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CALIFORNIA ENERGY COMMISSION

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January 3, 2019

Greg Lamberg
Compliance Manager
W Power
650 Bercut Drive, Suite A
Sacramento, CA 95811

**SUBJECT: Stanton Energy Reliability Center (16-AFC-01C), NOISE-3,
Employee Noise Control Program**

Dear Mr. Lamberg,

In accordance with NOISE-3, the CPM has reviewed and approved the Employee Noise Control Program. If you have any questions or concerns, please contact John Heiser, Compliance Project Manager, at (916) 653-8236, or by fax to (916) 654-3882, or via e-mail at John.Heiser@energy.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "John Heiser".

John Heiser
Compliance Office Manager
Siting, Transmission, & Environmental Protection
Division

Employee Noise Control Program

Condition of Certification NOISE 3

For the

Stanton Energy Reliability Center

Stanton, California

16-AFC-01

November 2018

Stanton Energy Reliability Center, LLC



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1.0 Purpose

Noise, or unwanted sound, is one of the most pervasive occupational health problems. It is a by-product of many industrial processes. Sound consists of pressure changes in a medium (usually air), caused by vibration or turbulence. These pressure changes produce waves emanating away from the turbulent or vibrating source. Exposure to high levels of noise causes hearing loss and may cause other harmful health effects as well. The extent of damage depends primarily on the intensity of the noise and the duration of the exposure. Noise-induced hearing loss can be temporary or permanent. Temporary hearing loss results from short term exposures to noise, with normal hearing returning after a period of rest. Generally, prolonged exposure to high noise levels over a period of time gradually causes permanent damage.

This hearing conservation program is designed to protect workers with significant occupational noise exposures from suffering material hearing impairment even if they are subject to such noise exposures over their entire working lifetimes.

2.0 Scope

This procedure applies to all Wellhead Construction LLC. Employees, contractors and sub-contractors.

3.0 Responsibility

The project manager is responsible for the maintenance of this procedure. All Wellhead Construction LLC. Employees, contractors and sub-contractors are responsible for adherence to this procedure.

Wellhead Construction and each contractor shall administer a continuing, effective conservation program for their employees that includes but is not limited to:

- Monitoring
- Audiometric Testing Program
- Evaluation of Audiogram
- Audiometric Test Requirements

4.0 Definitions

Standard Threshold Shift (STS): An average shift in either ear of 10 dB or more at 2,000, 3,000, and 4,000 hertz.

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5.0 Procedure

5.1 Monitoring

- 5.1.1 The hearing conservation program requires monitoring of noise exposure levels in a manner that will accurately identify employees who are exposed to noise at or above 85 decibels measured on the A-scale (dBA) averaged over 8 working hours, or an 8-hour time-weighted average (TWA). That is, all employees whose noise exposure is equivalent to or greater than a noise exposure received in 8 hours where the noise level is constantly 85 dBA.
- 5.1.2 The exposure measurement shall include all continuous, intermittent, and impulsive noise within an 80 dBA to 130 dBA range and shall be taken during a typical work situation. This requirement is performance-oriented since it allows choosing of the monitoring method that best suits each individual situation.
- 5.1.3 Monitoring shall be repeated when changes in production, process, or controls increase noise exposure when such changes may mean that additional employees need to be monitored or their hearing protectors may no longer provide adequate attenuation.
- 5.1.4 Under this program, employees or their representatives are entitled to observe monitoring procedures.
- 5.1.5 Employees shall be notified of the results of exposure monitoring when the results show exposure above the permissible exposure level. The monitoring is to also assess the attenuation of available hearing protectors.
- 5.1.6 Instruments used for monitoring employee exposures shall be calibrated to ensure that the measurements are accurate.
 - 5.1.6.1 Calibration procedures are unique to specific instruments. Follow the manufacturer's instruction to determine when and how extensively to calibrate.
 - 5.1.6.2 Supervisors have the responsibility to ensure that the measuring instruments are properly calibrated.

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5.1.6.3 Instruments monitoring noise levels shall be factory calibrated to traceable national standards at least annually.

5.1.7 The monitoring shall be evaluated, interpreted and summarized in a written report.

5.2 Audiometric Testing Program

5.2.1 The employer shall establish and maintain an audiometric testing program by making audiometric testing available to all employees whose exposures equal or exceed the action level.

5.2.2 The program shall be provided at no cost to employees.

5.2.3 Audiometric tests shall be performed by a licensed or certified audiologist, otolaryngologist, or other physician, or by a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, obtaining valid audiograms, and properly using, maintaining and checking calibration and proper functioning of the audiometers being used. A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist or physician.

5.2.4 All audiograms obtained pursuant to this procedure shall meet the requirements of Title 8, California Code of Regulations, Sections 5097, Appendix B: Audiometric Measuring Instruments.

5.2.5 The employer shall establish for each employee exposed at or above the action level a valid baseline audiogram against which subsequent audiograms can be compared.

5.2.6 Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. This requirement may be met by wearing hearing protectors which will reduce the employee's exposure to a sound level of 80 dBA or below.

5.2.7 The employer shall notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

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- 5.2.8 Audiometric tests shall be made available to employees by June 1, 1983 or within 6 months of an employee's first exposure at or above the action level, except that where a mobile test van is used to conduct the audiometric test, the test shall be made available within one year of an employee's first exposure at or above the action level provided that all such employees are given an opportunity for testing.

NOTE: This requirement may be met by an audiogram available to the employer upon the effective date of this section provided the conditions under which the audiometric test was performed were the same as prescribed by this section.

- 5.2.9 Where an employer chooses to have audiometric tests performed by a mobile test van in accordance with Title 8, California Code of Regulations, Sections 5097(c)(8) and an employee's baseline audiogram has not been obtained within 6 months of the employee's first exposure at or above the action level, the employer shall make hearing protectors available to the employee in accordance with Section 5098 and require that the hearing protectors are worn by the employee until the baseline audiogram is obtained.

- 5.2.10 At least annually after obtaining the baseline audiogram, the employer shall obtain a new audiogram for each employee exposed at or above the action level.

5.3 Audiogram Evaluation

- 5.3.1 Annual audiograms shall be routinely compared to baseline audiograms to determine whether the audiogram is valid and to determine whether the employee has lost hearing ability--i.e., if a standard threshold shift (STS) has occurred.

- 5.3.2 Problem audiograms shall be reviewed by an audiologist, otolaryngologist, or physician to determine whether there is need for further evaluation. The following shall be provided to the person performing this evaluation:

5.3.2.1 A copy of the hearing conservation requirements found in Title 8 CCR 5097-5100,

5.3.2.2 The baseline audiogram and most recent audiogram of the employee to be evaluated,

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- 5.3.2.3 Measurements of background sound pressure levels in the audiometric test room,
- 5.3.2.4 Records of audiometric calibrations.
- 5.3.3 If an STS is identified, that employee shall be fitted or refitted with adequate hearing protectors, shown how to use them, and required to wear them.
- 5.3.4 Employees shall be notified in writing within 21 days from the time the determination is made that their audiogram results showed an STS.
- 5.3.5 Some employees with an STS may need to be referred for further testing if the professional determines that their test results are questionable or if they have an ear problem of a medical nature that is thought to be caused or aggravated by wearing hearing protectors.
 - 5.3.5.1 If the suspected medical problem is not thought to be related to wearing hearing protection, employees shall be informed that they should see a physician.
 - 5.3.5.2 If subsequent audiometric tests show that the STS identified on a previous audiogram is not persistent, employees whose exposure to noise is less than a TWA of 90 dBA may discontinue wearing hearing protectors.
- 5.3.6 An annual audiogram may be substituted for the original baseline audiogram if the professional supervising the program determines that the employee's STS is persistent.
 - 5.3.6.1 The original baseline audiogram shall be retained for the length of the employee's employment.
 - 5.3.6.2 This substitution will ensure that the same shift is not repeatedly identified.
- 5.3.7 The professional may decide to revise the baseline audiogram if an improvement in hearing occurs. This will ensure that the baseline reflects actual hearing thresholds to the extent possible.

5.3.8 Audiometric tests shall be conducted in a room meeting specific background levels and with calibrated audiometers that meet American National Standard Institute (ANSI) specifications of S3.6-1969. The professional performing the audiometric test shall be furnished the results of the noise monitoring.

5.4 Audiometric Testing Audiometric testing monitors the sharpness and acuity of an employee's hearing over time.

5.4.2 The audiometric testing program shall include baseline audiograms, annual audiograms, training, and follow-up procedures.

5.4.3 Audiometric testing shall be provided at no cost to all employees who are exposed to an action level of 85 dBA or above, measured as an 8-hour TWA.

5.4.4 The employee shall be referred for further testing when test results are questionable or when problems of a medical nature are suspected. If additional testing is necessary or if the employer suspects a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors, the employee shall be referred for a clinical audiological evaluation or otological exam, as appropriate.

5.4.5 There are two types of audiograms required in the hearing conservation program: baseline and annual audiograms.

5.4.5.1 Baseline audiograms

5.4.5.1.1 The baseline audiogram is the reference audiogram against which future audiograms are compared.

5.4.5.1.2 Baseline audiograms shall be provided within 6 months of an employee's first exposure at or above an 8-hour TWA of 85 dBA.

5.4.5.1.3 Employees shall be fitted with, issued, and required to wear hearing protectors for any period exceeding 6 months after their first exposure until the baseline audiogram is obtained.

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5.4.5.1.4 Employees shall not be exposed to workplace noise for 14 hours preceding the baseline test; however, appropriate hearing protectors reducing the employee's exposure to 80 dBA or below may serve as a substitute for this requirement and may be worn during this time period.

5.4.5.2 Annual audiograms

5.4.5.2.1 Annual audiograms shall be conducted within 1 year of the baseline. It is important to test hearing on an annual basis to identify deterioration in hearing ability so that protective follow-up measures can be initiated before hearing loss progresses.

5.5 Hearing Protectors

5.5.1 Hearing protectors shall be made available without cost to all employees exposed to an 8-hour TWA noise level of 85 dBA or above.

5.5.2 Hearing protectors shall be worn by:

5.5.2.1 Employees for any period exceeding 6 months from the time they are first exposed to 8-hour TWA noise levels of 85 dBA or above until they receive their baseline audiograms in situations where baseline audiograms are delayed because it is inconvenient for mobile test vans to visit the workplace more than once a year.

5.5.2.2 Employees who have incurred standard threshold shifts since these workers have demonstrated that they are susceptible to noise.

5.5.2.3 Employees exposed over the permissible exposure limit of 85 dBA over an 8-hour TWA.

5.5.3 Employees shall be offered to select from at least two types of approved hearing protectors. Employees shall decide, with the help of a person who is trained in fitting hearing protectors, which size and type protector is most suitable for their working environment.

5.5.3.1 The two most common types of hearing protectors available are:

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5.5.3.1.1 Insert type earplugs,

5.5.3.1.2 Earmuffs.

5.5.3.2 Hearing protectors may be worn in combination in order to achieve greater protection.

5.5.3.3 The protector selected should be comfortable to wear and offer sufficient attenuation to prevent hearing loss.

5.5.4 Hearing protectors must adequately reduce the severity of the noise level for each employee's work environment.

5.5.5 The suitability of the employee's present protector shall be evaluated whenever there is a change in working conditions that may cause the hearing protector being used to be inadequate.

5.5.6 If workplace noise levels increase, employees shall be given more effective protectors.

5.4.7 The protector must reduce employee exposures to at least 90 dBA (TWA) and to 85 dBA (TWA) when an STS already has occurred in the worker's hearing.

5.4.8 Employees shall be shown how to use and care for their protectors and shall be supervised on the job to ensure that they continue to wear them correctly.

5.4.9 Consideration of the Noise Reduction Rating (NRR) of the protector should be considered when purchasing the equipment.

5.4.10 In theory, the NRR of a hearing protector is the amount of decibels by which a given device will reduce noise exposure. If a worker exposed to a 100 dB TWA was assigned a pair of earmuffs with an NRR of 26, the 26 dB would be subtracted from the 100 dB, leaving the worker with a 74 dB TWA exposure. It is important to note that this calculation is true only if the original TWA exposure was arrived at with a noise measuring instrument reading in the C scale. When the A scale is used for the initial noise level monitoring, OSHA requires a slightly different adjustment: 7 dB must first be subtracted from the hearing protector's NRR; the number is then subtracted from the TWA exposure. If the A scale had been used

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to record the 100 dB TWA exposure, the 7 dB is subtracted from the protector's 26 dB NRR leaving an effective 19 NRR. This number is subtracted from the 100 dB exposure, leaving the worker with an 81 dB TWA exposure. The effectiveness of the protector's fit also affects the noise exposure.

5.5 Administrative and Engineering Controls

5.5.1 Engineering controls

5.5.1.1 The primary means of reducing or eliminating personnel exposure to hazardous noise is through the application of engineering controls.

5.5.1.2 Engineering controls are defined as any modification or replacement of equipment, or related physical change at the noise source or along the transmission path that reduces the noise level at the employee's ear.

5.5.1.3 Engineering controls such as mufflers on heavy equipment exhausts or on air release valves are required where possible.

5.5.2 Administrative controls

5.5.2.1 Administrative controls are defined as changes in the work schedule or operations which reduce noise exposure.

5.5.2.2 If engineering solutions cannot reduce the noise, administrative controls such as increasing the distance between the noise source and the worker or rotation of jobs between workers in the high noise area should be used if possible.

5.6 Employee Training

5.6.1 Employees exposed to TWAs of 85 dBA and above shall be trained on this hearing conservation program.

5.6.2 Training shall be repeated at least annually for each included employee and training information shall be updated as necessary to remain consistent with changes in protective equipment and work processes.

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5.6.3 Training will cover the following topics:

5.6.3.1 The effects of noise on hearing.

5.6.3.2 The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types.

5.6.3.3 Instructions on the selection, fitting, use, and care of hearing protectors.

5.6.3.4 The purpose of audiometric testing, and an explanation of the test procedures.

5.6.4 The following information and training materials shall be made available:

5.6.4.1 The company shall make available to affected employees or their representatives' copies of the hearing conservation regulation and post a copy in the workplace.

5.6.4.2 The company shall provide to affected employees any informational materials pertaining to this standard that are supplied to the employer by OSHA.

5.6.4.3 The company shall provide, upon request, all materials related to this program to authorized representatives of NIOSH.

5.7 Recordkeeping

5.7.1 The company will maintain an accurate record of all employee exposure measurements and monitoring methods. Data sheets or documented details will be retained for at least 2 years on the noise exposure measurements. Noise monitoring reports will be maintained for at least 30 years.

5.7.2 The company will retain all employee audiometric test records, which include:

5.7.2.1 Name and job classification of employee.

5.7.2.2 Date of audiogram.

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5.7.2.3 Examiner's name.

5.7.2.4 Date of last acoustic or exhaustive calibration of the audiometer.

5.7.2.5 Employee's most recent noise exposure assessment.

5.7.2.6 Company must maintain accurate measurement records of background sound pressure levels in audiometric test rooms.

5.7.3 Audiograms will be retained for the duration of the affected employee's employment. Reports regarding audiometric testing will be kept for at least 30 years.

5.7.4 Records will be generated to document employee training. Training records will be kept for at least one year.

5.8 Information and Access to Records

5.8.1 Records and information regarding hearing conservation and the plan implementation and maintenance are generally not considered to be confidential.

5.8.2 Employees will be allowed access to such records according to access regulations following request for information.

6.0 Appendices

None

7.0 References

Code of Federal Regulations: 29 CFR 1910.95

Code of Federal Regulations: 29 CFR 1926.52

California Code of Regulations: 8 CCR 5097-5100