

TARLETON STATE UNIVERSITY
Hearing Conservation Program

Office of Risk Management and Safety
August 2009

1. INTRODUCTION

Tarleton State University is committed to providing a safe and healthful work environment for all of its employees. The objective of this program is to ensure that employees are not exposed to noise levels of the intensity which may damage the employee's hearing. To accomplish this, appropriate research has been completed and the following standard operating procedures established.

2. BACKGROUND

Although Tarleton State University, as a state agency, the following OSHA Standard is nationally recognized as the accepted guidance in the area of hearing conservation. The Occupational Safety and Health Administration (OSHA) Noise Standard, 29 CFR 1910.95, established permissible employee noise exposures in terms of duration in hours per day at various sound levels. The standard defines the Permissible Exposure Level (PEL) as that noise dose that would result from a continuous 8-hour exposure to a sound level of 90 dBA. This is a dose of 100%.

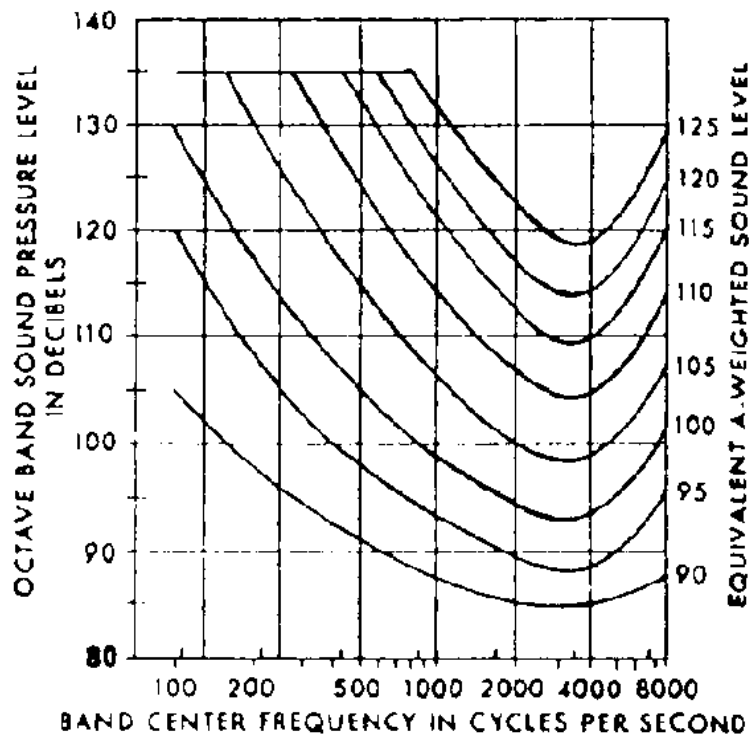


FIGURE G-9

Since employees are not normally exposed to excessive noise levels for an 8-hour duration, TSU does not meet or exceed the limitations established as recognized guidelines. However, since some readings do exceed the 90 dBA standard and individual sensitivity thresholds may vary substantially, TSU will implement a Hearing Conservation Program.

3. SCOPE

The development of a Hearing Conservation Program first requires a noise survey. The survey was conducted by the Office of Risk Management and Safety during September and October, 1998 and every year following as required. Refer to Appendix A, Noise Survey. The procedures of the survey are:

- a. Identify work areas where excessive noise levels may exist.
- b. (i.e., mechanical rooms, HVAC areas, boiler/generator areas, etc.)
- c. Obtain sound level readings using a Realistic Category 42-3019 Sound Level Meter.
- d. Determine the areas where hearing protection will be required. Appendix A, Noise Survey, describes the areas where noise problems might occur and lists the subsequent readings obtained at those sites.

Departmental procedures are in place to identify the appropriate employee responses when hearing risk areas are encountered.

4. PROGRAM GUIDELINES

The TSU Hearing Conservation Program consist of:

- a. Departmental procedures,
- b. Provision of hearing protection,
- c. Initial training,
- d. Required recordkeeping,
- e. Appropriate signage for designated areas, and
- f. Annual training for affected employees.

- a. Departmental procedures

Table 1 indicates exposure rates which determine hearing protection requirements. The levels below 90 dBA do not require hearing protection as indicated by OSHA 1910.95. However, for example, if an employee encounters an area that has a survey reading of 95 dBA, then that worker may enter and be exposed for 1 hour twice a day. If survey readings exceed 110 dBA, then hearing protection is mandatory.

Few areas on the Tarleton campus have readings of this magnitude. However it is the intent of the Office of Risk Management and Safety to ensure that employees are not exposed to noise levels of this intensity which may damage the employee's hearing.

1. Table 1

5. Maximum Daily Exposures		
6. Sound level	7. Maximum time per exposure	8. Maximum daily exposures.
9. Below 90	10. No protection required.	
11. 90 – 100	12. *1 hour	13. 2 per day
14. 101 – 110	15. *½ hour	16. 2 per day
17. Above 110	18. Hearing protection required at all times.	

*Hearing protection optional.

b. Provision of hearing protection

TSU will provide, at no cost to its employees, hearing protection in the form of earplugs or earmuffs. Employees must take responsibility for their hearing health by acting in accordance with the TSU Hearing Conservation Program and contributing to their own education about hearing hazards.

c. Training

Training will consist of an explanation of employee benefits of the program, the effects of noise on hearing, purpose of hearing protectors, their advantages and disadvantages, and instructions on their selection, fit, use, and care, and an explanation of the purpose and procedures of audiometric testing (noise survey).

NOTE: Although noise may not seem to be excessive, after a period of time the cumulative effect can be insidious and permanent. Hearing aids only magnify sound; they cannot correct damage to the ear.

d. Recordkeeping

The TSU Office of Risk Management and Safety will maintain any records pertaining to medical hearing problems.

e. Signage

Warning signs will be placed at the entrances to areas where the noise levels are at or above the 90 dBA guideline. The signage will read:

Warning
Hearing Protection Required for
Prolonged Exposure!

f. Annual training and Review

Refresher training will be conducted annually. Since Maintenance and Control Center personnel are the most familiar with the operations and environments at these locations, employees will report any changes in the noise environment to their supervisors so that suggestions and/or reevaluations can be made by the Office of Risk Management and Safety.

Additionally, when there are significant changes in machinery or production processes that may result in increased noise levels, re-monitoring must be conducted to determine whether additional employees need to be included in the hearing conservation program. In this effort, changes and updates may be made to the Noise Survey and/or Hearing Conservation Program to ensure that the work environment at TSU stays safe and healthful.

REFERENCE

Occupational Safety and Health Standards, 29 CFR 1910.95, "Occupational Noise Exposure", Dec. 12, 2008

APPENDIX A
TSU CAMPUS - NOISE SURVEY

**Noise Survey
Tarleton State University
Hearing Conservation Program**

Table 1

<i>Maximum Daily Exposures</i>		
Sound Level	Maximum time per exposure	Maximum daily exposures.
Below 90	No protection required.	
90 – 100	* 1 hour	2 per day
101 – 110	* ½ hour	2 per day
Above 110	Hearing protection required at all times.	Verify signs/labels/warnings posted as necessary

* Hearing protection optional.

Building	Bldg #	Room Location	Readings	Miscellaneous
Industrial Technology	501	East Mechanical Room	95	
		Plastics Lab	92	
		Metalworking Lab	84	
Heating	503	Boiler Room	98	
Fine Arts	506	Northeast	72	Equipment Room
		Orchestra Pit	68	Other Pumps
		Orchestra Pit	84	Heating pump.
		Orchestra Pit	92	Return air.
		Basement by loading dock	94	With compressors.
Agriculture	508	North basement	84	Without compressors.
Math	509	1 st floor by elevator	95	
		1 st floor, Room 114	89	
		2 nd floor by elevator	95	
		2 nd floor, northwest side	89	
		3 rd floor by elevator	95	
		3 rd floor, northwest side	95	
		Roof, northwest	98	
		Roof, north (center)	96	
Administration Annex	510	Northwest, across from Room 103	96	

		Room 105I	76	
Humanities	511	1 st floor by elevator	92	All other rooms have telephone equipment.
		1 st floor, east	88	
		1 st floor, west	96	
		2 nd floor, east	95	
		2 nd floor, west	85	
		3 rd floor, east	85	
		3 rd floor, west	89	
		Outside, east	84	
		Roof	93	With wind.
		Basement	82	
Education Building	513	Outside equipment yard	89	
		1 st floor, Room 113	89	
		2 nd floor, Room 211	95	With compressor.
		3 rd floor, Room 316	75	
Equipment Storage	517	N/A	-----	
Physical Plant	518	Pass through Room 113	82	
		Workshop (Woodshop)	92	
Trogon House	521	1 st floor, on screened porch	89	
		2 nd floor	-----	No equipment.
		Attic	65	
Davis Hall	522	1 st floor, through Room 102	86	
		Through Room 104	80	
		Room 111A	75	
		2 nd floor, through Room 205	Below 60	
		Through Room 201	Below 60	
		Through Room 211	66	
		Through Room 215	66	
		Through Room 216	Below 60	
		3 rd floor, through Room 302	Below 60	
		Through Room 305	75	
		4 th floor, through Room 404	89	
		Across from Room 406	89	
		Basement	85	
Dining Hall	961	Basement		
		Mechanical Room		
		Roof, north		

		Roof, south		
PE Education & Intramural	532	Room 111A	72	
		Room 111	84	
		AC outside	102	With wind.
		Basement, Room 001	96	
Tarleton Center	533	1 st floor, none	N/A	
		2 nd floor	86	
		Basement	90	
Administration	534	1 st floor, none	N/A	
		2 nd floor, west	86	
		2 nd floor, east	82	
Ticket Booth	540	No equipment	N/A	
PE Field Facility (Sport's Medicine)	551	West	84	With boilers.
	965	East	82	
West side concession	557	No equipment	N/A	
Greenhouse	603		Below 60	
Wisdom Gym	648	1 st floor	88	
		Basement	95	
		Swimming pool area	68	
		Boiler Room	92	
		Mech. Room south of pool	78	
Library	656	2 nd Floor Equip. Room South		
		2 nd Floor Equip. Room North		
		Roof Condenser West		
		Roof Condenser North		
		Attic Equip. Room East		
		Attic Equip. Room West		
		Basement Equip. Room		
Nursing	664	Mechanical Room	89	
Environmental Services	665	Mechanical Room	84	
Ag Engineering Bldg.	671	Mechanical Room	82	
Farm Machinery Lab	673	Mechanical Room	89	
Central Receiving	685	M2	85	With boilers.
		M3	82	
		2 nd floor, M1	84	
Business Bldg.	687	Room 156	86	
Hydrology/Engineering	688	1 st floor	95	Electric Equipment Room

		2 nd floor	80	Equipment Room
		Boiler	86	East of Equipment Room
		Equipment Yard	96	Outside - South
TSC (Student Center)	689	Basement Mechanical Room		
		Elevator equipment	80	
		1 st floor, SW corner	84	
		2 nd floor, NW corner	82	
		Room 205	81	
Control Center	690	Mechanical Room	92	With compressor.
		Boiler Room	recheck at later date	UNDER CONSTRUCTION
Horticulture Lab	725	Mechanical Room	72	
Horticulture Greenhouse East	726	Mechanical Room	72	
Horticulture Greenhouse West	727	Mechanical Room	74	
Ag Mechanics	728	Mechanical Room	89	
Recreational Sports Center	967			

Dorms				
Bender Hall	536	Attic	Below 60	
		Basement	95	
Traditions	646	1 st floor Equip. Room		
Ferguson Hall	663	Attic	78	
Gough Hall	526		N/A	No equipment rooms.
Hunewell Addition	531	Basement	96	
Hunewell Hall	529		N/A	No equipment rooms.
Hunewell Lounge	647		N/A	No equipment rooms.
Lewis Hall	527		N/A	No equipment rooms.
Moody Hall	530		N/A	No equipment rooms.
Farm				
Dairy		Milking	82	
Meats Lab		Roof	96	
Teaching Pavillion		Outside, south	88	

		Across from classroom	78	
		Next to restrooms	82	
Equipment Yards				
South entrance of the Stadium			96	
Between Lewis Hall & Hunewell Hall (cul de sac)			96	
Behind Davis Hall			92	
On Vanderbilt (approx. 50 yards east of Wisdom Gym)			96	
North of Central Plant			92	
West of Bender Hall			95	
East of the Education Bldg.			96	
Emergency Generators				
Admin Bldg			101	
Traditions			101	
Control Center			101	
Fine Arts			101	
Horse Barn			101	
Hydrology Bldg.			101	
Library			101	
Student Development Center			101	
Portable Equipment				
Blower			112	
Edger			112	
Lawn Mower – riding			96	
Lawn Mower – push			95	
Hilty drill			101	

Location readings in shaded blocks require hearing protection.

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