ITEM #	OSHA 29 CFR 1910.95	MSHA 30 CFR Part 62	NIOSH DHHS Pub. No. 98-126
	NOISE MEASUREMENT	NOISE MEASUREMENT	NOISE MEASUREMENT
1	Methods: Not specified	Not specified	Conform to ANSI S12.19-1996 without regard for hearing protection use.
2	Equipment: Sound Level Meter: not specified Dosimeter: not specified	"Use good practice" "Use good practice"	Conforms to ANSI S1.4-1983 & S1.4A-1985 Type II Conforms to ANSI S1.25-1991
3	Meter Response: Slow	Same as OSHA	Same as OSHA
4	Weighting Network: A-weighted	Same as OSHA	Same as OSHA
5	Exchange Rate of 5 dB	Same as OSHA	3 dB Exchange rate
6	Integration: all continuous, intermittent & impulse noise	Same as OSHA	Include continuous, varying, intermittent & impulse
7	Range: Action Level Determination (AL): 80-130 dBA Permissible Exposure Level (PEL): 90-140 dBA	AL: Same as OSHA, except integrating 80 to at least 130 dBA PEL: 90 to at least 140 dBA	REL: Recommended Exposure Level: 80-140 dBA
8	Sampling: Use representative personal monitoring for highly mobile workers, significantly varying, and impulse noise exposures.	Same as OSHA	Stationary Workers: sound level meter or dosimeter Mobile Workers: dosimeter or task based SLM
	PROTECTION AGAINST NOISE	PROTECTION AGAINST NOISE	PROTECTION AGAINST NOISE
9	PEL: Permissible Exposure Level Protection is required against noise when sound levels exceed time weighted average (TWA) of 90 dBA when integrating 90-140 dBA.	Same as OSHA, except integrating 90 to at least 140 dBA	REL: Recommended Exposure Level ≥85 dBA TWA
10	Ceiling Limit: No exposure above 115 dBA	"P" Code violation for any exposure >115 dBA	No exposure with or without HPD >140 dBA Reference Table 1-1 for specific durations
11	Impulse Noise: Not to exceed 140 dB Peak	To be integrated with all other measurements of noise	Same as OSHA
11	Impulse Noise: Not to exceed 140 dB Peak	_	Same as OSHA

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	NOISE CONTROLS	NOISE CONTROLS	NOISE CONTROLS
12	Feasible engineering controls and administrative controls for employees exceeding TWA of 90 dBA Subsequent policy interpretation permits effective HCP in place of engineering controls if <100 dBA TWA	Feasible engineering and administrative controls required for employees exceeding 90 dBA TWA. > 3 dBA reduction in noise exposure is considered a feasible control even if new TWA is still >PEL.	Feasible engineering for employees exceeding 85 dBA. No administrative controls that expose more workers.
13	Administrative Controls: and feasible noise control for employees exceeding 90 dBA TWA	Post adminstrative controls on mine bulletin board, and provide copy to affected miners.	No administrative controls that expose more workers to hazardsous noise levels.
	HEARING CONSERVATION PROGRAM	HEARING CONSERVATION PROGRAM	HEARING CONSERVATION PROGRAM
14	AL=Action Level Include employees in HCP whose noise levels ≥ 85 dBA, 8 hour TWA integrating 80-130 dBA	Same as OSHA, except integrating from 80 to at least 130 dBA	REL= Recommended Exposure Level ≥ 85 dBA TWA
	NOISE MONITORING	NOISE MONITORING	NOISE MONITORING
15	Initial Monitoring: Conduct once to determine risk and need for HCP.	Establish an ongoing system to evaluate each worker's noise exposure for rule compliance.	Determine for all workers whose exposure may equal or exceed 85 dBA.
16	Repeat Monitoring: when conditions change resulting in potential for an increase in exposure.	Noise monitoring must be designed to continually identify all employees for inclusion in the HCP.	Noise monitoring shall be repeated every 2 years and/or when there is a change in equipment, production process or maintenance routines. Also advised when work practices change or STS
	EMPLOYEE NOTIFICATION OF NOISE MONITORING	EMPLOYEE NOTIFICATION OF NOISE	EMPLOYEE NOTIFICATION OF NOISE
17	Notify employees of noise monitoring results when exposures are at or above 85 dBA TWA	Notify employee of noise monitoring results with- in 15 calendar days of determination when exposures are at or above 85 dBA for program inclusion, 90 dBA for noise control and 105 dBA for dual hearing protection use.	Same as OSHA
	OBSERVATIONS OF NOISE MONITORING	OBSERVATIONS OF NOISE MONITORING	OBSERVATIONS OF NOISE MONITORING
18	Employees or their representatives may observe noise monitoring at the worksite	Same as OSHA, plus <i>Prior notice</i> to employees or their representatives required.	Not specified

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	AUDIOMETRIC TEST PROGRAM	AUDIOMETRIC TEST PROGRAM	AUDIOMETRIC TEST PROGRAM
19	Employee Participation: Audiometric testing must be available to all employees in HCP.	Audiometric testing must be <i>offered</i> to all employees in HCP.	Audiometric testing is <i>required</i> for all employees included in HCP.
20	Supervisor of Testing: Licensed or certified audiologist, otolaryngologist, or other physician	Licensed or certified audiologist or physician	Audiologist or physician
21	Audiometric Technician Qualifications: Tests are performed by professional or responsible to supervisor. CAOHC certified, or demonstrated competence. Certification not required for microprocessor audiometers.	Tests performed by a physician, an audiologist or a certified technician. Requires physician or audiologist supervision. CAOHC or equivalent certification required.	Tests performed by professional or by competent tech. Certification required for technician. Under supervision of audiologist or physician. Note tester credentials on audiograms
22	Audiometric Equipment: Audiometers shall meet requirements of Appendix C	Shall meet accepted scientifically valid criteria	Shall meet ANSI S3.6-1996
23	Audiometer Calibration: Daily functional check before use, Annual acoustic calibration per Appendix E and exhaustive acoustic calibration every 2 years.	Shall meet accepted scientifically valid criteria	Daily functional check, an acoustic calibration whenever functional check indicates 10 dB change from reference levels at any Hz in either earphone Exhaustive calibration annually or as indicated by acoustic calibration - See Section 5.5.2 Record date of exhaustive calibration on audiogram
24	Audiometric Test Procedures: Audiograms meet 1910.95 Appendix C requirements Test .5K, 1K, 2K, 3K, 4K, 6K required	Audiometic testing must be conducted using scientifically valid procedures according to section 62.171 of the regulation. Documentation of scientific validity to be provided by tester.	Same as OSHA and in addition: Include 8KHz
	Ambient Noise Levels in Test Room: Levels are specified and must be provided to reviewer with test results. 40 dB @ 500 Hz & 1KHz, 47 dB @ 2000 Hz 57 dB @ 4000 Hz, and 62 dB @ 8000 Hz	Audiometic testing must be conducted using scientifically valid procedures according to section 62.171 of the regulation. Document scientific validity provided by provider.	Reference ANSI S3.1 1999 or latest revision Reference on audiogram or provide to reviewer More stringent than OSHA and compatible with clinical audiometric testing. Permanent test facilites update annually Mobile test facilities update daily or each time the facility is moved, whichever is more often.

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	BASELINE AUDIOGRAMS	BASELINE AUDIOGRAMS	BASELINE AUDIOGRAMS
26	Timeline to Establish: Within 6 months of hire date	Same as OSHA, can use previous tests	Obtain baseline test prior to employment or
	or within one year if mobile test van utilized.	w/professional review and if meet requirements	within 30 days of enrollment in HCP.
27	Grandfathering of Previous Tests: permited if meet	Permitted with professional review and if test	Not addressed
	test requirements of the standard	requirements of the standard are met.	
28	Quiet Period Prior to Test:	Same as OSHA	12 hour quiet period for <u>any</u> noise exposure at
	14 hour period without workplace noise before the		or above 85 dBA. Hearing protection cannot
	baseline testing (hearing protection may be substituted)		be substituted.
29	Employee Notification: Notify employees to avoid high	Same as OSHA	Same as OSHA
	non-occupational noise levels before the hearing test.		
	ANNUAL AUDIOGRAMS	ANNUAL AUDIOGRAMS	ANNUAL AUDIOGRAMS
30	Timeline to Obtain: Within 12 months of previous	Same as OSHA	Same as OSHA
	test results for employees in HCP.		Conduct during normal workshift.
			Called a "Monitoring Audiogram"
	RETEST AUDIOGRAMS	RETEST AUDIOGRAMS	RETEST AUDIOGRAMS
31	STS Retest: may retest within 30 days (optional) and	Same as OSHA	Retest immediately. If retest is the same then
	substitute for annual exam.		schedule for 30-day confirmation audiogram.
32	Retest Conditions: Same as for baseline exams	Same as OSHA	Same as baseline exam
	CONFIRMATION AUDIOGRAMS	CONFIRMATION AUDIOGRAMS	CONFIRMATION AUDIOGRAMS
33	Repeat Test: Not addressed in regulation	Not addressed in regulation	Conduct within 30 days of STS retest under same
			conditions as baseline exam & professional review.
	EXIT AUDIOGRAMS	EXIT AUDIOGRAMS	EXIT AUDIOGRAMS
34	Exit Exam: Not addressed in regulation	Not addressed in regulation	Obtain an exit exam for worker's terminating
			employment or who no longer works in hazardous
			noise environments. Test same as baseline.

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	AUDIOGRAM EVALUATION	AUDIOGRAM EVALUATION	AUDIOGRAM EVALUATION
35	Standard Threshold Shift (STS) Identification: Compare each annual test to baseline audiogram for STS defined as average change ≥10 dB at 2K, 3K & 4K in either ear	Same as OSHA	Significant Threshold Shift: compare each annual test to the baseline for ≥ 15 dB change at any test frequency, in either ear when confirmed on a retest.
36	Regulatory Reporting: Policy interpretation subject to change; <i>Recordability</i> of hearing loss on workplace injury/illness logs if ≥25 dB average shift from original baseline at 2000, 3000 & 4000 Hz	Reportable Hearing Loss: >25 dB average shift from baseline, or revised baseline at 2000, 3000 and 4000 Hz.	Not addressed in regulation; note STS in employee's medical file.
37	Age Correction: Adjustments allowed per Tables F-1 and F-2	Same as OSHA: Reference Tables G2-3 & G2-4	Not allowed
38	Test Validity: Compare each annual test to baseline for test validity	Same as OSHA	Not addressed in document
39	Problem Audiogram Review: Audiologist, ototlaryngologist, or other physican problem audiograms and determines need for further follow-up	Audiologist, Physician or Certified Technician under the supervision of a doctor or audiologist must determine if audiogram is valid, STS status, reportable hearing loss and confidential medical referrals.	Same as OSHA; STS's reviewed by physician or audiologist.
40	Baseline Revision: Annual audiogram may be substituted for the baseline when an STS is deemed persistent or when thresholds show significant improvement.	Annual audiogram may be substituted for the baseline when STS is <i>permanent</i> or thresholds show significant improvement.	Annual audiogram may be substitued for the baseline when <i>confirming audiogram validates</i> an STS.

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	EMPLOYEE AUDIOGRAM FOLLOW-UP	EMPLOYEE AUDIOGRAM FOLLOW-UP	EMPLOYEE AUDIOGRAM FOLLOW-UP
	Employee STS Notification:		
	Notify employees of STS in writing within 21 days	Notify employees within 10 days after review	Notify worker immediately and no later than 30 days
42	STS Follow-up:		
	Actions to be taken unless physician determines that	Actions to be taken unless audiologist or	Employer shall take appropriate action to protect
	STS does not have work-related component	physician determines STS is not work-related:	the worker from additional hearing loss due to
	A: Provide employee with hearing protectors (if not	A: Provide employee with hearing protectors	work-related noise exposure.
	already wearing), train in care and use and require	(if not already wearing) or a different HPD	Such actions may include:
	them to be worn for noise exposure at or above 85 dBA	B: Retrain on all required topics, may also	A. Explanation of the effects of hearing loss
	B : Refit and retrain employees already wearing hearing	satisfy annual training requirement	B. Re-training and re-fitting of hearing protectors
	protection devices	C: Review effectiveness of engineering and	C. Additional training in hearing loss prevention
	C: Refer as necessary for clinical evaluations or retest	administrative controls to correct deficiencies.	D. Re-assignment to a quieter work area
	D: Inform employees with non-work related ear	D: Inform employees with non-work related ear	E: Inform employees with non-work related ear
	problems of the need for personal otologic exam	· · · · · · · · · · · · · · · · · · ·	problems of the need for personal otologic exam
		Must be kept confidential from employer	

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40	HEARING PROTECTORS	HEARING PROTECTORS	HEARING PROTECTORS
43	Availability: For all employees exposed at or above 85 dBA and replaced as necessary at no charge to employee.	Same as OSHA	Same as OSHA
44	Mandatory HPD Use Criteria: Worn by employees when exposed to above 90 dBA Worn by employees when exposed to 85 dBA or greater if no baseline exam completed or after an STS occurs	Same as OSHA	Worn by employees when exposed ≥85 dBA TWA
45	Optional HPD Use Criteria: Permited for employees exposed ≤90 dBA TWA if no STS in past and baseline exam completed.	Same as OSHA	No optional use recognized
46	HPD Selection: Employees select from a variety of suitable protectors Typically interpretted as 1 earplug & 1 earmuff types.	Same as OSHA, except "variety" is specified as 2 types of earplugs and 2 types of earmuffs.	Same as OSHA; Variety interpretation not given
47	HPD Fitting: Employer ensures proper initial fitting & supervises correct use of hearing protectors	Same as OSHA	Same as OSHA
48	Dual Hearing Protection: Use of earplug & earmuff at the same time; not directly addressed in regulation but may be necessary to provide sufficient attenuation.	Required for exposures ≥ 105 dBA	Recommended for exposures >100 dBA
	HEARING PROTECTOR ATTENUATION	HEARING PROTECTOR ATTENUATION	HEARING PROTECTOR ATTENUATION
49	Adequacy:	TILAKING FROTEGIOR ATTENUATION	TILANING FROTECTOR ATTENDATION
	Evaluate attenuation for specific noise environment according to Appendix B using manufacturer NRR's. Attenuate to at least 90 dBA, or 85 dBA if STS in past Re-evaluate attenuation as necessary	Not addressed in regulation. Compliance guide to follow; not currently available	Attenuation shall be sufficient to assure that employee's "real world" noise exposure is <85 dBA
50	Real-World Effectiveness Correction: Compliance policy subject to change: utilizes 50% derating of the manufacturer NRR to compare effectiveness of HPD's to engineering noise controls.	Not addressed in regulation	Manufacturer NRR shall be derated by 25% for earmuffs, 50% for foam earplugs, and 70% for other earplugs unless subject fit data is available from manufacturer such as ANSI S12-6-1997 Method B

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	HCP TRAINING PROGRAM	HCP TRAINING PROGRAM	HCP TRAINING PROGRAM
51	Provision To: Provide training to employees exposed at/above 85 dBA	Same as OSHA	Same as OSHA
52	Training Timelines; Repeat training annually and update materials	Initial training within 30 days of HCP enrollment, Repeat annually	Same as OSHA
53	Training Topics: A. Effects of noise on hearing B: Types of hearing protectors (advantages/disadvant.) attenuation, fitting, use and care. C. Purpose and explanation of audiometric testing	Same as OSHA with additional topics of D. Noise control responsibilities for both the employee and the employer. E. General requirments of MSHA regulation	Same as OSHA with additional topics: D. Psychological effects of noise E. HCP roles & responsibilities of employees and employers.
	ACCESS TO INFORMATION	ACCESS TO INFORMATION	ACCESS TO INFORMATION
54	Copy of Regulation & Warning Signs: Copies of OSHA Standard available to employees and their representatives. Posted in workplace.	Not address in regulation	Post warning signs at entrance to areas with TWA's routinely above 85 dBA.
55	Regulatory Information: Information provided by OSHA is available to employees	Not addressed in regulation	Not addressed in document
56	Individual Employee Record Request: All records provided on request to employees, former employees, representatives and OSHA	Records provided within 15 days of written request. Specific limitations to records access dependent on requesting source.	Same as OSHA

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	RECORDKEEPING	RECORDKEEPING	RECORDKEEPING
57	Accuracy: Maintain accurate records of noise exposure measures	Not addressed in regulation	Not addressed in document
58	Individual Employee Record Content: Maintain audiometric records with the following info: Employee name & Job classification; date of audiogram; examiner's name, date of last acoustic or exhaustive calibration, employee's most recent noise exposure assessment and background noise levels in test room	Maintain audiometric test record for each miner: Employee name & job classification, copy of all audiograms conducted; Evidence that exams were conducted under Section 62.171-a requirements; Noise exposure determinations; Results of follow-up examinations.	Maintain Exposure Assessment Records: include Employee name; Identification number; duties performed and job locations; dates and times of measurements; type of measurement; brand, model and size of hearing protection used if any; the measured exposure levels; and the identity of person taking the measurements. Medical Surveillence Record: include Employee name; Identification number; duties performed; job locations; medical, employment, and noise exposure history; dates, times and types of hearing tests; hours since last noise exposure before each test; hearing threshold levels at each required frequency; tester identification and assessment of test reliability; the etiology of any STS; and the identification of the reviewer.
59 60	Record Retention: Retain all noise exposure records for at least 2 years Retain all hearing tests for duration of employment Record Transfer: Transfer all records to successor employer	Retain employee noise exposure notices; training records, and hearing test for duration of enrollment in HCP and/or duration of employment plus 6 months Same as OSHA plus successor must use previous baseline reference	Noise Monitoring Records for 30 years Medical Monitoring Records for duration of employment plus 30 years. Calibration Records & Ambient Levels for 5 years Same as OSHA

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