Standard Operating Procedure
for

Hearing Conservation Program

REVISION

Rev No.	DCN No.	Change Summary	Release Date	DCN Initiator	Document Owner
7	DCN1431	Update to include Utica; Add Identification of Hearing Protection Required Areas; Add two forms; and general updates for clarity.	8-29-17	E. Timlin	T. Diamond

Prior revision history, if applicable, is available from the Document Control Office.

1 PURPOSE

1.1 To define procedures for an effective Hearing Conservation Program that meets or exceeds Federal and State government requirements.

1.2 Ensure that all new employees that are entered into the Hearing Conservation Program receive training on the SUNY Poly Hearing Conservation Program prior to entering their work area.

2 RESPONSIBILITIES

2.1 The **EHS Manager** is responsible for managing the Hearing Conservation Program. Specific responsibilities include:

2.1.1 Performing noise exposure surveys.

2.1.2 Identify areas/jobs which are covered under the Hearing Conservation Program.

2.1.3 Assist various groups to develop engineering controls and preventative work practices.

2.1.4 Arrange for and provide quality assurance for baseline and annual audiometric testing.

2.1.5 Training employees on the hazards of noise, proper use of hearing protection and the Hearing Conservation Program.

2.2 **Facilities Operations Group**

2.2.1 Development and/or installation of engineering controls for noise sources.

2.3 **Department Managers/Supervisors**

2.3.1 Ensure that all employees covered under the Hearing Conservation Program are trained on the types of hearing protection available, proper use and fit, and elements of the Hearing Conservation Program.

2.3.2 When and where required enforce the use of hearing protection.

3 ASSOCIATED DOCUMENTS

EHS-00014-F1 – Enrolling Employees in Hearing Conservation Program

EHS-00014-F2 – Noise Dosimetry Task Recording Sheet

4 NOISE EXPOSURE SURVEYS

4.1 Noise exposure surveys are performed to evaluate employee exposures and to identify noise sources for design of engineering controls. Initial noise exposure surveys shall be performed for work areas and tasks where sound levels above 80 decibels are anticipated.

4.1.1 Noise Exposure Surveys will be performed:

- Within 60 days of a process change, modification, or equipment installation, which results in a sound level above 85 dBA and could affect employee noise exposure
- To evaluate the effectiveness of newly installed engineering controls.

4.2 **Measurements**

4.2.1 Noise exposure surveys shall be performed using a general purpose sound level meter that meets ANSI S1.4-1983 (NIOSH Approved Type I or Type II). The meter shall be acoustically calibrated before and after each survey.

4.2.2 All measurements shall be taken on the “A” scale and in the “Slow Response” mode.

4.2.3 The measurement shall be made at a height, which represents the employee’s ear level, with both minimum and maximum levels recorded.

NOTE: If the noise exposure in an employee’s work area is at or above 85 dBA, full shift measurements with noise dosimeters shall be considered. All continuous, intermittent, and impulsive sound levels from 80-130 decibels shall be integrated into noise measurements.

4.2.4 Employees exposed to noise levels in excess of the OSHA action level of 85 dBA as an eight (8) hour Time Weighted Average (TWA) by virtue of dosimeter reading, or by job classifications and work locations, will be included in the Hearing Conservation Program and will be notified of results in writing.

4.2.5 Noise measurement records shall be retained for at least two years.

5 AUDIOMETRIC TESTING

5.1 Initial audiograms will be performed within 6 months of hire for all new or transferred employees in jobs which are included in the Hearing Conservation Program.

5.2 Annual audiograms will be offered to employees whose jobs are included in the Hearing Conservation Program at no cost to employees.

5.3 Acoustical calibration and background noise level verification must be done annually. EHS will determine which supplier(s) is/are qualified to perform Audiometric testing for SUNY Poly employees.

5.4 No audiometric test will be given to any employee or prospective employee who has been exposed to noise above 85 dBA during the 14 hours proceeding the test period unless it can be verified that hearing protection was used.

5.5 **Audiogram Validity**

5.5.1 Audiometric tests shall be performed by a licensed audiologist, otolaryngologist, or other physician, or by a technician certified by the Council of Accreditation in Occupational Hearing Conservation.
A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist, or physician.

5.6 **Audiogram**

5.6.1 Audiometric tests shall be pure tone, air condition hearing threshold examinations with test frequencies including, as a minimum: 500, 1000, 2000, 3000, 4000 and 6000 hertz. Tests at each frequency shall be taken separately for each year.

5.6.2 A copy of the audiogram shall be kept on file for the duration of the individuals employment and shall include the following information:

- Name and Social Security Number
- Job Classification/Department/Department Number
- Date of Audiogram
- Examiner's Name
- Date of Last Annual Calibration
- Employee's Most Recent Noise Exposure Data

5.6.3 Individuals whose audiograms exhibit the following problems shall be re-tested within 30 days to confirm any of the listed changes.

- A comparison to pre-placement baseline audiogram which shows a 25 dB loss in any frequency. (Individuals shall be referred to their personal physician and shall be responsible for costs associated with re-testing.)
- Standard Threshold Shift (Section 5.7)

5.7 Standard Threshold Shift

5.7.1 Standard threshold shift: annual retest audiograms showing an average shift of 10 decibels or more, averaged in the frequency range of 2000, 3000, 4000 hertz in either ear compared to the baseline audiogram (allowance must be made for the contribution of aging).

5.7.2 Each employee's annual audiogram shall be compared to the employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift (Section 5.7.1) has occurred.

5.7.3 An audiologist, otolaryngologist, or physician must review problem audiograms and will determine whether there is a need for further evaluation.

5.7.4 The EHS Department shall inform the employee in writing within 21 days of the determination of the existence of a standard threshold shift.

5.7.5 The EHS Department shall inform the Department Manager/Supervisor of all employees with work-related standard threshold shifts, so that corrective action may be initiated.

5.7.6 If a hearing loss has been determined to be occupationally related, with the annual re-test audiogram showing a loss of 10 decibels and an overall reduction of 25 decibels compared to the initial baseline audiogram, the loss shall be recorded by the EHS Department on the New York State Department of Labor Form SH900.

5.7.7 All standard threshold shifts must be reported to the EHS Manager/Director.

5.7.8 If an employee experiences a physician-diagnosed work-related standard threshold shift or if the standard threshold shift is determined by a physician to be aggravated by occupational noise exposure, the following shall be performed:

- Employees will be fitted or refitted with hearing protectors and trained or re-trained on when and how to use them.
- Employees will be informed of the need for additional otological examinations and any new audiometric interpretation related to medical pathologies of the ear.
- If subsequent audiometric testing of an employee with noise exposures below the OSHA PEL indicates the standard threshold shift is not persistent, the employee may discontinue the use of hearing protectors.

6 ENGINEERING CONTROLS

6.1 Engineering Controls are mandatory when an employee's exposure to noise exceeds the OSHA PEL of 90 dBA for an eight hour time-weighted average. Engineering Controls are desired when an employee's exposure to noise exceeds the SUNY Poly action level of 80 dBA for eight hours. The groups that work in areas where such noise exists are responsible for implementing these controls. Assistance in designing effective controls can be obtained from:

1) The manufacturer of the noise-producing equipment (or similar equipment);

2) Manufacturers of acoustical materials;

3) Literature or an acoustical engineering consultant; or

4) The SUNY Poly EHS Department

6.2 After engineering controls have been installed, the operation must be surveyed again to determine the effectiveness of the controls.

7 ADMINISTRATIVE CONTROLS

7.1 If the noise level exceeds the OSHA PEL of 90 dBA and no further engineering controls are feasible, then feasible administrative controls must be implemented.

7.2 The implementation and enforcement of Administrative Controls is the responsibility of the supervisor in the area. Three major approaches to Administrative Controls are:

1) Where the time required for a job exceeds the permissible exposure limit for one person, divide the work among two, three, or as many operators as necessary to reduce the individual exposure time.

2) If less than full-time operation of a noise machine is needed, arrange to run it a portion of each day rather than all day for a part of the week.

3) Perform occasional high noise level producing operations at night or at other times when a minimum number of employees will be exposed.

8 PERSONAL HEARING PROTECTION

8.1 SUNY Poly shall make hearing protectors available to all employees working in areas ≥85 dBA and/or exposed to an eight hour Time Weighted Average (TWA) of 85 dBA (the OSHA action level) or greater, at no cost to the employees. Hearing protectors shall be replaced, as necessary.

8.2 SUNY Poly shall require that hearing protectors are worn:

- By any employee who is exposed to an 8-hour time weighted average of 85 dBA or greater;
- By employees who are working in areas that exceed the OSHA PEL of 90 dBA where engineering and/or administrative controls have not yet been implemented;
- By those who have not yet had a baseline audiogram, and/or
- By those who have experienced a standard threshold shift. The HP attenuation will provide protection to less than 85 dBA.

8.3 Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by SUNY Poly. EHS must approve all hearing protectors offered by SUNY Poly prior to their introduction into any workstation.

8.4 SUNY Poly shall provide training on the use and care of all hearing protectors provided to employees, and shall ensure proper initial fitting, and supervise the correct use of all hearing protectors.

8.5 Employees shall be informed of the locations where hearing protectors are required. Those areas (>85 dBA) will be posted with “Hearing Protection Required” signs (or equivalent).

8.6 It is the responsibility of the supervisor to ensure that employees wear hearing protection when required.

8.7 Although the clean rooms and laboratories areas have not been designated as hearing conservation areas, hearing protection has been made available to use voluntarily by those that work there for comfort.

8.8 The Areas and Activities at the SUNY Poly facilities, identified in Appendix A, Tables 2 and 3, have been surveyed and determined to be part of the Hearing Conservation Program.

9 EMPLOYEE TRAINING AND INFORMATION

9.1 All employees who are exposed to noise at or above the 8 hour >85 dBA OSHA action level;, those whose job duties require them to work in noise hazard areas; or those that have been enrolled in the Hearing Conservation Program, will be trained annually in the following:

9.1.1 The effects of noise on hearing;

9.1.2 The purpose and need for audiometric testing, and an explanation of the test procedures;

9.1.3 The purpose of hearing protectors, the advantages and disadvantages of the various types, the attenuation of various types, and instructions on selection, fitting, use and care;

9.1.4 Non-occupational sources of noise exposure;

9.1.5 Occupational sources of noise exposure.

9.2 The annual training program is provided as an online training class and quiz by the SUNY Poly EHS Department.

9.3 The supervisors of the affected employees are responsible for ensuring the participation of their employees.

10 HEARING CONSERVATION PROGRAM FOR OUTSIDE CONTRACTORS

10.1 Contractor employees who work side-by-side with SUNY Poly employees (who are part of SUNY Poly's Hearing Conservation Program) must comply with the requirements set forth in this program.

10.2 Contractor employees, whose job duties may take them into noise hazard areas or who work on noisy equipment and who report to a CNSE supervisor, must participate fully in this program.

10.3 SUNY Poly will provide hearing protection to outside contractor employees at no expense, if they meet the requirements outlined above.

11 RECORD KEEPING

11.1 SUNY Poly shall retain records required by this program for at least the following periods:

11.1.1 Noise exposure surveys for at least two years;

11.1.2 Training records and employee audiometric test results for the duration of the affected employee's employment;

11.1.3 All records will be kept on file in the SUNY Poly EHS Department.

12 APPENDIX

Appendix A – Process and Criteria for Enrolling Employees in the Hearing Conservation Program

APPENDIX A - Process and Criteria for Enrolling Employees in the Hearing Conservation Program

INTRODUCTION

An occupational noise control program includes, among other things, use of Hearing Protection Devices (HPDs) in high-noise areas and, for those employees who meet certain criteria, inclusion in a Hearing Conservation Program (HCP) that includes audiometric testing (medical hearing tests).

The OSHA standard for occupational noise exposure requires that employees whose exposures equal or exceed the action level be enrolled in a HCP. The OSHA-defined action level is an exposure of 85 decibels (dBA) as an eight-hour Time-Weighted Average (TWA), or equivalently, a dose of fifty percent of the OSHA permissible noise exposure levels.

Table 1
OSHA Action Level and Equivalents

Sound Pressure Level (dBA)	Threshold (Hours)
85	8
90	4
95	2
100	1

The following criteria are for use by supervisors who are responsible for identifying their employees who may need to be enrolled in the HCP. Proposed candidates are employees who are likely to work a specific number of hours or more during a given shift within posted "Hearing Protection Required" areas. The number of hours worked to become a proposed candidate will vary depending on the noise level in the posted area(s).

The Table 2 below lists the posted “Hearing Protection Required” areas on the Utica campus and the corresponding durations of exposure (thresholds) at or above which an employee should be considered for enrollment in the HCP.

The Table 3 below lists the posted “Hearing Protection Required” areas on the Albany campus and the corresponding durations of exposure (thresholds) at or above which an employee should be considered for enrollment in the HCP.

IMPORTANT: Time spent in low-noise (i.e., non-posted) areas, such as cafeterias, offices, and break rooms, is subtracted from the duration of exposure when determining the number of hours an employee is expected to work within "Hearing Protection Required" areas.

NOTE: Whether or not an employee is enrolled in the HCP, Hearing Protective Devices (plugs (required 1st)) and muffs (optional in addition to plugs) must be worn within posted “Hearing Protection Required” areas.

Table 2
Hearing Protection Required/Posted Areas (Utica)

Building	Area /Activity	Threshold (Hours)	Zone ID
Utica Grounds	Lawns when mowing	3+	UA
Multiple	Generators and Motors when operating	TBD	UB

Table 3
Hearing Protection Required/Posted Areas (Albany)

Building	Area / Activity	Threshold (Hours)
CUB	Waste Water Treatment Area	4
Grounds	Operating Landscaping Equipment (i.e., lawn mowers, weed trimmers, chainsaws, snow blowers)	3
NFE	Boiler Room	8
NFN	1st Floor Waste Water Treatment Area	4
NFN	Room N-116	2
NFN	Room N-118	4
NFN	Room N-127	4

Building	Area / Activity	Threshold (Hours)
NFN	Room N-216	8
NFN	Room N-240	8
NFN	Room N-307	2
NFN	Room N-417	2
NFN	Room N-419	2
NFX	Scrubber Deck	4
NFX	Room 104	4
NFX	Room 107	8
NFX	Room 108	2
NFX	Room 141	2
NFX	General Exhaust 3rd Floor	1
NFX	Mechanical Room 3rd Floor	8
NFX	Room 403	2
NFX	Room 404	4
NFX	Room 421	4
NFX	Room 432	4
ALL	HVAC Roof Top Units	4
ALL	Running Emergency Generators	1

Hearing Conservation Program ENROLLMENT PROCESS

The Hearing Conservation Program (HCP) enrollment process at SUNY Poly, is as follows:

Supervisor identifies candidates for enrollment in the HCP.

1. Supervisor completes the HCP Proposed Candidate Forms (**EHS-00014-F1**), which are then to be submitted to the Director of Facilities, Human Resources, and the Environmental Health and Safety (EHS) office.

2. EHS will assess the potential exposures of the proposed candidates and determine which employees must be enrolled in the HCP.

   NOTE: The determination will be based on the relevant noise survey and dosimetry data. If there is not sufficient data available, sound level meter measurements and/or dosimetry may need to be conducted to make a determination.

Supervisors are to reassess the HCP candidates/employees, as follows:

- Whenever new hires are brought onboard;
- Whenever existing employees have a change in job assignment that affects how much time they spend in "Hearing Protection Required" areas (whether it be that they spend more time in such areas and may need to be enrolled in the HCP, or that they spend less time in such areas and could be removed from the HCP);
- Periodic (annual) review of all proposed candidates/employees enrolled.

IMPORTANT: Questions about the criteria and process for employee enrollment in the HCP should be directed to the SUNY Poly Environmental Health and Safety office:

UTICA:

HCP Program Manager: Ernest Timlin (etimlin@sunypoly.edu)

Phone: 518-956-7179

ALBANY:

HCP Program Manager: Jon Hellman (jhellman@sunypoly.edu)

Phone: 518-390-6602