see p. 7),

--adopt uniform criteria for deciding when engineering controls should be used (see p. 10), and

--provide guidance on the need to enforce penalties for hearing protection violators under existing regulations and to carry out educational programs on hearing conservation (see p. 12).

Contents

ABBREVIATIONS

DOD	Department of Defense
GAO	General Accounting Office
NIOSH	National Institute for Occupational Safety and Health

CHAPTER 1

GROWTH IN HEARING LOSS CLAIMS

Claims for hearing loss filed by Government civilian workers have doubled since 1973, and about 95 percent of the claims have been submitted by Department of Defense (DOD) workers. In 1975, the Office of Workers' Compensation Programs, Department of Labor, received over 7,400 hearing loss claims from Defense workers. Although we do not know how many of these claims may be approved nor how much they may cost, the Navy informed the Subcommittee on Manpower and Housing, House Committee on Government Operations, on June 10, 1976, that 2,52 Navy hearing loss claims paid in 1975 cost about $17 million. At the Naval Air Rework Facility, Cherry Point, North Carolina, for example, 273 civilian workers, about 15 percent of the work force, filed claims in a 3-year period ended March 1976. At that time, the Department of Labor had approved 117 claims, denied only 11, and was still considering 145.

The number or claims and the amount of compensation for hearing loss of former military personnel are also increasing, although not so sharply. The Veterans Administration estimates that from 1972 to 1975 the annual compensation for hearing loss increased from $53 million to $72 million.

DOD said (see app. I) that, based on (1) House Report 94-1757, 1/ October 6, 1976, which was critical of the Department of Labor's claim compensation program and (2) a GAO review which found that the Department of Labor approved many claims with questionable medical evidence, hearing loss payments may be excessive. DOD believes that, because payments may be excessive and because hearing losses appearing now are the result of chronic past exposure, the large number of hearing loss cases should not be used as a measure of the current effectiveness of DOD's hearing conservation programs.

The House Report also said that the compensation program statistical system has limitations that prevent useful claims analysis, and, consequently, the system does not have the data necessary to verify or refute charges of widespread abuse. Moreover, the military services began their hearing conservation programs about 20 years ago,

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1/A study by the Manpower and Housing Subcommittee, House Committee on Government Operations.

and a National Institute for Occupational Safety and Health 1/ (NIOSH) study showed that the onset of hearing loss resulting from daily exposure to 90-decibel noise is present after just 2 or 3 years. Therefore, while we agree that the growth in DOD employee claims and the magnitude of compensation awards do not accurately measure the current effectiveness of DOD's hearing program, they do compound the hearing conservation program problems that are disclosed in this report and are in need of solution.

HEARING CONSERVATION PROGRAMS

The military services and the Defense Logistics Agency have programs to protect the hearing of the thousands of military and civilian personnel exposed to hazardous noise in their industrial, testing, and military training operations.

The hearing conservation programs generally provide for surveying work areas to identify hazardous noise areas; testing the hearing of workers assigned to such areas; applying engineering controls for equipment to reduce noise when feasible; instructing workers on noise effects; and using ear protective devices.

INDICATIONS OF HEARING LOSS

Installation officials do not know how successful their hearing conservation programs have been because they do not know how many employees have job-related hearing loss. Based on our analyses, a group of DOD civilians working in a hazardous noise area had more cases of hearing loss than a private industry group working in areas without hazardous noise. This suggests the services' hearing conservation progams are not as effective as they could be.

We selected a sample of 538 DOD civilian workers at 7 installations that had comparable data, determined how many had hearing losses by Department of Labor standards, 2/ and compared the results with similar data for a group of 525 private industry workers. This latter group consisted of private industry workers who worked in offices or other quiet work areas.

The comparison showed that 37 percent of the workers in quiet areas, compared with 60 percent of the DOD workers, had a hearing loss in both ears.

1/A component of the Center for Disease Control, Department of Health, Education, and Welfare.

2/The ability to hear and interpret speech at the frequencies of 1,000, 2,000, and 3,000 cycles per second.

CHAPTER 2

HEARING CONSERVATION PROBLEMS IN DOD

CURRENT NOISE EXPOSURE LEVELS

The Occupational Safety and Health Administration, Department of Labor, by authority of the Occupational Safety and Health Act of 1970, set the maximum noise levels to which private industry and Federal employees may be exposed without protection. The levels range from 90 decibels for an 8-hour period to 115 decibels for a 15-minute period. When employees are exposed to noise exceeding these levels, protection--either engineering changes to the noise source or administrative controls, such as decreasing exposure time--is required. If these measures fail to bring the noise within acceptable levels, employees must wear protective devices.

While an evaluation of the justification for the maximum standard was beyond the scope of this report, certain agencies believe that an 85-decibel, 8-hour noise exposure level would improve workers' protection.

In 1972, NIOSH recognized a need for improving the workers' protection and recommended that an 85-decibel, 8-hour noise exposure level be applied to all newly designed occupational exposure environments.

The seventh annual report of the Council on Environmental Quality states that a level of 90 decibels is equivalent to the noise of a heavy truck at full acceleration from about 50 feet; a level of 85 decibels is equivalent to the noise from a pneumatic drill at the same distance. The report also states that this relatively small difference is believed to have marked effects on hearing loss over years of occupational exposure.

In October 1974 the Occupational Safety and Health Administration, although proposing changes to the noise exposure regulations, continued to support a 90-decibel, 8-hour noise exposure level. The Environmental Protection Agency, by its authority under the Noise Control Act of 1972 (42 U.S.C. 4901-4918) to review and comment on the policies and regulations of other Federal agencies in setting noise standards, recommended that the Occupational Safety and Health Administration recognize the 85-decibel, 8-hour exposure level as the maximum noise level to which employees may be exposed without protection.

Department of Labor guidance for determining compensable hearing loss recognizes that employees may suffer noise-induced hearing loss from prolonged exposure to noise levels above 85 decibels.

In the Department of Defense, the Navy and the Defense Logistics Agency adopted the Occupational Safety and Health Administration's exposure levels above which protection would be required. The Army adopted a level of 85 decibels above which protection was required but with no time limits for exposure above 85 decibels, and the Air Force set a level of 84 decibels with time limits on exposure and requirements for protection above 84 decibels.

We reviewed records of hearing tests for 124 workers in three shops at the Naval Weapons Support Center, Crane, Indiana, where the noise levels at times reached 85 to 90 decibels. Based on Department of Labor hearing loss standards, test records for nearly two-thirds of the workers indicated hearing losses at or above the level usually compensated if determined to be job related. Because the Navy adopted a level of 90 decibels for an 8-hour period, these shops do not require protective measures against noise.

Because of potential hearing loss from exposure to noise levels above 85 decibels, we believe that the Navy and the Defense Logistics Agency should recognize exposure to a sound level of 85 decibels for an 8-hour period as the maximum for unprotected workers.

Recommendation and agency comments

We recommend that the Secretary of Defense have the Navy and, where applicable, Defense agencies adopt an 85-decibel, 8-hour exposure level as the maximum for unprotected workers.

DOD concurred and said (see app. I) that it is furnishing guidance in a proposed DOD instruction to address this aspect of hearing conservation. The proposed instruction will establish a uniform policy of placing personnel in hearing conservation programs when they are exposed to more than 85 decibels for an 8-hour day.

In a December 9, 1974, response to the Department of Labor, DOD advocated adoption of 85 decibels as the maximum noise level to which employees may be exposed without protection. Since each of the military services and the Defense Logistics Agency had its own hearing conservation program, DOD's response to the Department of Labor did not effect any change in the respective programs.

IDENTIFYING HAZARDOUS NOISE AREAS

All the military services require their installations to survey work areas and identify those that would endanger workers' hearing. The areas identified in some surveys were not sufficiently defined for practical administrative control.

The Naval Ordnance Station, Louisville, Kentucky, for example, designated an entire building noise hazardous, although the noise was below hazardous levels in parts of the building and at different times during the work day.

At Fort Knox, Kentucky, the survey of noise in and around its tank engine test cells led to two different interpretations of how far the boundary of the hazardous noise area should extend. Testing tank engines creates noise up to 120 decibels. The building supervisor where these test cells are located thought the hazardous area was the immediate area around the test cells. The health and environment representative responsible for the surveys thought it should be the entire building.

Conclusion, evaluation of agency comments, and recommendation

Because further guidance on identification of hazardous noise work areas would increase the effectiveness of the hearing conservation program, we proposed that instructions for more exacting identification of such areas be issued.

DOD believes that its existing survey procedures are adequate. It said that safety and health professionals make comprehensive noise surveys and, based upon their judgment, designate facilities or areas as potential hazardous noise areas. DOD said that the example at Fort Knox might be isolated and might not represent what may be found at more than 800 major DOD installations.

We agree that the two examples may not be representative; but, in view of DOD's agreement to adopt a uniform policy on noise exposure, it seems that many hazardous noise areas will have to be resurveyed and redesignated to adapt them to DOD's revised noise exposure limits.

We therefore recommend that the Secretary of Defense have the proposed instruction on uniform noise exposure incorporate work area survey guidance for obtaining more exacting identification of hazardous noise areas in conformity with the 85-decibel, 8-hour exposure criteria.

ADMINISTERING HEARING TESTS

Brief noise exposure may induce temporary hearing loss, with recovery following a period of quiet, but recurrent exposure may result in only partial recovery, according to a NIOSH study. Thus, if the hearing loss can be discovered early, recovery is possible and additional loss can be prevented.

The military services require their installations to administer hearing tests to workers upon being assigned to high noise areas. Annual tests thereafter are required to detect any hearing loss which would require remedial action, such as reassignment or improved protective measures.

Some installations were not annually testing all workers in hazardous noise areas.

--Officials at Fort Knox said they tested only about half of the 1,500 civilian workers exposed to hazardous noise in 1975. Few military personnel had been tested. In 1976, the installation began a regular testing program for military personnel on hazardous noise duty.

--Both our auditors and the Army Audit Agency staff noted several hazardous noise shops at Fort Campbell, Kentucky, where workers had not been tested in 1975 and previous years. Only 13 percent of the military personnel assigned to these shops were tested in 1975.

--From a review of hearing test records for a 2-month period at Wright-Patterson Air Force Base, Ohio, we estimated that about 60 percent of the civilian workers in hazardous noise areas were not tested in 1975.

--Officials at Kelly Air Force Base, Texas, said they tested about half of the 4,000 civilian workers exposed to hazardous noise in 1975.

--The Naval Ordnance Station, the Defense Construction Supply Center, Ohio, and the Jefferson Proving Ground, Indiana, omitted most of the testing in 1975.

DOD claims that the statement that the Defense Construction Supply Center omitted most of the hearing testing in 1975 is an inaccuracy and that records at the Center's Army Health Clinic show that 401 individuals in the 500 positions exposed to noise received testing during 1975. DOD also said that Center data shows its testing is increasing over the years and that this sort of evidence of program improvement in recent years was not given in our report.

Our review of the Center's hearing test records showed that 86 percent of the workers in the program were not tested in 1975. The Center's Health Clinic staff told us that 401 employees were included in the hearing conservation program in 1975 but the Clinic made few tests in 1975 because of a lack of trained personnel. Therefore, program participation records are not adequate for DOD's conclusions on testing.

When a person suffers a specified amount of hearing loss during the year, a medical examination has to be made to determine if the loss is caused by noise, and a series of hearing tests have to be given to see if the loss stabilizes or progresses.

An Air Force study in 1975 said that there had not been enough followup tests of persons who demonstrated significant changes in hearing ability. According to the study, hearing test records for a 1-month period showed that, of 3,257 persons whose records showed significant changes in hearing ability, about 42 percent did not receive proper followup. We noted 10 instances at one Army installation and 15 at one Navy installation where workers had suffered losses requiring followup tests and examinations but their medical files did not indicate that this was being done.

Conclusion, evaluation of agency comments, and recommendation

Because the hearing tests required upon assigning a worker to a hazardous noise area and each year thereafter ought to be monitored systematically, we proposed that a monitoring system be established.

According to DOD, this requirement exists in all component directives and, thus, periodic tests should be given to all exposed personnel. DOD agreed, however, that this may not have been done in all instances because of budgetary restrictions.

DOD did not specifically comment on the proposed monitoring system. Although component directives require initial and periodic hearing tests, directives in themselves do not insure compliance without being systematically monitored. Regarding budgetary restrictions, the services should request sufficient funds for the required hearing tests. A 1976 study prepared for the Occupational Safety and Health Administration indicated that the annual cost (depreciation, personnel, and lost time) of testing workers exposed to noise levels above 85 decibels is about $20 a person, but we did not

verify that estimate. Such tests should eventually reduce the cost to DOD of hearing loss compensation awards.

We therefore recommend that the services and Defense agencies be required to establish a monitoring system to insure that the required initial and yearly hearing tests are given to all workers on hazardous noise assignments.

USE OF ENGINEERING CONTROLS

Federal regulations require the use of administrative or engineering controls when employees are exposed to noise above the acceptable levels. Administrative controls limit exposure time by controlling each employee's work schedule. Engineering controls reduce noise intensity at the source or in the immediate exposure environment by such means as replacing, modifying, or isolating equipment or parts. Engineering control projects were completed at some of the installations visited. However, other projects were identified as needed but they were not funded.

The Army Environmental Hygiene Agency surveys of Fort Knox and Jefferson Proving Ground said that acoustical engineering controls are feasible and should be implemented to reduce noise levels except when there is substantial evidence that practical and economically sound methods do not exist for reducing noise below 85 decibels.

Navy instructions state that engineering controls are the ideal method of abating hazardous noise above allowable limits and in all cases where the remaining sound levels exceed allowable limits, namely, 90 decibels for 8 hours, 92 decibels for 6 hours, etc., an effective program for use of personal protective devices will be administered.

Air Force regulations state that the best protection is to design a procedure, system, or piece of equipment in such a way that noise does not exceed the limits for total daily exposure, such as 84 decibels for 8 hours, 86 decibels for 6 hours, etc. The second best method is to isolate noise sources (procedure, equipment, etc.) which exceed the limits either by enclosure or by separation from personnel. The third and least satisfactory method when hazardous noise sources cannot be isolated is to require persons to wear personal protective devices.

An October 1973 Air Force Surgeon General staff comment on a proposed Federal noise standard recommended that engineering controls be optional if the noise level is 85 to 100 decibels but mandatory if the level is equal to or

greater than 100. An Air Force Logistics Command study begun in 1974 showed that modifications to eliminate hazardous noise of the support equipment managed by two logistics centers would cost $25.5 million. Because of equipment age and design and because of cost of the modifications, the command advised against the modifications. The Air Force Logistics Command has recommended engineering controls for noise exceeding 90 decibels and personal protective devices for lower levels.

DOD said that the references to the Air Force Logistics Command study were misleading because they were taken out of context and did not include consideration of exposure times and, even when taken in their proper context, they are not DOD policy.

We realize that the criteria on noise levels above which administrative or engineering controls are required include consideration of the length of exposure time, and we have indicated some of the exposure limits that the services have stipulated for considering engineering controls. Moreover, in our opinion, variations in engineering control criteria among the services are due to the absence of a DOD policy.

Conclusion, evaluation of agency comments, and recommendation

We concluded that uniform criteria were needed for deciding when engineering controls are feasible and proposed that such criteria be established.

DOD said that the main points to consider regarding the need for engineering controls are the presence of a potential noise hazard, the degree of protection required, technological feasibility, and cost effectiveness. The points DOD cites are some of the elements that require uniform definition for equal protection of employees. The 85-decibel, 8-hour exposure limit which DOD says it will adopt (see p. 4) could constitute a uniform noise hazard criterion for determining the need for engineering controls, but DOD's reply did not resolve this issue or clarify whether engineering controls should be mandatory at that exposure limit or at any other exposure limit.

DOD also said that qualified engineering and medical personnel decide on a case-by-case basis whether such controls should be instituted.

We doubt that decisions on a case-by-case basis by qualified personnel operating without the benefit of uniform policy guidance would achieve equal protection of DOD employees.

Accordingly, we recommend that the Secretary of Defense have the service secretaries and Defense agency directors adopt uniform criteria for determining when engineering controls should be used.

STRESSING SAFETY RULES AND INSTRUCTIONS

Personnel can be protected from hazardous noise by personal protective devices, such as ear plugs which fit in the ear canal or muffs which are worn over the ears. We toured several facilities and observed that many workers exposed to hazardous noise were not wearing any type of ear protectors.

For example:

1. At the San Antonio Air Logistics Center, Kelly Air Force Base, we and the bioenvironmental engineer toured several large industrial areas where aircraft are repaired. Some areas of these buildings had noise up to 120 decibels. Of the several hundred people working in these areas, many were not using ear protectors the day we were there. The accompanying engineer said he expected as much for it was typical of past observations.

2. At Fort Knox, we and a health and environment representative toured a building where tank engines were being tested. We observed that test cell operators were wearing ear protectors but other workers were not, even though they were only a few feet away and were exposed to the hazardous noise.

3. At the Naval Air Rework Facility, Cherry Point, North Carolina, we and the safety administrator toured several buildings and facilities where aircraft are reconditioned and jet engines are tested. Although many workers were wearing ear protectors,

others were not wearing them even though they were in hazardous noise areas. We also saw many workers walking near or through hazardous noise areas without ear protectors. The safety administrator said the workers knew we were there to see if they were wearing such protectors. He said his office had issued about 100 pairs of protectors the day before our arrival and that the number of workers wearing them was greater than normal

4. At the Defense Construction Supply Center, we and the safety engineer toured a building designated as a hazardous noise area. About 25 people worked in the building and when the machinery was running we observed only two workers wearing ear protectors.

The 26 medical, safety, or supervisory personnel representing 7 of the installations visited told us workers do not always wear ear protectors when they should and some said that personnel are losing their hearing because they violated safety regulations. The responsibility for getting the workers to use protectors rests with the supervisors, but supervisors do not always enforce hearing protection rules. In no instances did we find that employees were disciplined, as permitted by the Civil Service Commission, for violating safety rules.

Service regulations and conservation specialists stress education in carrying out an effective hearing conservation program. Some installations had more comprehensive educational programs on hearing protection than others.

In 1975 at Fort Knox, for example, Army audiologists began presenting films and lectures to supervisors and to all incoming personnel who were assigned to hazardous noise areas. The Naval Air Rework Facility, however, did not have such a program, and officials said they feared a comprehensive program would cause an increase in hearing loss claims. At other installations education amounted to periodic general safety lectures given by supervisors or by the person giving the hearing test.

Conclusion, evaluation of agency comments, and recommendation

In view of the number of people with hearing losses, disregard for safety rules, and lack of disciplinary action,

we concluded that comprehensive educational programs and stricter enforcement of safety rules are needed. We proposed that guidance on these needs be provided.

Although DOD concurred, it believes that adequate administrative policies already exist which provide for and prescribe disciplinary actions to be taken in cases of failure to comply with safety requirements. DOD also believes that to supplement disciplinary actions, its education programs which stress the hazardous nature of noise and the need for protective devices are a more positive approach to full compliance.

Existing policies and regulations provide for disciplinary action for safety regulation violations, but we found no instance where supervisors were enforcing such regulations. The supervisor's enforcement responsibilities need to be backed up by parties more detached from the workers.

We therefore recommend that the Secretary of Defense have the service secretaries and Defense agency directors provide guidance to installation commanders on the need to enforce penalties for hearing protection violators under existing regulations and to carry out comprehensive educational programs on hearing conservation.

CHAPTER 3

SCOPE

We made a limited review during the period from June to October 1976 of the methods used to carry out the hearing conservation program for protecting all military and civilian personnel from hearing loss at the following installations.

Air Force
- Wright-Patterson Air Force Base, Ohio
- Kelly Air Force Base, Texas

Army
- Fort Knox, Kentucky
- Fort Campbell, Kentucky
- Jefferson Proving Ground, Indiana

Defense Logistics Agency
- Defense Construction Supply Center, Columbus, Ohio

Navy
- Naval Ordnance Station, Louisville, Kentucky
- Naval Air Rework Facility, Cherry Point, North Carolina
- Naval Weapons Support Center, Crane, Indiana

We also reviewed records of the Air Force Hearing Conservation Data Registry at Brooks Air Force Base, Texas, where we were briefed on the total scope of the Air Force hearing conservation data and program status.

APPENDIX I

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

INSTALLATIONS AND LOGISTICS

18 APR 1977

Mr. J. J. Shafer
Director, Logistics and
Communications Division
U.S. Government Accounting Office
Washington, D. C. 20548

Dear Mr. Shafer:

This is in reply to your draft report to the Secretary of Defense dated February 3, 1977, regarding your audit on "Hearing Conservation Problems in the Department of Defense," OSD Case #4541, LCD-77-308, Code 945280.

The Department of Defense (DoD) has no substantive disagreement with any of the six GAO recommendations. In fact, with the exception of the recommendation to establish definitive criteria to assess the feasibility of engineering controls, all of the other recommendations are presently being implemented as DoD policy.

We recognize that full compliance with existing component policies is, to varying degrees, lacking at some of the installations. To correct this situation, we are now preparing a DoD instruction which will set forth uniform procedures to establish and maintain hearing conservation programs. The enclosure contains specific DoD comments in response to various sections of the report. I trust that this letter will assist you to prepare your final report.

Sincerely,

DALE R. BABIONE
Acting Assistant Secretary of Defense
(Installations and Logistics)

Enclosure

DEPARTMENT OF DEFENSE COMMENTS ON

GAO Draft Report "Hearing Conservation Problems in DoD"

Pages 1 and 3 of Cover Letter -
GAO finding:

The Department is paying out millions of dollars for employees' job-related hearing losses. Hearing loss claims by Government civilian workers have doubled since 1973 and about 95 percent of the claims are submitted by Defense workers. In 1975, the Office of Worker's Compensation Programs, Department of Labor, received over 7,400 hearing loss claims from Defense workers. Although we do not know how many of these claims may be approved and how much they may cost, the Navy informed the Subcommittee on Manpower and Housing, House Committee on Government Operations, on June 10, 1976, that 2,520 Navy hearing loss claims paid in 1975 cost about $17 million. In addition, the Veterans Administration estimates that from 1972 to 1975 the annual compensation for hearing loss by former military personnel increased from $53 million to $72 million.

The costs of ineffective hearing conservation measures are the damage to affected workers and the compensation paid for hearing loss. We believe that, to maximize the protection of employees' hearing and minimize and where possible eliminate compensation costs, improvements are needed to insure that hearing program guidance is complete and well defined and that installation officials comply with all regulations covering the program.

DoD Response:

This is a faulty deduction since hearing losses appearing now are the result of chronic past exposures to noise. In the past, the hazardous nature of noise was not fully recognized, and hearing conservation efforts were minimal. We do not concur with the conclusion that the large number of workmens' compensation cases for occupational hearing losses should be used as a measure of the current effectiveness of DoD's program.

We recommend that this reasoning be removed from the report. This is warranted since the 1976 HR 94-1757, which addressed workmens'

compensation claims was critical of the Department of Labor's (DOL) program. A GAO review found that many compensation claims are approved on the basis of questionable medical evidence. Thus, payments for loss of hearing may be excessive because DOL uses different standards than those in other major compensation programs.

Appendix I, page 3 -
GAO finding:

In October 1974 the Occupational Safety and Health Administration, while proposing changes to the occupational noise exposure regulations, continued to support a 90-decibel, 8-hour noise exposure level. The Environmental Protection Agency, under authority of the Noise Control Act of 1972 to review and comment on the policies and regulations of other Federal agencies in setting noise standards, recommended that the Occupational Safety and Health Administration recognize the 85-decibel, 8-hour exposure level as the maximum noise level to which employees may be exposed without protection.

DoD Response:

We have thoroughly reviewed this proposed rulemaking. On December 9, 1974, we responded to DOL that DoD, based upon hearing impairment risk, advocated adoption of 85dbA as the maximum noise level to which employees may be exposed without protection. A proposed DoD I will establish a uniform policy of placing personnel in hearing conservation programs when they are exposed to more than 85dbA in an 8-hour day.

Appendix I, page 4 -
GAO recommendation:

Recommendation to the Secretary of Defense

We recommend that the Secretary of the Navy and, as applicable, Defense agency Directors be required to adopt an 85-decibel, 8-hour exposure level as the maximum exposure for unprotected workers.

DoD Response:

We concur, and guidance is furnished in a proposed DoD instruction to address this aspect of the hearing conservation program.

Appendix I, page 5 -
GAO finding:

At Fort Knox, Kentucky, the survey of noise in and around its tank engine test cells led to two different interpretations of how far out the boundary of the noise hazardous area should be drawn. Testing tank engines creates noise up to 120 decibels. The building supervisor where these test cells are located thought the noise hazardous area was the immediate area around the test cells. The health and environment representative responsible for the surveys thought it should be the entire building.

We believe that further guidance requiring better identification of noise hazardous work areas will increase the effectiveness of the hearing conservation program.

Recommendation to the Secretary of Defense

We recommend that the service Secretaries and, as applicable, Defense agency Directors be required to issue instructions for improving work area surveys to obtain more exacting identifications of their noise hazardous areas.

DoD Response:

We believe the existing survey procedures are adequate, and there is no requirement to issue additional instructions. At this time, safety and health professionals conduct comprehensive noise surveys, and based upon their judgement, facilities or areas are designated as potentially noise hazardous areas. It would appear that the example at Fort Knox might be isolated and not representative of what may be found at the more than 800 major DoD installations. We suggest that this recommendation be deleted.

APPENDIX I

Appendix I, page 6 -
GAO finding:

ADMINISTERING HEARING TESTS

Brief noise exposure may induce temporary hearing loss with recovery following a period of quiet and recurrent exposure may result in only partial recovery, according to a NIOSH study. Thus, if the hearing loss can be discovered early, recovery is possible and additional loss can be prevented.

DoD Response:

To be precise, it is more appropriate to use "temporary threshold shift" rather than "temporary hearing loss."

Appendix I, page 8 -
GAO finding:

The Naval Ordnance Station, Defense Construction Supply Center, Columbus, Ohio, and Jefferson Proving Ground, Indiana, omitted most of the testing in 1975.

DoD Response:

The statement that the Defense Construction Supply Center omitted most of the hearing testing in 1975 is an inaccuracy. Records maintained at the U.S. Army Health Clinic at DCSC show that out of the 500 positions identified as noise hazardous, 401 individuals received audiometric testing during 1975, representing a completion rate of 807. Additional data from DCSC shows that their audiometric testing completion rates are increasing over the years. This sort of evidence of program improvement in recent years was not addressed in the GAO report.

Appendix I, page 9 -
GAO finding:

An Air Force Logistics Command study showed that modification of the support equipment managed by two logistics centers would cost $25.5 million to eliminate hazardous noise. Because of equipment age, design and cost of the modifications, the command advised against the modifications. The Air Force Logistics Command is considering recommending engineering controls for noise exceeding 90 decibels and personal protection devices for lower levels. However, an Air Force Surgeon General staff comment on a proposed Federal noise standard recommended that engineering controls be optional if the noise level is 85 to 100 decibels but mandatory if the level is equal to or greater than 100. We believe that uniform criteria is needed for deciding when engineering controls are feasible.

Recommendation to the Secretary of Defense

We recommend that the service Secretaries and, as applicable, Defense agency Directors be required to establish uniform criteria for deciding when engineering controls are feasible.

DoD Response:

This portion is misleading because it is taken out of context and does not include consideration of exposure times. Even when taken in its proper context, it is not DoD policy. The main criteria to consider engineering controls are the presence of a potential noise hazard, the degree of protection required, technological feasibility, and cost effectiveness. Qualified engineering and medical personnel, on a case-by-case basis, decide whether such controls should be instituted.

Appendix I, page 9 -
GAO Recommendation:

Recommendation to the Secretary of Defense

We recommend that the service Secretaries and, as applicable, the Defense agency Directors be required to establish a monitoring system to insure that the required initial and yearly hearing tests are being given to all workers on noise hazardous assignments.

DoD Response:

The requirement exists in all component directives and insures that periodic audiograms should be given to all exposed personnel. We agree that this may not be accomplished in all instances due to budgetary restrictions.

Appendix I, page 13 -
GAO Recommendation:

Recommendation to the Secretary of Defense

We recommend that the service Secretaries and, as applicable, Defense agency Directors be required to provide guidance to installation commanders on the need to enforce penalties for hearing protection violators under existing regulations and to carry out comprehensive educational programs on hearing conservation.

DoD Response:

We concur with this recommendation. We believe that adequate administration policies already exist which provide for and prescribe disciplinary actions to be taken in cases of failure to comply with safety requirements. We also believe that our health education programs, to supplement disciplinary actions, stressing the hazardous nature of noise and the need to use hearing protection devices is a more positive approach to full compliance.

GAO notes:
1. Page references in this appendix may not correspond to page numbers in the final report.
2. Comment on the scope of our review has been incorporated into the report.

APPENDIX II

PRINCIPAL OFFICIALS RESPONSIBLE FOR ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
SECRETARY OF DEFENSE:		
Harold Brown	Jan. 1977	Present
Donald H. Rumsfeld	Nov. 1975	Jan. 1977
James R. Schlesinger	July 1973	Nov. 1975
SECRETARY OF THE ARMY:		
Clifford L. Alexander	Feb. 1977	Present
Martin R. Hoffmann	Aug. 1975	Feb. 1977
Norman R. Augustine (acting)	July 1975	Aug. 1975
Howard H. Callaway	May 1973	July 1975
SECRETARY OF THE NAVY:		
W. Graham Claytor, Jr.	Jan. 1977	Present
J. William Middendorf II	Apr. 1974	Jan. 1977
SECRETARY OF THE AIR FORCE:		
John C. Stetson	Mar. 1977	Present
Thomas C. Reed	Dec. 1975	Mar. 1977
John L. McLucas	May 1973	Dec. 1975
DIRECTOR OF THE DEFENSE LOGISTICS AGENCY:		
Lt. Gen. W. W. Vaughan	Jan. 1976	Present
Lt. Gen. Wallace H. Robinson, Jr.	Aug. 1971	Jan. 1976

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