# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>TITLE</th>
<th>PAGE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>PURPOSE / INTRODUCTION / SCOPE</td>
<td>1, 2</td>
</tr>
<tr>
<td>ROLES AND RESPONSIBILITIES</td>
<td>2</td>
</tr>
<tr>
<td>EMPLOYEE TRAINING</td>
<td>3</td>
</tr>
<tr>
<td>ENGINEERING CONTROLS</td>
<td>4</td>
</tr>
<tr>
<td>NOISE EXPOSURE EVALUATION</td>
<td>4</td>
</tr>
<tr>
<td>SIGNAGE / POSTING</td>
<td>4 - 5</td>
</tr>
<tr>
<td>AUDIOMETRIC TESTING</td>
<td>5 - 8</td>
</tr>
<tr>
<td>EMPLOYEE COUNSELING</td>
<td>9</td>
</tr>
<tr>
<td>HEARING PROTECTION</td>
<td>10</td>
</tr>
<tr>
<td>DOCUMENTATION / RECORDKEEPING</td>
<td>11</td>
</tr>
<tr>
<td>APPENDIX A - GLOSSARY</td>
<td>12 - 13</td>
</tr>
</tbody>
</table>

OSHA HEARING CONSERVATION STANDARD 29 CFR 1910.95
PURPOSE
The purpose of the Hearing Conservation Program is to reduce hearing loss related to potential occupational exposure to noise within TECO Energy Supply.

INTRODUCTION
The Hearing Conservation Program represents the company's continuing commitment to meet its moral and legal obligations relative to the prevention of hearing loss from exposures to noise and other source causes.

It is the policy of Tampa Electric, Energy Supply, to utilize engineering methods to control noise exposure when feasible. When not feasible, noise exposure shall be controlled by the elements contained in this program.

This program contains the following elements:

• Employee Training
• Engineering Controls
• Noise Exposure Evaluation
• Signage / Posting
• Audiometric Testing
• Audiometer Calibration
• Employee Counseling
• Hearing Protection
• Documentation / Recordkeeping

SCOPE
The OSHA Occupational Noise Exposure Standard, 29 CFR 1910.95 states that the employer shall administer a continuing, effective hearing conservation program whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels (action level). It should be recognized that the OSHA rule is a minimum standard, and the requirements of this Hearing Conservation Program are more stringent.

In the Energy Supply Group of Tampa Electric, the group requiring participation in the hearing conservation program has been determined to be;

• All non-administrative plant employees of Big Bend, Bayside, Sebring and Polk.
• All laboratory services technicians in the Environmental Health & Safety Department
SCOPE (cont’d)

It should be noted that all Energy Supply Employees shall be offered the opportunity and encouraged to receive annual training and annual audiograms in accordance with this program.

ROLES AND RESPONSIBILITIES

Station Director

Each Station Director is responsible for the implementation and maintenance of the Hearing Conservation Program at their facility.

Each Station and Department Director is responsible for their assigned employees who are covered by this program receiving initial and annual training and audiograms as provided by this program.

Duties supporting this objective may be assigned to the Plant Safety & Industrial Health Coordinators or others as designated.

The Director, Environmental, Health and Safety, Energy Supply is responsible for reviewing, maintaining and revising this program as necessary. Responsibilities supporting this objective may be assigned to others as designated.

Tampa Electric Energy Employees

Each employee covered by this program is responsible for scheduling and obtaining their required medical examinations as outlined in the company’s “Share” Program.
EMPLOYEE TRAINING

Target Audience - All employees covered by this program.

Frequency – Initial training shall be provided to each affected employee prior to the assignment of tasks which may result in exposure to noise greater than or equal to 85 decibels based upon an eight hour time-weight average.

Retraining shall be conducted annually and documented.

Methods – Training shall be accomplished through Computer-Based Training, by PowerPoint presentation with video, or other training materials determined adequate by the Environmental Safety and Health department.

At a minimum, the content of the training shall include;

- The effects of noise on hearing;
- The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selecting, fitting, use, and care; and
- The purpose of audiometric testing, and an explanation of the test procedures

Documentation – All training will be documented electronically in the Medgate database. Classroom training will require the attendees to sign-in roster and that information will later be transferred into the electronic Medgate database. When Computer Based Training is used, the training may be documented in the separate CBT program database or transferred into the Medgate database, where practical.
ENGINEERING CONTROLS

Environments that contain equipment that produces noise levels above the OSHA Action Level should, whenever it is technologically and economically feasible, be modified to reduce noise levels to below the OSHA Action Level.

When plant modifications are made or new equipment is installed, consideration should be given to the effect that the modification or new equipment will have on ambient noise levels. Whenever it is technologically and economically feasible, all new installations and modifications shall maintain or reduce the ambient sound pressure level in the vicinity of their installation.

NOISE EXPOSURE EVALUATION

General

Each facility will be evaluated for the purpose of determining the scope of its Hearing Conservation Program.

Methods

The evaluation may be accomplished by a Sound Pressure Level Grid Survey or a Dosimetry Study as determined by the facility’s Safety and Industrial Health Coordinator. All noise exposure monitoring results will be maintained for as long as they are relied upon by the facility Safety and Industrial Health Coordinator.

Frequency

These evaluations shall be conducted initially at each facility. These evaluations shall be repeated whenever a change in production, process, equipment, or controls increase noise exposures.

SIGNAGE / POSTING

Signage

Approved hearing protection is required in all areas where the noise level is 85 decibels or greater.

These areas will be posted in such a manner that it is readily recognized as a hearing protection required area by all who enter.
SIGNAGE / POSTING cont’d

Posting

A copy of the OSHA Occupational Noise Exposure Standard (29 CFR 1910.95) shall be posted in an area of the plant that is readily accessible to all employees.

AUDIOMETRIC TESTING

General

Prior to the commencement of employment in our power generating stations, employees shall receive an audiometric test. All non-administrative plant employees and Tampa Electric Energy Supply employees who routinely are exposed in areas of the Energy Supply Facilities that have noise levels equal to or greater than 85 dBA shall receive an annual audiometric test.

All testing will be performed by a Certified Occupational Hearing Conservationist. Testing may be performed at the nurse’s stations at Big Bend, Bayside, or Polk Plants or at the COMBI facility at 9210 Florida Palm Drive, Tampa, FL 33619.

For any and all testing, the Certified Occupational Hearing Conservationist shall ensure that testing protocol established by this program is followed and that all test results are forwarded to ETC for interpretation, validation and processing.

Forward test results to:

   Environmental Technology Corporation
   11205 Alpharetta Hwy., B-4
   Roswell, GA 30076

   Phone: 770-475-2055
   Fax: 770-442-0980
AUDIOMETRIC TESTING (Cont’d)

CERTIFIED OCCUPATIONAL HEARING CONSERVATIONIST

Each plant’s Hearing Conservation Program shall be administered by a Certified Occupational Hearing Conservationist (COHC).

To qualify as COHC, one must satisfactorily complete the twenty hour CAOHC certification course, and pay the certification fee. One day recertification must be taken at five year intervals to maintain this certification. Documentation of this certification shall be maintained individually by each COHC.

AUDIOMETERS AND TEST BOOTHs

All audiometric testing under the TECO Energy Supply Hearing Conservation Program shall be conducted using a microprocessor controlled audiometer. This audiometer shall meet or exceed ANSI standard S3.6-1969.

CALIBRATION AND TESTING

Functional Testing

Functional testing of the audiometer shall be performed PRIOR TO EACH DAY’S TESTS by the COHC using an electro-acoustic ear in accordance with the audiometer manufacturer’s instructions. If this test indicates that the audiometer is not functioning properly, then audiometric testing cannot be performed until the instrument is repaired.

Acoustic Calibration

Acoustic calibration of the audiometer shall be conducted ANNUALLY. Documentation of this calibration shall be maintained at each stations’ first aid facility by the plant nurse or nurse practitioner.

Exhaustive Calibration

Exhaustive calibration of the audiometer shall be conducted EVERY TWO YEARS. It should be noted that acoustic calibration is incorporated into exhaustive calibrations. Therefore, additional acoustic calibration is not required in years that exhaustive calibration is performed. Documentation of this calibration shall be maintained at each station’s first aid facility by the plant nurse or nurse practitioner, and/or the EHS Department Safety Tools and Materials Technician. This calibration may be performed by Teleacoustics, ETC, the audiometer manufacturer, or by any other qualified vendor.
AUDIOMETRIC TESTING (Cont’d)

Test Booth Attenuation Testing

Test booth attenuation testing shall be conducted initially and whenever a change has occurred that could increase the noise level inside of the test booth. This testing may be conducted by the EHS Department Safety Tools and Materials Technician or other qualified personnel within the Environmental Safety and Health Department. The sound pressure levels within the audiometric test room should not exceed the following levels:

<table>
<thead>
<tr>
<th>Frequency HZ</th>
<th>500</th>
<th>1 K</th>
<th>2K</th>
<th>4 K</th>
<th>8 K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound Pressure Level dB</td>
<td>&lt;30</td>
<td>&lt;30</td>
<td>&lt;35</td>
<td>&lt;42</td>
<td>&lt;41</td>
</tr>
</tbody>
</table>

These levels are more conservative than those required by OSHA and have been adopted by both ETC and Tampa Electric Energy Supply in order to assure higher integrity and quality of testing.

TYPES OF AUDIOGRAMS

Baseline - the results of a hearing test on an individual who has not been exposed to noise in excess of 80 dBA for at least 14 hours.

It should be noted that effective use of hearing protection will meet this requirement of reducing noise exposure to below 80dBA. Employees must receive a baseline audiogram at time of employment or when instructed by consulting audiologist.

Annual - After the baseline audiogram, each employee shall be given a annual audiogram. Annual audiograms may be administered during the employee work shift regardless of noise exposure since effective exposure is attenuated by the proper use of hearing protection in designated areas.

Retest - employees must be retested when and as instructed by the consulting audiologist.

ADMINISTERING THE AUDIOGRAM

Prior to testing, and if necessary during testing, employees will be instructed as to what they will hear and how they should respond.

All audiometric tests shall be recorded on the audiometric examination form contained in Medgate, which must be filled out completely each time a test is conducted. The printed audiogram shall be attached to the audiometric examination form.
AUDIOMETRIC TESTING (Cont’d)

AUDIOGRAM PROCESSING

Each audiogram shall be promptly forwarded to Environmental Technology Corporation for evaluation, validation and interpretation.

Forward audiograms to:

Environmental Technology Corporation
11205 Alpharetta Hwy., B-4
Roswell, GA 30076

Phone: 770-475-2055
Fax: 770-442-0980

AUDIOGRAM EVALUATION AND VALIDATION

All completed audiograms received by ETC will be evaluated for completeness, reviewed and validated. If judged to be invalid, the audiogram will be returned to the plant with the inadequacies identified and specific suggestions provided for correction. Retesting shall be conducted and this process should be repeated until a valid test is obtained.

AUDIOGRAM INTERPRETATION AND RECOMMENDATION

Once judged valid, using professional judgment, the ETC audiologist analyzes the audiogram, taking into consideration relevant factors such as variance from normal, configuration of audiogram, medical history, age, previous test results, occupational noise exposure history, sociocusis, etc. Based on this analysis, the audiologist interprets the audiogram test results as indicating either normal hearing, variance possibly due to noise exposure, variance possibly due to medical reasons, variance possibly due to medical reasons and noise exposure (mixed) or other reasons.

After all audiograms received from a facility are validated and interpreted by an audiologist, ETC completes an information report and forwards one copy to the plant. The report displays the audiometric data in an organized manner and all recommended follow-up action.

The plant COHC is responsible for implementing all recommended follow-up actions. If retesting is recommended, it must be **COMPLETED AND RESULTS forwarded to ETC WITH 21 DAYS.**
EMPLOYEE COUNSELING

General

All employees will be counseled as to the results of their most recent hearing test whenever consulting audiologists believe, based on their professional judgment, that an employee’s hearing test showed characteristics which are audiologically significant.

ETC audiologists will provide the plant with employee specific, two part counseling forms for each employee that will receive counseling. Based on this analysis, the audiologist interprets the audiogram test results as indicating variance due to noise exposure, variance possibly due to medical reasons, variance possibly due to medical reasons and noise exposure (mixed) or other reasons.

The first part of the form serves to notify the employee of the date, location and time of counseling. The plant COHC will complete this section and provide it to the employee.

The second part of the form will be completed during the counseling session. Employee counseling must be completed within 21 days from receipt of the forms from ETC.

The COHC shall make detailed written comments on the form while conducting the counseling session. The form shall be dated and signed by both the employee and the COHC.

Following the counseling session, two copies of the completed form shall be made. One copy shall be provided to the employee. The other copy shall be filed and maintained by the COHC for confirmation that the counseling has been performed.

The original shall be kept in the employee's medical file.
HEARING PROTECTION

Appropriate hearing protection will be provided by each facility for employees required to wear hearing protection.

Each facility will provide employees with the opportunity to select from a variety of suitable hearing protectors. Hearing protection at the plant must be evaluated and approved by the Plant Safety and Industrial Health Coordinator. A NIOSH Method 1 evaluation will be conducted for each type of hearing protection to verify suitability for our work environment. The NIOSH Method 1 evaluation is used since, according to OSHA (1910.95 Appendix B), this is the most accurate method to determine hearing protection effectiveness since it uses the largest amount of spectral information from the individual employee’s noise environment.

The proper wearing of hearing protection in designated (posted) hearing protection areas will be enforced in accordance with established disciplinary procedures.
DOCUMENTATION AND RECORDKEEPING

Records of audiometric test results, noise exposure evaluations, employee counseling and employee training shall be maintained. These records shall be made available to affected employees, their representatives, or OSHA upon request.

Audiometric Testing Records

Audiometric testing records shall be maintained in the Medgate database.

Noise Exposure Evaluations

Noise exposure evaluations shall be maintained by the Plant Safety and Industrial Health Coordinator.

Employee Counseling Records

All employee counseling forms shall be retained in the individual employee’s medical file for the employee’s length of service plus 30 years.

Employee Training Records

Employee training records shall be maintained electronically in the Medgate database.

Audiometer Calibration Records

Documentation of all acoustic and exhaustive audiometer calibrations shall be maintained indefinitely by the Plant Nurse, the Plant Nurse Practitioner, or the EHS Safety Tools and Materials Technician.

OSHA Recordkeeping

Recordable OSHA cases will be identified by ETC on the information report. The Plant Safety and Industrial Health Coordinator will appropriately record these cases on the plant’s OSHA 300 log.
**APPENDIX A**

**GLOSSARY**

**Action level** - An 8 hour time weighted average of 85 decibels measured on the A-scale, slow response.

**Audiogram** - A chart, graph, or table resulting from an audiometric test showing an individual's hearing threshold levels as a function of frequency.

**Audiologist** - A professional, specializing in the study and rehabilitation of hearing, who is certified by the American Speech-Language-Hearing Association or licensed by a state board of examiners.

**Baseline audiograms** - The audiogram against which future audiograms are compared.

**Certified Occupational Hearing Conservationist (COHC)** - An individual who has completed a twenty hour certification course as accredited by the Council for Accreditation in Occupational Hearing Conservation.

**COMBI (Comprehensive Occupational Medicine for Business and Industry)** – COMBI is the preferred provider for medical examinations as well as the provider of the Energy Supply Medical Review Officer. COMBI has locations at 9210 Florida Palm Drive, Tampa, Florida, and 3810 Drane Field Road, Unit 15, Lakeland, Florida 33811

**Criterion sound level** - A sound level of 90 decibels.

**Decibel (dB)** - Unit of measurement of sound level

**Hertz** - Unit of measurement of frequency, numerically equal to cycles per second.

**NIOSH Method 1** - A method used for determining the attenuation of hearing protection by comparing the levels of noise in the workplace at certain frequencies and comparing with the attenuation of the hearing protection at these frequencies. According to OSHA, this is the most accurate method of hearing protection evaluation since it uses the largest amount of spectral information from the individual employee’s noise environment.

**Noise dosimeter** - An instrument that integrates a function of sound pressure over a period of time.
GLOSSARY (cont’d)

OSHA – Occupational Safety & Health Administration

Representative exposure - Measurement of an employee’s 8-hour time-weighted average sound level that is representative of the exposures of other employees in the workplace.

Sound level meter - An instrument for the measurement of sound level.

Standard Threshold Shift – A standard threshold shift is a change in an individual’s hearing threshold relative to their baseline audiogram at an average of 10 dB or more at frequencies of 2000, 3000, and 4000 Hz in either ear.

Time-weighted average sound level - That sound level, which if constant over an 8-hour exposure, would result in the same noise dose as is measured.