



Vice President for Research
Environmental Health & Safety

HEARING CONSERVATION PROGRAM

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I. PURPOSE

Exposure to excessive noise in the workplace can cause permanent hearing loss. Certain operations and workstations may expose faculty, staff, or students to significant noise levels. The Hearing Conservation Program has been established to help ensure that members of the UVA community do not suffer health effects from exposure to excessive noise while at work. Elements of this written program include those designated in OSHA 1910.95: exposure monitoring, audiometric testing, engineering and administrative controls, hearing protection devices (HPD), training, recordkeeping, and program evaluation.

II. SCOPE

The provisions of this Hearing Conservation Program apply to all personnel in academic departments, Athletics, Parking & Transportation and the main hospital. University satellite research locations and campuses are also included.

III. APPLICABILITY

This program shall apply to all operations where employees are expected to be exposed to noise levels of 85 dB(A) or above for 8 hours as a time weighted average.

IV. DEFINITIONS

Action Level OSHA

An 8-hour time weighted average (TWA) of decibels measured on the A-weighted scale, slow response, or equivalently a dose of 50%. This is the level of sound exposure at which employee participation in the UVA Hearing Conservation Program is mandatory.

ACGIH

American Conference of Governmental Hygienists

ANSI

American National Standards Institute

A-Weighted Sound Level (dB(A))

The weighting of sound levels that is equivalent to sound response of the human ear.

Audiometric Testing Program

The portion of the Hearing Conservation Program that consists of measuring an employee's hearing threshold to establish a baseline and subsequent comparisons, usually on an annual basis.

Decibel (dB)

Unit of measurement of sound level.

Dose

A ratio of noise exposure relative to the OSHA noise criterion level of 90 decibels, expressed as a percentage. Ninety decibels represents a dose of 100% over an 8-hour work shift. Eighty-five decibels represents a dose of 50% over an 8-hour work shift. Dose is based on the OSHA 5 dB exchange rate. Dose may be determined from the equation given in Table 2 for non-continuous noise or estimated from Table 3 based on the TWA.

Hearing Conservation Program (HCP)

A written program that establishes procedures to ensure the protection of employees from high noise areas or operations in compliance with the OSHA Occupational Noise Regulation 29 CFR 1910.95 and in accordance with best practices published in consensus guidelines from ACGIH and National Institute for Occupational Safety and Health (NIOSH) research.

Hearing Protection Attenuation

The estimated reduction in the noise level at the eardrum as a result of the use of hearing protection. Estimated using the formula: Attenuated TWA, dB(A) = TWA - (Noise Reduction Rating, NRR, - 7) for A - scale weighted sound levels. Attenuated TWA, dBC = TWA - NRR for C-scale weighted sound levels.

Noise Induced Hearing Loss, NIHL

The OSHA recordable occupationally related hearing loss, as defined by 29 CFR 1904.10 and 29 CFR 1904.5, and includes a Standard Threshold Shift (STS) of 10 db, with age correction, averaged over the 2K, 3K, and 4K frequencies from baseline in either ear and a 25 db shift from audiometric zero, in the same ear as the 10 dB STS at the same frequencies.

Noise Reduction Rating (NRR)

The theoretical maximum amount of noise reduction that can be achieved using a hearing protection device. This is a manufacturers' calculated value and must be displayed with the hearing protection device.

Monitoring

The sampling of noise levels using a sound level meter, octave band analyzer, or personal noise dosimeter.

Permissible Noise Exposure

The maximum daily noise exposure which may be experienced by employees not using hearing protectors from a continuous 8-hour exposure to a sound level of 90 dB(A) or equivalent dose of 100%.

Standard Threshold Shift (STS)

A change in hearing threshold, relative to the most recent audiogram for that employee, of an average of 10 decibels (dB) or more at 2000, 3000, and 4000 hertz in one or both ears and substantiated within 30 days with a follow-up audiogram.

Threshold Limit Value (TLV)

Health based exposure limits, established by ACGIH committees from the review of existing published and peer-reviewed scientific literature, concluded to be safe for workers to experience without adverse health effects.

Time Weighted Average (TWA)

The [equivalent] noise level, in dB, based on an 8-hour exposure time frame. If the noise is not constant over an 8-hour exposure, then a calculated 8-hour TWA must be made using the equation in Table 1. The TWA may also be estimated from the dose or percent noise exposure, based on noise exposure continuous over 8-hours, as given in Table 2.

V. ROLES & RESPONSIBILITIES

Three departments participate in administering the hearing conservation program; Environmental Health and Safety (EHS), UVA WorkMed and UVA Audiology. EHS acts as the overall administrator of UVA's Hearing Conservation Program in accordance with the OSHA Noise Standard 20 CFR 1910.95. The ongoing tasks of this program also include a cooperative effort between EHS, principal investigators in UVA research departments, UVA Health System, Athletics and Parking & Transportation. and staff and supervisors in all the aforementioned areas.

A. Environmental Health & Safety Department (EHS)

1. Develop the written Hearing Conservation Program and revise the program as necessary.
2. Identify an audiometric testing clinic(s) for occupationally exposed employees. See requirements of the testing clinic below.
3. Obtain and review written opinions and audiograms for all employees in the HCP from the audiometric testing clinic and/or WorkMed. Track standard threshold shifts (STS) and hearing related medical evaluations recommended by the healthcare provider per 29 CFR 1910.95. Notify employees of confirmation of a persistent STS. Update baseline audiograms as needed.
4. Inform the Workers' Compensation Coordinator in Human Resources (HR) of any STS so it can be reflected on the OSHA 300 Log. The age correction calculation used in 29 CFR 1910.95 Appendix F will be used and considered prior to reporting an STS on the 300 Logs.
5. Conduct monitoring to identify areas or operations requiring inclusion in a hearing conservation program (HCP).
6. Assist in noise control measures (i.e. hearing protection devices (HPD), noise control engineered solutions, administrative controls) to reduce employee exposures to below 85 dB(A).
7. Identify approved hearing protection for use by UVA employees requiring protection.
8. Enroll an employee in the HCP after learning from departmental supervisors that an employee is assigned to a work area or combination of work areas where the occupational noise exposure is known to exceed 85 dB(A) for occupational noise.
9. Train personnel enrolled in the HCP including effects of overexposure to noise, and the use, care and limitations of hearing protection devices.
10. Remove enrolled employees from the HCP upon receipt of one of the following:
 - Noise exposure monitoring results that show administrative or engineering controls have been implemented and have reduced employee exposure to occupational noise below the OSHA action level.
 - Notification that an employee's job responsibilities change so that the employee is no longer a member of a similar exposure group included in the HCP.
 - Notification that the employee has terminated employment.
11. Oversee calibration and servicing of monitoring equipment (sound level meters, noise dosimeters, and other such equipment as necessary to protect the health of the employees) as manufacturers' guides instruct.

12. Maintain exposure monitoring records, training records, audiometric test results, and any medical reports related to 29 CFR 1910.95 for the duration of employment plus 30 years.
13. Review and revise the HCP as needed for compliance with applicable regulations.

B. Healthcare Providers

Healthcare providers perform audiometric tests (hearing tests) and evaluate the results for employees enrolled in the HCP. They also arrange the scheduling of audiometric tests, referrals to specialists for hearing loss evaluations and repeat audiograms for persistent STS. They maintain the records of audiometric test results and outcomes of specialist referrals. They are in partnership with the UVA Office of Environmental Health & Safety in ensuring that the medical surveillance aspects of the UVA Hearing Conservation Program are fulfilled.

B.1. WorkMed – UVA WorkMed, in its role as occupational health program provider for UVA employees, is responsible for ensuring the scheduling, completion and recordkeeping of OSHA mandated medical surveillance examinations for UVA employees enrolled in the hearing conservation program. The medical surveillance program shall be under the supervision of an audiologist or physician.

1. Coordinate baseline audiometric testing within 6 months of an employee's enrollment in the HCP through UVA Audiology Dept. Inform the employee to avoid high levels of occupational and non-occupational noise for at least 12 hours prior to baseline audiometric testing and reschedule if this has not occurred. Schedule baseline testing for the first thing in the morning.
2. Coordinate annual audiometric testing for all employees enrolled in the HCP through UVA Audiology Dept. Inform the employee that annual audiograms are to occur after a minimum of four hours of noise exposure in the typical work environment and schedule the employee's annual audiometric test accordingly.
3. Provide EHS with written results for employees that have experienced a standard threshold shift (STS) of 10 dB or more following loss correction for age, regardless of a 25 dB shift from audiometric zero within 5 days of the audiometric test.
4. Schedule a repeat audiometric test within 30 days for any employee who has experienced a STS.
5. Inform the employee that has experienced a STS within 21 days of the initial testing.
6. Notify EHS if any medical condition related to the use of HPD are found during the audiometric or annual physical examinations.
7. Inform employee of the need for otological examination if a medical condition unrelated to the use of HPD is suspected.
8. Provide EHS with UVA Audiology's written opinion with a copy of the audiogram, including time of day of testing, following each audiometric evaluation.
9. Maintain all audiometric test records for the duration of employment plus 30 years.

B.2. UVA Audiology - The healthcare provider in Charlottesville performing audiometric tests and evaluating the results for the HCP is the UVA Audiology Department. UVA Audiology staff performing the tests are audiologists certified by the Council of Accreditation in Occupational Hearing Conservation (CAOHC). Specific responsibilities of UVA Audiology for this HCP are:

1. Conduct audiometric testing for University employees potentially exposed to noise levels at or above 85 dB(A) as an 8 hour TWA in accordance with 29 CFR 1910.95.

2. For baseline testing, verify that the employee has avoided high levels of occupational and non-occupational noise for at least 12 hours prior to audiometric testing and reschedule if this has not occurred.
3. For annual testing, verify that the employee has been working for a minimum of 4 hours in the routine noise environment prior to audiometric testing.
4. Provide UVA WorkMed with written results and opinion with a copy of the audiogram, including time of day of testing, within 10 days of each audiometric evaluation.
5. Provide UVA WorkMed with written results for employees that have experienced a standard threshold shift (STS) of 10 dB or more following loss correction for age, regardless of a 25 dB shift from audiometric zero.
6. Notify EHS if any medical condition related to the use of HPD are found during the audiometric examination.
7. Inform employee of the need for otological examination if a medical condition unrelated to the use of HPD is suspected.
8. Participate with UVA WorkMed to meet the requirement to conduct a re-test audiometric evaluation for an employee within 30 days if the employee has experienced a STS or for other reasons as requested by UVA WorkMed or EHS.
9. Retain audiometric testing results for the duration of an employee's employment.
10. Maintain written calibration of audiometers and daily operational pre-testing checks. Conduct an exhaustive calibration, as specified in 29 CFR 1910.95(h)(5)(iii), of the audiometric measuring instruments at least every two years.

B.3. Mobile and other Ancillary Audiometric Testing Facilities

Mobile and ancillary audiometric testing facilities include any facility other than UVA Audiology, Charlottesville, VA. Mobile and ancillary testing facilities are required to: 1) meet all requirements specified in OSHA 1910.95 including Appendices, 2) be operated under the supervision of a physician or audiologist, 3) be approved by UVA EHS and complete an *Audiometric Testing Letter of Agreement* (see Appendix D) prior to the performance of testing on UVA staff enrolled in the HCP. Audiometric tests shall be performed by a physician, audiologist or an occupational hearing conservationist certified by the Council for Accreditation in Occupational Hearing Conservation (CAPOHC) or the equivalent working under a physician or audiologist. These facilities shall meet all the requirements specified in **B.1.** and **B.2** when servicing UVA employees enrolled in the UVA Hearing Conservation Program.

C. Departments, Supervisors, Directors, Managers Shall:

1. Identify potentially hazardous noise locations and operations and contact EHS for evaluations.
2. Coordinate baseline audiometric testing within 6 months of an employee's hire for those with job titles enrolled in the HCP. Inform the employee to avoid high levels of workplace and non-workplace noise for at least 12 hours prior to audiometric testing and ensure this has occurred. Reschedule the audiometric test if the latter has not occurred.
3. Ensure that employees required to participate in the hearing conservation program complete their annual audiometric testing, at the clinic with which a written agreement has been established. Annual tests are to occur after at least 4 hours of routine noise exposure in the workplace.
4. Require employees exposed to noise in excess of 85 dB(A) to attend hearing protection training.

5. Implement EHS recommendations for controlling employee noise exposures to equipment and work areas above 85 dB(A). The feasibility of controlling noise levels at the source through administrative and/or engineering controls will be considered as first options. If such controls are not feasible, hearing protection devices must be used to reduce exposures to below 85 dB(A).
6. Provide the required hearing protection devices for employees including more than one style as required to provide a proper fit. Ensure employees wear the assigned HPD.
7. Maintain any noise area postings required by EHS.
8. Notify EHS if an employee enrolled in the HCP transfers to a new position or terminates employment.

D. Employee Shall:

1. Assist the supervisor in identifying potentially hazardous noise locations or operations to which they may be exposed.
2. Schedule and complete audiometric testing or exposure assessments as instructed.
3. Use hearing protection as required and in accordance with training received.
4. Attend hearing protection training as instructed.
5. Notify the supervisor or EHS of any concerns related to the use of HPD.

VI. GENERAL REQUIREMENTS

A. Exposure Limits

The OSHA PEL for noise is based upon an eight-hour TWA of 90 dB(A) with a doubling rate of 5 dB(A). The OSHA Action Level for noise is an eight-hour TWA of 85 dB(A) with a doubling rate of 5 dB(A). Exposure to impulse or impact noise should not exceed 140 dB without proper hearing protection.

The ACGIH Threshold Limit Value (TLV) for noise is based upon an eight-hour TWA of 85 dB(A) with a doubling rate of 3 dB(A). Though not a regulatory requirement, the TLV is the most up-to-date, scientifically sound exposure limit for the assessment of noise exposure.

B. Monitoring

When information indicates that an employee's exposure may equal or exceed 85 dB(A) for an 8-hour TWA assessment, monitoring shall be conducted by EHS. Affected employees shall be notified of the results of the monitoring including an explanation of the significance of the results. Monitoring activities may consist of:

1. Sound level measurements for locations where the noise level is stationary and expected to be continuous or
2. Personal noise dosimetry for work operations that are highly mobile or random in noise level.
3. Re-monitoring, if a change in equipment, process or controls increases the noise level to the extent that:
 - Additional employees may be exposed at or above 85 dB(A) or;
 - The attenuation provided by the hearing protectors used by the employee(s) does not reduce the noise exposure level to 85 dB(A) for an 8 hour TWA or 80 dB(A) as 8 hour

TWA for employees that have experienced a standard threshold shift.

- Follow-up monitoring if an STS has occurred.
4. The opportunity for affected employees to observe the noise measurements during collection.

C. HCP Enrollment

Employees must be enrolled in the HCP if they are assigned to a work area (or work in a similar exposure group) where occupational exposure to noise exceeds 85 dB(A).

Enrolling Employees in the HCP

Upon receipt of written results that an employee or a group of employees who are exposed to occupational noise above 85 dB(A), EHS will enroll the employee or group of employees in the HCP.

Removing Employees from the HCP

EHS will remove employees from the HCP if any of the following criteria are met:

1. Exposure monitoring results indicate that an employee or a group of employees who work in a similar exposure group are no longer exposed to occupational noise above 85 dB(A) after implementing engineering or administrative controls.
2. Notification from the employee's supervisor that an employee's job responsibilities have changed and the employee is no longer a member of a similar exposure group included in the HCP.
3. Notification that the employee has terminated employment

D. Audiometric Testing Program

All employees exposed to noise at or above 85 dB(A) are required to participate in the program. This program consists of:

1. A baseline test to be completed within 6 months of the employee's first exposure above 85 dB(A). This test must be preceded by at least 12 hours without exposure to workplace noise at or above 85 dB(A) or hearing protection devices must be used prior to testing.
2. Annual testing thereafter provided that exposure at or above 85 dB(A) is expected.
3. A follow-up audiogram shall be provided within 30 days if a standard threshold shift has been identified. The employee shall be informed in writing within 21 days of the determination.
4. Audiometric testing reviewed by an audiologist. The audiologist will determine if further evaluation or retraining is needed.
5. Maintenance of audiometric testing equipment in accordance with the requirements of the OSHA Occupational Noise Standard (29 CFR 1910.95 and its appendices).

E. Noise Control & Training

Where noise levels for non-mobile sources are found to be in excess of 85 dB(A) or above the Permissible Noise Exposure as listed in Table 1 on a continuous basis and employees are required to work in such areas the following measures shall be taken:

1. Engineering controls will be reviewed for feasibility in noise reduction. Until they are implemented or if adequate controls are not feasible then;
2. Hearing protection devices shall be worn by employees whose exposure is at or above 85 dB(A) as an 8 hour TWA. Hearing protection devices will be made available to exposed employees at no cost. Hearing protection attenuation shall reduce the exposure below 85 dB(A) as an 8 hour TWA using the NRR of the rated device.
3. Training of affected employees regarding the hazards of noise exposure, and where necessary the fitting of employees with appropriate hearing protection devices and training about their use, care and limitations

F. Record-keeping

The audiometric testing clinic shall maintain audiometric exams for each tested employee for the duration of that employee's participation in the program. WorkMed shall maintain audiometric test results for the duration of employment plus 30 years. EHS shall maintain all noise monitoring data and audiometric test results for the duration of employment plus 30 years.

TABLES

TABLE 1: ACGIH THRESHOLD LIMIT VALUES FOR AUDIBLE SOUND			
	Duration Per Day	Sound Pressure Level dB(A)	
Hours	24	80	
	16	82	
	8	85	
	4	88	
	2	91	
	1	94	
Minutes	30	97	
	15	100	
	7.50	103	
	3.75	106	
	1.88	109	
	0.94	112	
	Seconds	28.12	115
		14.06	118
		7.03	121
		3.52	124
1.76		127	
0.88		130	
0.44		133	
0.22		136	
	0.11	139	
	0.08	140	

The noise level should be determined by a sound level meter, integrating sound level meter or dosimeter. When the daily noise exposure is composed of two or more periods of noise of different levels, their combined effect should be considered rather than the individual effect of each. If the sum of the following fractions,

$$\frac{C_1}{T_1} + \frac{C_2}{T_2} + \dots + \frac{C_n}{T_n}$$

exceeds unity, then the combined exposure should be considered to exceed the TLV. C indicates the total duration of exposure at a specific noise level, and T indicates total duration of exposure permitted at that level. All on-the-job noise exposure of 80-140 dBA should be used in the above calculations.

For more variable sound pressure levels and when brief, impulsive or impact sounds are present a dosimeter or an integrating sound level meter must be used. The limit is exceeded when the dose is more than 100% as indicated on a dosimeter set with a 3 dB time intensity exchange rate and an 8-hour criteria level of 85 dBA.

No exposure to continuous, intermittent or impact noise (e.g. audible sound between the frequencies of 20 to 20,000 Hz) is permitted in excess of a peak C-weighted level of 140 decibels (dB).

Noise levels in dB are measured on a sound level meter, conforming, as a minimum, to the requirements of the American National Standards Institute Sound Level Meters – Part 1: Specifications S1.4 (ANSI, 2007) Type 2, and set to use the A-weighted network with slow meter response.

TABLE 2: OSHA 8- HOUR TWA SOUND LEVELS & ALLOWABLE EXPOSURE TIMES

Sound Level (dB(A)) (loudness)	Allowable Exposure Duration (Hours)	
80	32	For brevity, only dB(A) values that are multiples of 5 are shown. Shaded areas represents OSHA defined exchange rate. The complete table G- 16A at 29 CFR 1910.95 App A will be used. Allowable exposure duration is time in hours at a dB(A) level, which constitutes an exposure equivalent in energy and sound dose to 90 dB(A) for 8 hours. Calculations/Definitions: Allowable exposure time may be calculated using the following equation for sound levels not specified in this table: $T = 8/2^{(L-90)/5}$ Where T = Allowable Exposure Duration and L = measured A-weighted sound level.
85	16	
90	8	
95	4	
100	2	
105	1	
110	0.5	
115	0.25	
120	0.125	
125	0.063	
130	0.031	

Sound levels below 80 dB(A) are not included in exposure calculations. A dose of 50% or more, or an 8h-TWA of 85 dB(A) or higher, triggers the Action Level requirements and mandates an employee's participation in the UVA Hearing Conservation Program.

TABLE 3: OSHA PERCENT NOISE EXPOSURE (DOSE) AND EQUIVALENT 8-HOUR

Dose (%)	8-Hour TWA	
10	73.4	For brevity, a shorten selection of dose values are shown. The complete list is given in table A-1 of 29 CFR 1910.95, Appendix A. The dose may be calculated using the following formula: $\text{Dose} = 100 \times \left\{ \frac{C_{\text{Level1}}}{T_{\text{Level1}}} + \frac{C_{\text{Level2}}}{T_{\text{Level2}}} + \frac{C_{\text{Level n}}}{T_{\text{Level n}}} \right\}$ Where C = time of exposure at any noise level and T = allowable exposure time, in hours given by Table 1.
20	78.4	
30	81.3	
40	83.4	
50	85.0	
60	86.3	
70	87.9	
80	88.4	
90	89.2	
100	90.0	
120	91.3	
140	92.4	
160	93.6	
180	94.2	
200	95.0	
240	96.3	
280	97.9	
300	97.9	
400	100.0	
500	101.6	Example: Dose = 75% $\text{8h-TWA} = 16.61 \log(.75) + 90 = 16.61(-.1249) + 90 = -2.07 + 90 = 87.93 \text{ dB(A)}$

APPENDICES

APPENDIX A: NOISE DOSIMETRY DATA SHEET



OFFICE OF THE VICE PRESIDENT FOR RESEARCH

ENVIRONMENTAL HEALTH & SAFETY
AUDIODOSIMETRY SURVEY

Date:	Department:	Supervisor:
Test Location:	Task:	Audiosimetry Performed By:
PRE/POST CALIBRATION:		Audiosimetry Reviewed By:
Source: Quest QC-30 Calibrator 114 dB	Source: 3M Edge eg5 dosimeter	
OSHA Hearing Conservation Cutoff	OSHA PEL (Compliance)	

Dosimeter #	Employee & Computing ID or Location	Job Title	Time On	Time Off	Total Sample Time:	TWA	Dose	Lmax	LPeak	LAvg
Observations:							Projected TWA:		Projected Dose:	
Recommendations:										

Notes

APPENDIX B: AREA NOISE SURVEY DATA FORM



Vice President for Research
Environmental Health & Safety

SOUND LEVEL MEASUREMENTS

Date: _____

Location: _____

PI: _____

Process: _____

Individual Performing Survey: _____

Sound Level Instrument: _____

Settings: (Fast, Slow, Impulse, Peak) _____ Weighting scale _____

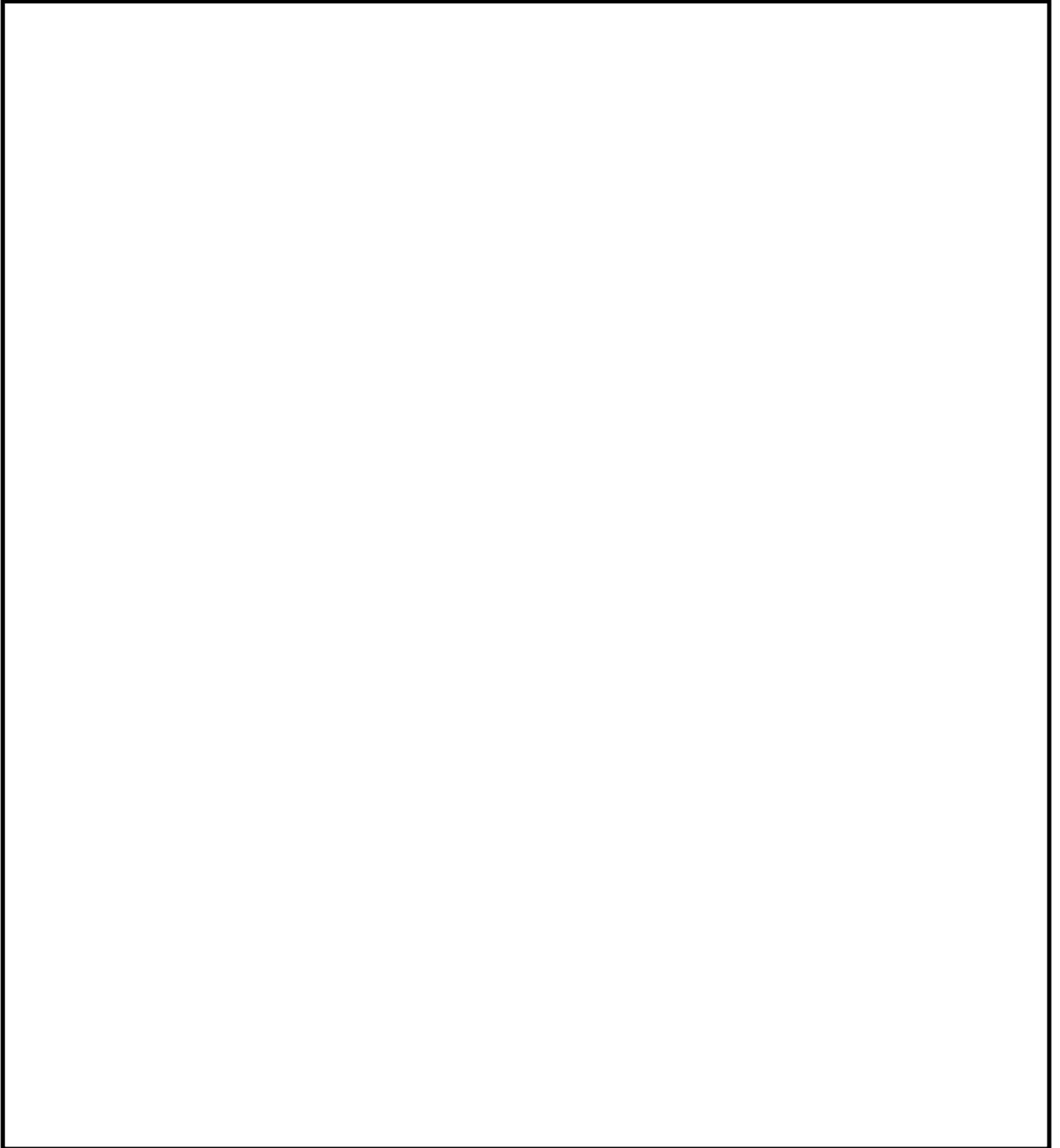
Calibrator, Level, Hz: _____

Result: _____ Meets +/- 0.5 dB Y/N

Measurement No.	ID/Activity	Equipment	Sound Level	Comments

Notes:

Sketch noise source & room layout.



APPENDIX C: STS NOTIFICATION LETTER



Office of the Vice President for Research
Environmental Health and Safety

TO: _____
FROM: _____
DATE: _____

SUBJECT: Standard Threshold Shift in Hearing

The results of your recent hearing test as part of your OSHA physical examination indicates you have sustained a Standard Threshold Shift (STS) in your hearing ability. An STS is a permanent loss of 10 decibels or greater averaged over the 2000, 3000, 4000 hertz frequency ranges in either ear. This is based on a comparison of your most recent audiogram with your initial baseline audiogram. Allowances have been made for the contribution of aging to the change in hearing level.

The 2000 to 4000 hertz frequency range is considered to be part of the speech frequency range. Losses in this range will eventually make it difficult to understand normal conversation. You may start to notice that people have to shout to make you understand. Telephone and radio use will be affected due to the absence of face-to-face contact. Reduction of these types of problems with the use of effective hearing conservation methods will enhance your quality of life.

As your employer, it is our responsibility to inform you of this hearing loss and provide you with information to preserve your present hearing level without additional losses. It is necessary to continue to wear effective hearing protection, earplugs or muffs, when working in noisy environments. Noise induced hearing loss is a gradual process that you may not realize is occurring until it's too late and there is no treatment for it.

A meeting was held with you on _____ to discuss information related to your noise exposure on and off the job, methods of controlling your personal noise exposure, the effective use of hearing protection. EHS may also conduct additional monitoring of workplace noise exposure levels in your area in the future. If so, you will be provided a copy of the results.

The following items were discussed:

- Explanation of STS and ways to prevent hearing loss
- Use of properly fitted hearing protection
- Workplace noise levels data and future monitoring

Criterion Met: _____ STS _____ OSHA Reportable STS

EHS Representative: _____ Date: _____

Employee: _____ Date: _____

CC: Employee's Department Supervisor or HR Representative _____

APPENDIX D: Audiometric Testing Letter of Agreement



Date:

Subject:

Audiometric Testing Letter of Agreement

Between the University of Virginia's Office of Environmental Health & Safety (EHS),
the _____ and
(UVA Department requesting audiometric testing)

(Audiological Health Care Provider)

Purpose: To establish a letter of agreement between the above named parties pertaining to each organization's duties and responsibilities in fulfilling the University of Virginia's Occupational Safety and Health Administration (OSHA) requirements for medical surveillance as outlined in the Occupational Noise Exposure Standard, 29 CFR 1910.95, the Recording Criteria for Cases Involving Occupational Hearing Loss, 29CFR1904.10, and Determination of Work-relatedness, 29 CFR 1910.5. Copies of these standards can be requested from EHS.

A. UVA Office of Environmental Health & Safety (EHS)

The role and responsibilities of UVA EHS as coordinator of the UVA OSHA Hearing Conservation Program are detailed in the UVA Hearing Conservation Program (HCP) Section V.1. In summary, the main tasks are HCP program oversight, the completion of noise surveys, identification of job titles to enroll in HCP or remove from the HCP, tracking audiometric test results, annual training, and evaluating hearing protection,

B. Departments

The UVA Departments that fall under this UVA HCP include UVA research departments, UVA Health System, Athletics and Parking & Transportation. UVA Facilities Management manages its own HCP. The responsibility of departments and staff are detailed in the UVA HCP Section C. In summary these are; identify potentially high noise areas and contact EHS for noise monitoring, work with the AHCP (see below) to ensure that staff enrolled in the HCP obtain audiometric testing within 6 months of hire, ensure staff in the HCP obtain annual audiometric testing, provide hearing protection for staff and ensure staff receive hearing protection training.

C. Audiological Health Care Provider (AHCP) accepts the following duties and responsibilities:

1. Conduct or oversee the audiometric testing program for all active employees identified by EHS and UVA Departments for enrollment in the UVA Hearing Conservation Program (HCP). These employees are enrolled in the HCP as a result of noise monitoring which indicates their time weighted average noise exposures exceeds the action level (85 dBA).
 - a. Schedule all baseline, annual and follow-up audiometric tests, in accordance with the UVA HCP Section B.1. Send appointment notices to employees through their respective departments
 - b. Ensure audiometric tests are administered by a certified and licensed audiologist or a graduate audiologist under the supervision of an audiologist or an occupational hearing conservationist certified by the Council for Accreditation in Occupational Hearing Conservation (CAOHC) working under the supervision of an audiologist or physician.
 - c. Ensure the time of day of audiometric testing complies with the UVA Hearing Conservation Program Section B.1.1-B.1.2.
 - d. Ensure that audiometric testing follows all requirements specified in Section B2 of the UVA HCP.

APPEND

- e. Ensure the following OSHA 29CFR1910.95 requirements are met for audiometric testing; Measuring Instruments (Appendix C), Test Rooms (Appendix D), Calibration (Appendix E), Calibration Recordkeeping (29CFR1910.95 (h) (5)).
 - f. Review and evaluate the audiograms. Notify employee when there is a new audiometric interpretation, identify when a standard threshold shift (STS) has occurred and refer employees to audiological specialists as needed. Audiometry should be conducted again within 30 days of any monitoring or retest audiogram that shows a significant threshold shift. A minimum of 12 hours of quiet shall precede the confirmation audiogram. Notify EHS when an STS has occurred.
 - g. Maintain audiometric test records for all active and newly identified employees as designated by EHS for participation in the HCP.
 - h. Send copies to EHS of all baseline, annual and follow-up audiometric test results with outcome interpretation for each UVA employee in the HCP, including time the test was completed.
 - i. Meet with EHS annually to review occupational noise environments in UVA workplaces and the medical surveillance program of the HCP.
 - j. Contact EHS with any problems or concerns regarding the fulfillment of any of these responsibilities.
2. Sound level monitoring and noise surveys are completed by EHS in those departments identified with the potential to exceed the action level. The AHCP shall notify EHS of any work-related noise exposure complaints received by UVA employees during clinic visits. This will allow EHS to perform noise surveys as needed.

Signatures

Director AHCP

UVA EHS HCP Program Coordinator

UVA Department in HCP

Printed Names

Director AHCP

UVA EHS HCP Program Coordinator

UVA Department in HCP

APPENDIX E: Relevant OSHA, ANSI and ACGIH Standards, Appendices & Guidelines

- 1) OSHA Occupational Noise Exposure Standard and Appendices 29CFR 1910.95
- 2) OSHA Determination of Work Relatedness 29CFR 1904.5
- 3) OSHA Recording Criteria for Cases Involving Occupational Hearing Loss 29CFR 1904.10
- 4) ANSI S1.11-1971 "Specification for Octave, Half-Octave, and Third-Octave Band Filter Sets"
- 5) ANSI S1.25-1978 "Specification for Personal Noise Dosimeters"
- 6) ANSI S1.4-1971 "Specification for Sound Level Meters"
- 7) ANSI S3.6-1969 "Specifications for Audiometers"
- 8) ACGIH "Threshold Limit Values for Chemical Substances and Physical Agents"