

CHAPTER 18**HEARING CONSERVATION PROGRAM**

1. Purpose. To prevent occupational noise-related hearing loss among military and civilian personnel at the Naval Air Engineering Station Lakehurst (NAES Lakehurst).

2. Background and Biological Effects

a. Exposure to loud noises such as those created in industry or by jet aircraft may, over a period of time, result in hearing loss. This loss may be temporary and recovery may ensue or it may be permanent due to injury to the inner ear. Susceptibility to hearing loss due to noise varies greatly among different individuals; some can tolerate much more than others without ear damage. Loss usually occurs first in the high frequency range (above 4,000 Hertz) and may be quite extensive before the important speech range (500 to 3,000 Hertz) is affected.

b. The maximum daily level of permissible exposure to noise is greatly influenced by factors such as the frequency spectrum of the noise, whether the noise is intermittent or continuous, the duration of the exposure and individual susceptibility. Although individual noise susceptibility cannot be readily predicted and it is not always possible to monitor the noise exposure of all personnel, knowledge of the relationship between noise exposure and hearing impairment provides for the establishment of guidelines which alert individuals to the existence of noise hazards and will protect the hearing of the majority of personnel so exposed.

(1) Exposure to noise where the sound level is less than 84 dBA is not considered to cause permanent hearing loss. Exposure may be intermittent or continuous for as long as 8-hours per day. Much of the common "noise pollution" of offices and shops is below the 84 dBA level. The noise from automatic typewriters, card punches, printers and other data processing equipment generally does not exceed 84 dBA. These sounds are easily identified above the background noise because of their distinct tones, irregularity of operation or because they are impact sounds. While these are unlikely to cause hearing loss for normal workers, such noises are an undesirable stress and may result in decreased efficiency, increased fatigue, and interference with communications and may make concentration on complex tasks more difficult. Noises that are much louder than background or that are distinctive in tone or pitch should be reduced or otherwise controlled to reduce stress and worker complaints. The use of ear protection in noise areas of less than 84 dBA to improve communication or reduce annoyance is not to be discouraged.

c. The effectiveness of the NAES Lakehurst hearing conservation program depends on a general awareness of the hazardous noise in the work environment, the reduction of hazardous noise by engineering control methods, and the use of hearing protection devices.

3. Noise Hazard Areas/Operations. The areas outlined below are designated as noise hazardous, except where noted otherwise, and are to be clearly posted. Hearing protection will be utilized by all personnel (military, civilian, and visitors).

<u>AREA</u>	<u>NOISE HAZARDS EXIST</u>
Aircraft Engine (jet)	Within 300 feet of any engine
Recovery Systems Test (RSTS) Area (Launch End)	When jet car engines are running: 1. Inside adjacent control booths. 2. Elsewhere within 450 feet of J-79 jet car or 300 feet of J-48 car, except inside warehouses or PSC-2 with doors closed. (See Note 1)
Catapult Area (topside and decks) (Note #1)	When operating aircraft, except in the Integrated Catapult Control Systems (Integrated Catapult Control Systems capsule).
Runway Arrested Landing Area	When operating aircraft, above Site (Runway Arrested Landing Site)deck and pit areas, except when in Automatic Data Handling Systems room, closed building/trailer or in the tower.
Jet Blast Deflector Site	When aircraft is turning up, within a 450-foot radius.

<u>AREA</u>	<u>NOISE HAZARDS EXIST</u>
Taxiway Aircraft Hi-Power Turn-up Area	When aircraft is being turned up above idle power (300 feet radius).
Helicopter Support Test Evaluation Complex	When helicopter is turning up, and within a 450-foot radius. Personnel below decks are included.
Power Plants 1 and 2	When operating.
Jackhammer Operations radius. (See Note 2)	When operating and personnel within a 75-foot radius.
Line areas of Hangars 5, 6, and Building 307 (West Field)	When aircraft are operational within 300 feet.
Abrasive Sandblasting Building 124	When operating.

c. OSH Department shall:

(1) Advise the Regional Industrial Hygiene Department of potential noise hazardous areas detected during safety surveys.

(2) In cooperation with Regional Industrial Hygiene Department, train personnel in the selection, use, inspection and care of hearing protection devices required for their work situations and maintain records of such training.

(3) Issue approved types of ear protective equipment other than fitted earplugs.

(4) In cooperation with the Regional Industrial Hygiene Department, advise operating departments in their noise control program.

(5) Compile a listing of all employees included in the hearing conservation program and provide the BRMEDCLINIC and departments a monthly schedule of those individuals due for testing.

d. Line Departments shall:

(1) Conduct an active noise reduction program.

(2) Inform the OSH Office of areas and operations that are potentially noise hazardous, including all areas where communication difficulties are noted, e.g., where it is necessary to use loud voices at short ranges.

(3) Post with signs all areas determined to be noise hazardous.

(4) Label all equipment, including hand tools, producing sound in excess of 84 dBA when operating.

(5) Enforce the wearing of ear protective equipment in noise hazardous areas when the noise source is in operation.

(6) Ensure all hearing protection devices are maintained and stored in a sanitary manner.

(7) Ensure all employees assigned to noise hazardous areas are included in the hearing conservation program, including preassignment testing and periodic retesting.

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