

Hearing Conservation Program Louisiana Division

Plant: Chlorine I

References: OSHA 29CFR 1910.95 Occupational Noise Exposure and the Dow Program
Requirements for Hearing Conservation - August 1990

A. MONITORING:

1. The date of the last noise survey was 9-90. The surveys include both area noise levels and personal job exposure evaluations. Personal audio dosimeter average results (% allowable daily dose corrected to full shift) for each job assignment were as follows:

<u>12 Hour Shift</u>	<u>8 Hour Shift</u>
OS - 80.0% DOSE	OS - 7.2% DOSE
	SOS - 24.1% DOSE
	Supervisor - 15.6% DOSE

The OSHA Standard 29CFR 1910.95 requires that any individual exceeding a dose of 50% must participate in a hearing conservation program including annual audiogram, required annual training and mandatory hearing protection. The Chlorine Plant's hearing conservation program fulfills all of the OSHA requirements.

Area sound pressure level measurements ranged from 55-96 dBA. The following areas are designated as mandatory hearing protection areas since they are at or above 90 dBA. These areas are posted with signs requiring hearing protection.

South Air Blower	D-100A	P-702	C-52
C-40 A/B	C-300A	C-701A	C-62
C-90/91	P-260	T-701A	
C-100A			

The following areas are designated as hearing protection areas for both plugs and muffs since they are at or above 105 dBA.

Chlorine I has no areas above 105 dBA.

Temporary jobs that have equipment with noise levels at or above 90 dBA require temporary signs and mandatory use of hearing protection anytime the equipment is in operation. This includes such areas as sandblasting, hydroblasting, use of portable air compressors and hand tools.

2. Personal noise exposures doses were determined, using a Dupont MK-2 audio-dosimeter. Noise exposure monitoring results were based on OSHA settings (80 dB(A) threshold, 90 dB(A) criterion level, 5 dB(A) doubling rate). Area sound level measurements were taken using a _____ sound pressure meter with A-weighted scale and slow meter response. The instruments were calibrated before and after each survey.
Bruel Kjaer sound level meter type #2219-598547.

RESTRICTED FOR USE WITHIN DOW CHEMICAL ONLY

DO A 043275
CONFIDENTIAL

B. HEARING PROTECTORS:

Hearing protectors approved for use in this plant include the following:

<u>Device</u>	<u>Noise Reduction Rating (NRR)</u>
QD-30 Quiet Ear Plugs	26
Wilson #20 sound ban	19
Expand-o-fit ear plugs	26
Bilson #2313-11 Comfort ear muff	23

Other devices are available through plant supervision or the Industrial Hygiene Department.

C. HEARING PROTECTOR ATTENUATION

To compensate for that portion of employees who inadvertently wear the hearing protectors incorrectly, a corrected noise reduction rating can be obtained by subtracting seven decibels from the manufacturers recommended noise reduction rating. The corrected noise reduction rating of the hearing protector is then subtracted from the average sound level in dB(A), to obtain the attenuated sound level in dB(A). This method is described in the OSHA Hearing Conservation Amendment, Appendix B. The hearing protectors used at the Chlorine Plant will attenuate the noise below 90 dB(A).

D. TRAINING PROGRAMS:

A review of the sound level measurements and audio-dosimeter surveys were presented to employees as part of the annual training program. The presentation includes the effects of noise on hearing, the purpose and the instruction in the use of hearing protectors, and the audiometric testing program. Original documentation will be sent to the Industrial Hygiene Department for placement in the 75 year record retention file. A copy of the OSHA Standard, 29CFR 1910.95 is posted in the plant.

E. AUDIOMETRIC TESTING PROGRAM:

1. Baseline audiograms have been determined on all employees working in the Chlorine I Plant.
2. Audiograms will be repeated annually on each employee as required by the OSHA Hearing Conservation Program, and follow-up will be conducted where deemed necessary.

F. NOISE ABATEMENT PLAN:

Engineering Noise Control Plans for this plant are as follows:

<u>Area</u>	<u>Noise Control Option</u>
Octave band analysis in areas that exceed 90 dBA for possible engineering controls. Continue to collect personal noise monitoring to characterize all job classifications.	

Any new equipment or changes to the process, will be evaluated for noise and when feasible, engineered to keep noise levels below 85 dBA.

Date: 6-26-91
By: M. Torres
Replaces: _____

RESTRICTED FOR USE WITHIN DOW CHEMICAL ONLY

DO A 043276
CONFIDENTIAL