



PROGRAM CHECKLIST FOR MSHA'S OCCUPATIONAL NOISE EXPOSURE REGULATION

Company: _____

Location: _____

Reviewer: _____

Date: _____

This checklist is designed to help mine operators evaluate and ensure compliance with MSHA's noise exposure regulation, 30 CFR Part 62. Part 62 sets standards for surface and underground metal, nonmetal, and coal mines subject to the Federal Mine Safety and Health Act of 1977. An answer of "no" to any of the following questions indicates the need for further investigation and possible corrective action. Terms highlighted for the first time in ***bold and italics*** may be cross-referenced in the attached Definitions document. For detail and further explanation, refer to the complete text and tables of 30 CFR Part 62, *Federal Register, Vol. 64, No. 176, September 13, 1999, 49630-49634.*

ITEM #	SECTION OF REG.	HEARING CONSERVATION PROGRAM COMPONENT	YES	NO	COMMENTS
		<i>NOISE MONITORING</i>			
1.	62.110 (a)	Is noise exposure assessment conducted when information indicates that any miner's exposure may equal or exceed the <i>action level</i> , defined as an 8-hour <i>time-weighted-average</i> (TWA) of 85 dBA, or equivalently, a dose 50% of the <i>Permissible Exposure Level</i> (PEL)?			
2.	62.110 (a)(b)	Is the noise monitoring strategy designed to evaluate each miner's noise exposure sufficiently to determine continuing compliance with the rule, including: <ul style="list-style-type: none"> • Determining if a miner's noise exposure equals or exceeds the action level, exceeds the PEL, or exceeds the <i>dual hearing protection level</i> • Determining the effectiveness of the engineering and administrative controls • Identifying areas of the mine where <i>hearing protectors</i> are required and • Ensuring that the audiometric test providers receive the necessary information to properly evaluate miners' audiograms? 			

ITEM #	SECTION OF REG.	HEARING CONSERVATION PROGRAM COMPONENT	YES	NO	COMMENTS
3.	62.101 62.110 (b)(2)(ii)	When determining whether a miner's TWA equals or exceeds the action level for inclusion in the HCP, are all <i>sound levels</i> from 80 to at least 130 dBA integrated into the TWA, or dose, determination?			
4.	62.101 62.110 (b)(2)(ii)	When determining whether a miner's TWA exceeds the PEL, are all sound levels from 90 to at least 140 dBA integrated into the TWA, or dose, determination?			
5.	62.110 (b)(2)(i)	Are TWA determinations made without regard to the use of hearing protectors?			
6.	62.110 (b)(2)(iii)	Do TWA determinations reflect the miner's full work shift?			
7.	62.110 (b)(2)(iv) (v)	Are TWAs measured and/or determined using the following specifications: <ul style="list-style-type: none"> • a 90-dBA <i>criterion level</i> • a 5-dBA <i>exchange rate</i> • A-weighting and "slow" response settings of the instrumentation • an 80-dBA threshold level for HCP inclusion purposes and • a 90-dBA threshold level for determining compliance with the PEL? 			
8.	62.110 (c)	When noise monitoring is to be conducted, are miners and their representatives given prior notice of the date and time the survey is scheduled?			
9.	62.110 (c)	When noise monitoring is conducted, are miners and their representatives provided an opportunity to observe the monitoring process?			
10.	62.110 (d)	Are all miners* exposed to noise equal to or exceeding the action level, exceeding the PEL, or exceeding the dual hearing protection level notified of the monitoring results in writing, and any corrective actions being taken, within 15 calendar days of the exposure determination and corrective actions? <i>*Note: it is not necessary to re-notify miners who have been informed of the same results within the prior 12 months.</i>			

ITEM #	SECTION OF REG.	HEARING CONSERVATION PROGRAM COMPONENT	YES	NO	COMMENTS
		<u>REDUCTION IN NOISE EXPOSURES</u>			
11.	62.130 (a)(b)	For all miner noise exposures that exceed the PEL, are feasible engineering or administrative controls used to reduce those exposures within acceptable limits, or to as low a level as feasible? <i>Note: MSHA considers the following factors when determining whether engineering and/or administrative controls are feasible: the nature and extent of the exposure, the demonstrated effectiveness of available technology, and whether the committed resources are wholly out of proportion to the expected results.</i>			
12.	62.130 (a)	When administrative controls are used, are the procedures posted on the mine bulletin board?			
13.	62.130 (a)	When administrative controls are used, is a copy of the procedures provided to affected miners?			
14.	62.130 (c)	Are procedures or mechanisms in place to ensure no miner is exposed at any time to a sound level exceeding 115 dBA*? <i>*Note: as determined without adjustment for the use of hearing protection.</i>			
		<u>HEARING CONSERVATION PROGRAM (HCP)</u>			
15.	62.120 62.150	Whenever miner noise exposures equal or exceed the action level, is there a continuing and effective HCP in place that complies with the regulation, including: <ul style="list-style-type: none"> • a system of noise exposure monitoring • the provision and use of hearing protectors • audiometric testing • training, and • recordkeeping? 			
		<u>HEARING PROTECTORS</u>			
16.	62.160 (a)	Are hearing protectors with scientifically accepted indicators of noise reduction, and necessary replacements, provided to all miners in the HCP at no cost? <i>(continued next page)</i>			

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		<i>Note: although hearing protectors must be provided and used if engineering and administrative controls fail to reduce the miner's exposure to the PEL, they are not accepted in lieu of such controls.</i>			
17.	62.160 (a)(2)	Is the miner allowed to choose the type of hearing protector from at least two muff and two plug type devices? <i>Note: although the type is selected by the miner, the size and fit of the device must be determined by the mine operator.</i>			
18.	62.140	Are miners with TWAs over 105 dBA, or equivalently a noise dose greater than 800% of the PEL, required to use dual hearing protection (concurrent use of an earplug and earmuff)? <i>Note: the TWA for this purpose must be determined integrating sound levels from 90 to at least 140 dB.</i>			
19.	62.160 (a)(2)	When dual hearing protectors are required, is the miner allowed to select one muff and one plug from at least two devices of each type?			
20.	62.160 (a)(3)	Is there a procedure in place to ensure that hearing protection is in good condition and replaced as needed?			
21.	62.160 (a)(3)	Is hearing protection fitted and maintained in accordance with the manufacturers' instructions?			
22.	62.160 (a)(5)	Is the miner allowed to choose a different hearing protector(s) if the initially selected hearing protector(s) is subsequently precluded due to medical pathology of the ear?			
23.	62.160 (b)	Are all miners whose exposures exceed the PEL required to wear hearing protection devices? <i>Note: this requirement is in effect before engineering and/or administrative controls are implemented, or if the control measures do not reduce the TWAs below the PEL.</i>			
24.	62.160 (c)	Are hearing protection devices required to be worn by all miners in the HCP who: <ul style="list-style-type: none"> will have more than 6 months pass before they can take a baseline audiogram, or have incurred a standard threshold shift (STS) in hearing? 			

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		<u>AUDIOMETRIC TESTING</u>			
25.	62.170 (a)	If a prior hearing test was used to establish a baseline audiogram (first or “reference” audiometric test), were all test requirements of section 62.171 satisfied?			
26.	62.170 (a)	If a prior hearing test was not available or not used to establish the baseline audiogram, has each miner in the HCP been offered the opportunity to establish a valid baseline audiogram? <i>Note: MSHA has indicated that all baseline audiograms must be in place for miners in the HCP by March 13, 2001 (or September 13, 2001 if mobile van services are used)</i>			
27.	62.170 (a)(1) (3)	Are valid baseline audiograms for all miners in the HCP established within six months of first exposure at or above the action level, or within one year if mobile van services are utilized? <i>Note: a new baseline may be established for a miner who is away from the mine for more than six consecutive months.</i>			
28.	62.170 (a)(2)	Do miners receive prior notification of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the <u>baseline</u> audiometric test?			
29.	62.170 (a)(2)	Is there a 14-hour period without exposure to workplace noise* prior to obtaining a baseline audiogram for each miner? <i>*Note: hearing protection may be used to satisfy this quiet period requirement</i>			
30.	62.170 (b)	For all miners included in the HCP, are audiometric tests offered at least every 12 months after the baseline audiogram is established?			
31.	62.170 (c)	Is an annual audiogram deemed to be a revised baseline audiogram when in the judgement of the reviewing audiologist or physician, there is significant improvement over the baseline?			
32.	62.170 (c)	Is an annual audiogram deemed to be a revised baseline audiogram when in the judgement of the reviewing physician or audiologist, a standard threshold shift (STS) has occurred and is considered permanent?			
33.	62.170	Are all audiometric tests provided at no cost to miners in the HCP?			

ITEM #	SECTION OF REG.	HEARING CONSERVATION PROGRAM COMPONENT	YES	NO	COMMENTS
34.	62.170	Are all audiometric tests performed by an audiologist, physician, or a qualified (CAOHC-certified or equivalent) technician ?			
35.	62.170	If audiometric tests are performed by a qualified (CAOHC-certified or equivalent) technician, is this individual under the direction and supervision of an audiologist or physician?			
36.	62.171 (a)	Do all audiometric tests consist of pure tone, air conduction, hearing threshold examinations at frequencies of 500, 1000, 2000, 3000, 4000, and 6000 Hertz (Hz) for each ear separately?			
37.	62.171 (a)	Are all audiometric tests conducted using scientifically validated procedures for conducting audiometric testing, calibrating audiometers, and qualifying audiometric test rooms?			
		EVALUATION OF AUDIOGRAMS and FOLLOW-UP			
38.	62.172 (a)(1)	Has the audiologist or physician evaluating the audiograms been informed of the requirements of 62.172 (Evaluation of Audiograms) and been provided a copy of the miner's audiometric test records?			
39.	62.172 (a)(2) (c)	Has a physician or audiologist, or a qualified (CAOHC-certified or equivalent) technician who is under the direction and supervision of a physician or audiologist: <ul style="list-style-type: none"> • determined if each audiogram is valid, and • determined if a standard threshold shift* (STS) or a reportable hearing loss* has occurred? <p><i>* Note: allowance may be made for the contribution of aging (presbycusis), utilizing procedures specified in 62.172 (c)</i></p>			
40.	62.172 (a)(3) 62.173 (c)	Has the physician, audiologist, or qualified technician been instructed not to reveal to the mine operator, without the written consent of the miner, any specific findings or diagnoses unrelated to occupational noise exposure, hearing loss due to workplace noise, or the wearing or hearing protectors?			

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41.	62.172 (a)(4)	Have the results and interpretation of the results of audiograms been received by the mine operator within 30 calendar days of conducting the audiogram?			
42.	62.172 (b)(1)(2)	Are audiometric retests provided within 30 calendar days of receiving a determination that an audiogram is invalid, provided any medical pathology has improved to the point that a valid test may be obtained? <i>Note: the mine operator may provide one (optional) audiometric retest within 30 calendar days of receiving a determination that an STS or reportable hearing loss has occurred and may use this test as the annual audiogram.</i>			
43.	62.173 (a)	When a valid audiogram cannot be obtained due to a suspected work-related medical pathology of the ear, are affected miners <u>referred</u> for a clinical-audiological evaluation or an otological examination, at no cost to the employee?			
44.	62.173 (b)	When a valid audiogram cannot be obtained due to a suspected medical pathology of the ear that the physician or audiologist concludes is <i>unrelated</i> to the miner's occupational noise exposure or the wearing of hearing protection, is the audiologist or physician instructed to <u>inform</u> affected miners of the need for an otological examination?			
45.	62.174	Unless a physician or audiologist determines an STS is neither work related nor aggravated by exposure to workplace noise, are the following actions taken within 30 days of receiving evidence or confirmation of the STS: <ul style="list-style-type: none"> • retrain the affected miner as per requirements of 62.180, • provide the miner with the opportunity to select a hearing protector, or a different protector, from among those offered by the employer in accordance with 62.190, and • review the effectiveness of any engineering and administrative controls to identify and correct any deficiencies? 			

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46.	62.175 (a)	Is each miner notified in writing within 10 working days of the mine operator receiving the results of an audiogram or a follow-up audiogram (as required under 62.173) of: <ul style="list-style-type: none"> • the results and interpretation of the hearing test, including any finding of an STS or reportable hearing loss, and • the needs and reasons for further testing, if applicable? 			
47.	62.175 (b)	When evaluation of the audiograms show that a miner has incurred a reportable hearing loss, has this been reported to MSHA within 10 working days according to Part 50 (on Form 7000-1)? <i>Note: hearing losses need not be reported if a physician or audiologist determines that the loss is neither work-related nor aggravated by occupational noise exposure</i>			
		<u>TRAINING</u>			
48.	62.180 (a)	Is training provided to each miner within 30 days of enrollment in the HCP?			
49.	62.180 (a)	Is training repeated for miners in the HCP at least every twelve months?			
50.	62.180 (a) 62.160 (a)(1)	Does initial and repeat training include information on all of the following items: <ul style="list-style-type: none"> • the effects of noise on hearing, • the purpose and value of wearing hearing protection devices, • the advantages and disadvantages of the hearing protectors offered, • the various types of hearing protectors offered and the care, fitting, and use of each type, • the general requirements of the regulation, • the mine operator's and miner's respective tasks in maintaining mine noise controls, and • the purpose and value of audiometric testing and an explanation of the test procedures? 			

ITEM #	SECTION OF REG.	HEARING CONSERVATION PROGRAM COMPONENT	YES	NO	COMMENTS
		<u>RECORDS</u>			
51.	62.110 (e)	When a miner is notified of his/her noise exposure, is a copy of this notification letter (or a comparable document) maintained for the duration of the miner's enrollment in the HCP plus 6 months?			
52.	62.171 (b)	Does each miner's audiometric test records contain the following: <ul style="list-style-type: none"> • name and job classification of the miner tested, • a copy of all of the miner's audiograms, • evidence that the audiograms were conducted in accordance with audiometric test requirements* [Section 171(a)], • any personal noise exposure determinations, and • the results of follow-up examinations, if any? <i>*Note: evidence that a group of audiograms were conducted in accordance with requirements is sufficient, provided that the record makes clear which audiograms are involved.</i>			
53.	62.171 (c)	Are the audiometric test records kept for the duration of the affected miner's employment plus 6 months?			
54.	62.180 (b)	Is the date and type of training given each miner documented, and the miner's most recent certification maintained for as long as the miner is enrolled in the HCP plus 6 months?			
55.	62.190 (a)	If applicable, have authorized representatives of the Secretaries of Labor and Health and Human Services been provided access to all records required under Part 62 upon request?			
56.	62.190 (a)(1)	If applicable, have all records maintained under Part 62 for an individual miner been provided to that miner, or with written consent to the miner's designee , within 15 calendar days of written request?			
57.	62.190 (a)(2)	If applicable, have HCP training certifications and notices of noise exposure determinations been provided to specific miner representatives as designated under Part 40, within 15 calendar days of written request?			

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58.	62.190 (a)(3)	If applicable, have former miners been provided their records of previous noise exposures within 15 calendar days of written request?			
59.	62.190 (c)(1)	Is there a mechanism in place to transfer all records required to be maintained under the regulation to a successor mine operator?			
60.	62.190 (c)(2)	If applicable, if a successor mine operator has come into being, are all baseline, or revised baseline audiograms, obtained from the original mine operator and used for purposes of determining whether an STS or reportable hearing loss has occurred?			

Additional Comments:

Recommendations:

DISCLAIMER: Although this checklist is intended to assist mine operators with the best approach to hearing conservation and compliance with MSHA's Occupational Noise Exposure Regulation 30 CFR Part 62, Associates in Acoustics, Inc. and all authors provide no guarantees, expressed or implied, that full compliance will be achieved by implementing the procedures outlined in this checklist.

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MSHA Noise Regulation Definitions

30 CFR Part 62.101

Access. The right to examine and copy records.

Action level. An 8-hour time-weighted average sound level (TWA_8) of 85 dBA, or equivalently a dose of 50%, integrating all sound levels from 80 dBA to at least 130 dBA.

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

Baseline audiogram. The audiogram recorded in accordance with 62.170(a) of this part against which subsequent audiograms are compared to determine the extent of hearing loss.

Criterion level. The sound level which if constantly applied for 8 hours results in a dose of 100% of that permitted by the standard.

Decibel (dB). A unit of measure of sound pressure levels, defined in one of two ways, depending upon the use:

- (1) For measuring sound pressure levels, the decibel is 20 times the common logarithm of the ratio of the measured sound pressure to the standard reference sound pressure of 20 micropascals (Pa), which is the threshold of normal hearing sensitivity at 1000 Hertz (Hz).
- (2) For measuring hearing threshold levels, the decibel is the difference between audiometric zero (reference pressure equal to 0 hearing threshold level) and the threshold of hearing of the individual being tested at each test frequency.

Dual Hearing Protection Level. A TWA_8 of 105 dBA, or equivalently, a dose of 800% of that permitted by the standard, integrating all sound levels from 90 dBA to at least 140 dBA.

Exchange rate. The amount of increase in sound level, in decibels, which would require halving of the allowable exposure time to maintain the same noise dose.

For the purposes of this part, the exchange rate is 5 decibels (5 dB).

Hearing protector. Any device or material, capable of being worn on the head or in the ear canal, sold wholly or in part on the basis of its ability to reduce the level of sound entering the ear, and which has a scientifically accepted indicator of noise reduction value.

Hertz (Hz). Unit of measurement of frequency numerically equal to cycles per second.

Medical pathology. A condition or disease affecting the ear.

Miner's designee. Any individual or organization to whom a miner gives written authorization to exercise a right of access to records.

Qualified technician. A technician who has been certified by the Council for Accreditation in Occupational Hearing Conservation (CAOHC), or by another recognized organization offering equivalent certification.

Permissible exposure level. A TWA_8 of 90 dBA or equivalently a dose of 100% of that permitted by the standard, integrating all sound levels from 90 dBA to at least 140 dBA.

Reportable hearing loss. A change in hearing sensitivity for the worse, relative to the miner's baseline audiogram, or the miner's revised baseline audiogram where one has been established in accordance with 62.170(c)(2), of an average of 25 dB or more at 2000, 3000, and 4000 Hz in either ear.

Revised baseline audiogram. An annual audiogram designated to be used in lieu of a miner's original baseline audiogram in measuring changes in hearing sensitivity as a result of the circumstances set forth in 62.170(c)(1) or 62.170(c)(2) of this part.

Sound level. The sound pressure level in decibels measured using the A-weighting network and a slow response, expressed in the unit dBA.

Standard threshold shift. A change in hearing sensitivity for the worse relative to the miner's baseline audiogram, or relative to the most recent revised baseline audiogram where one has been established, of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

Time-weighted average-8 hour (TWA_8). The sound level which, if constant over 8 hours, would result in the same noise dose as is measured.