TRANSCRIPT OF PROCEEDINGS

UNITED STATES DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

In the Matter of:	)
	)
PROPOSED RULES ON HEALTH STANDARDS	)
FOR OCCUPATIONAL NOISE EXPOSURE	)

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Tuesday,
May 13, 1997

Mt. Evans Ballroom
Four Points ITT Sheraton
3535 Quebec Street
Denver, Colorado

The public meeting commenced, pursuant to notice, at 9:00 a.m.

APPEARANCES:

<u>On behalf of the Mine Safety and Health Administration</u>:

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JACK POWASNIK
ROSLYN FONTAINE

C O N T E N T S

P R O C E E D I N G S

MR. NICHOLS: Good morning, everybody. Can you hear me in the back? Can you hear okay?

My name is Marvin Nichols. I am the Administrator for Coal Mine Safety and Health. Welcome to MSHA's public hearing on its proposed standards for noise exposure in coal and metal and non-metal mining.

Let me introduce the rest of the panel. On my far left is Jim Custer. Jim is with Metal and Non-Metal in our headquarters office in Arlington, Virginia. Michael Valoski is with the Office of Tech Support. On the far end is Roslyn Fontaine. She is with the Office of Standards, Regulations and Variances in MSHA headquarters.

On her left is Jack Powasnik. Jack, if you want to do a better pronunciation of that name, I would entertain it. Jack is with the Office of the Solicitor. Victoria Pilate, on his left, is also with the same office as Roslyn, the Office of Standards, Regulations and Variances in our headquarters office.

To my right is Bob Thaxton. Bob is with Coal Mine Safety and Health in our Arlington headquarters office, and

Bob will be the moderator for the hearing today.

We have one other person in the audience that I want to introduce, Andrea Hricko. Andrea is the Deputy Assistant Secretary for MSHA. It is good to have you here.

We are here today to listen to your comments on the December 17, 1996, proposed rule revising certain portions of the existing health standards for noise exposure in coal and metal and non-metal mines. The hearings are being held in accordance with Section 101 of the Federal Mine Safety and Health Act of 1977. As is the practice of the agency, formal rules of evidence will not apply at this hearing.

Let me give you some of the background on the proposed rule that we are here to talk about today. MSHA published an advanced notice of proposed rule making on December 4, 1989, as part of the agency's ongoing review of its safety and health standards. The agency's existing noise standards, which were promulgated more than 20 years ago, are inadequate to prevent the occurrence of occupational noise induced hearing loss among miners.

In the advanced notice of proposed rule making,

the agency solicited information for revision of the noise standards for coal and metal and non-metal mines. The comment period closed on July 15, 1990.

On December 17, 1996, in response to information received on the advanced notice of proposed rule making, MSHA published the proposed standard. The agency has developed a proposal that it estimates can reduce by two-thirds the number of miners currently projected to suffer hearing loss, but which it estimates can be implemented at a cost of less than $9,000,000 to the mining industry as a whole.

The focus of the proposed rule is on the use of the most effective means to control noise; engineering controls to eliminate the noise or administrative controls, for example, rotating miners' duties to minimize noise exposure whenever feasible.

The proposed standard would retain the existing permissible exposure limit. It would also establish a new action level of an eight hour time weighted average of 85 dBa. If a miner's exposure exceeds the permissible exposure limit, the proposal would require that the mine operator use

feasible engineering and administrative controls to reduce the noise exposure to the permissible exposure limit.

If engineering and administrative controls do not reduce the miner's noise exposure to the permissible exposure limit, the operator must use those controls to lower exposure to as close to the permissible exposure limit is as feasibly achievable. In addition, the operator would have to provide any exposed miner annual audiometric examinations, properly fitting hearing protection and insure that the miner take the annual audiometric examination and uses such protection.

The comment period was extended from February 18, 1997, to April 21, 1997, due to requests from the mining community. MSHA received a broad range of comments from over 60 different interests, which include mine operators, industry trade associations, organized labor, colleges and universities and most equipment manufacturers. The comments addressed the primary provisions of the proposed rule such as the action level, the permissible exposure limit, methods of compliance, the exposure monitoring and audiometric testing.

Let me talk for a few minutes about the provisions of the proposed rule. Exposure to noise is measured under proposed Section 62.120. The proposed section would require that a miner's noise exposure not be adjusted for the use of hearing protectors, that a miner's noise exposure measurement integrate all sound levels from 80 dBa to at least 130 dBa during the miner's full work shift and that the current five dB exchange rate to measure the level of the miner's noise exposure would continue to be used.

An action level of 85 dBa during any work shift or equivalently a dose of 50 percent would also be established under the proposed rule. For miners who are exposed to the 85 dBa action level, the proposed rule would not require the use of engineering and administrative controls. Rather, operators would be required to provide personal hearing protection upon a miner's request, annual employee training and enrollment in a hearing conservation program.

The proposed rule would also retain the existing permissible exposure limit of 90 dBa, requiring that no miner be exposed to noise exceeding a time weighted average of 90 dBa during any work shift or equivalently a dose of

100 percent.

While the permissible exposure limit would not change, the actions required nor the exposure exceeds permissible exposure limit are different from the current requirements. MSHA's existing metal and non-metal noise standards, for example, already require the use of feasible engineering or administrative controls when a miner's noise exposure exceeds the permissible exposure limit.

The existing standards, however, do not require the mine operator to post the procedures for any administrative controls used or to conduct specific training or to enroll miners in a hearing conservation program. Under MSHA's current coal mining standard, a citation is not issued when a miner's exposure exceeds the permissible exposure limit if appropriate hearing protection is being used by the miners.

In the event of a violation of the coal mining standard, operators are required to promptly institute engineering and/or administrative controls and to submit to MSHA a plan for the administration of a continuing effective hearing conservation program.

The proposed rule would establish a hierarchy of controls for all miners when exposure exceeds the permissible exposure limit. In addition, other aspects of the rule increase protection to miners and further reduce the potential for hearing loss.

Under the proposal, mine operators must first utilize all feasible engineering and administrative controls to reduce sound levels to the permissible exposure limit before relying on other controls to protect against hearing loss. Furthermore, an operator would be required to insure that miners whose exposure exceeds the permissible exposure limit take the hearing examination offered through enrollment in a hearing conservation program.

Under proposed Section 62.120(f), MSHA would require operators to establish a system of monitoring which effectively evaluates each miner's noise exposure. The proposal would also require that within 15 calendar days of determining that a miner's exposure exceeded the action level, the permissible exposure level, the dual hearing protection level or the ceiling level, the mine operator must notify the miner in writing of the overexposure and the

corrective action being taken pursuant to Section 103 of the Mine Act.

The proposed rule also provides for hearing protection and training. Under proposed Section 62.125, miners would be given a choice from at least one muff type and plug type hearing protector. Under Section 62.130, miners would be given the required training.

Additionally, under proposed Section 62.140, operators would be required to offer baseline audiograms to miners enrolled in a hearing conservation program; that is, when a miner's exposure exceeds the action level. Prior to conducting the baseline audiogram, operators would be required to make certain that miners have at least a 14 hour period where they are not exposed to workplace noise. Use of hearing protectors as a substitute for this quiet period would be prohibited.

The proposed rule would also require mine operators to offer a valid audiogram at intervals not exceeding 12 months for as long as the miner remains in the hearing conservation program.

Proposed Section 62.150 would require the operator

to assure that all audiometric testing is conducted in accordance with scientifically validated procedures. MSHA would also require that audiometric test records be maintained at the mine site for the duration of the affected miner's employment plus at least six months thereafter.

Under proposed Section 62.160, operators would have 30 days in which to obtain audiometric test results and interpretations. Additionally, under proposed Section 62.180, MSHA would require, with limited exceptions, that within 30 calendar days of receiving evidence of a standard threshold shift, the operator must do the following:

One, retrain the miner; two, allow the miner to select a hearing protector or to choose a different hearing protector if the miner has previously selected one; three, review the effectiveness of any engineering and administrative controls to identify and correct any deficiencies.

Proposed Section 62.190 would require that within ten working days of receiving the results of an audiogram or receiving the results of a follow up evaluation, the operator notify the miner in writing of the results and

interpretation of the audiometric test, including: One, any finding of a standard threshold shift or reportable hearing loss; and, two, if applicable, the need and reasons for any further testing or evaluation.

Finally, the proposed rule would require that the operator provide the miner, upon termination of employment, with a copy of all records that the operator was required to maintain under this part without cost to the miner.

This is the third of six hearings. We will also receive comment and testimony on the proposed rule in Las Vegas, Nevada, on May 15, in Atlanta, Georgia, on May 28, and in Washington, D.C., on May 30. The hearings will all begin at 9:00 a.m. and end at 5:00 p.m., but, if necessary, MSHA will continue the hearings into the evening hours. In other words, we will stay as long as we have people wanting to testify.

A verbatim transcript of this hearing is being taken. It will be made an official part of the rule making record. Hearing transcripts, along with all the comments that MSHA has received to date on the proposed rule, will be available for review by the public. If you wish a personal

copy of the hearing transcript, however, you can make your own arrangements with the court reporter.

I am now going to turn the hearing over to Bob Thaxton, who will be the moderator for the rest of the day.

MR. THAXTON: Good morning. As Marvin said, my name is Bob Thaxton, and I will be the moderator for today's hearing.

For those of you that came in a little late, I would like to restate that there is a sign up sheet on the front table just as you come inside the door. If you have not had a chance to sign that, during one of the breaks that we take today we would appreciate it, please, if you would just sign that sheet indicating your presence.

MSHA views these rule making activities as extremely important. We realize that by your presence here that you also place an importance on this rule making activity. To insure that an adequate record is made during this proceeding, we ask that when you come forward to do your testimony that you approach the podium, state your name, spell your name and state the organization which you represent.

The order of presentation for the public statements will be in the order in which we received requests. The order today is as follows: Patrick James; Gary Madsen; Susan Dawson; David James; Stuart Sanderson; Wayne Jeffery; Steve Laird; Link Derick; Robert Dobie; Dave Hutchinson; United Mine Workers of America represented by Nick Ortega, Rick Snyder, Forrest Addison and Jim Stevenson; Randy Tatton; Gordon Brannon; Bob Payovich; Melinda Pon and company; and Roger Connett.

It is MSHA's intent that all persons that wish to make public statements will get the opportunity during this hearing. Anyone who has not previously requested to speak should indicate their intention to do so by coming forward and signing the sheet for speakers that will be located at my far right with Ros. Time will be allowed at the end of the hearing for anybody else that signs up. You will get an opportunity to speak.

The Chair will also attempt to recognize all speakers in the order in which they requested to speak. If necessary, though, we reserve the right to modify the order of presentation in the interest of fairness. Also, as

moderator, I may exercise discretion to exclude irrelevant or unduly repetitious material. In order to clarify certain points, the panel may ask questions.

MSHA will accept written comment and other appropriate data on the proposed rule from any interested party, including those who will not make oral presentations. Written comments may be submitted to Roslyn Fontaine during this hearing or sent to Pat Sylvia, Director of MSHA's Office of Standards at the address listed in the hearing notice.

All comments are important to the agency. Should anyone desire to modify their comments or submit additional comments following the hearing, the record will remain open until June 20, 1997. If possible, the agency would request that you forward your comments and provide us with a copy on disk.

The comments are essential in helping MSHA develop the most appropriate rule that will improve the health of our nation's miners. MSHA has received extensive comments on this proposed rule. We appreciate the constructive criticism and the hard work and careful thought which your

comments represent.

On behalf of Assistant Secretary David McAteer and MSHA, I would like to take this opportunity to express our appreciation to each of you for your being here today and for your input. We look forward to your continued participation in this rule making activity.

Before we begin with the first speaker, I would like to remind you again that we would like you to sign the attendance sheet and if you are wishing to speak and are not currently listed on the speakers' list that you come forward and sign the sheet with Ms. Fontaine.

Finally, again I would like to remind everyone that when you come to the podium please state your name, spell your name and state the organization which you represent. If you have copies of your prepared statement at the time that you come forward to make your testimony, please present them to the panel at that time.

With that, we would like to begin this morning's hearing with the first speaker. That would be Patrick James.

MR. JAMES: I am Pat James. I am going to pass

right now to the next speaker.

MR. THAXTON: Gary Madsen?

STATEMENT OF GARY E. MADSEN, DEPARTMENT OF SOCIOLOGY, SOCIAL WORK AND ANTHROPOLOGY, UTAH STATE UNIVERSITY

MR. MADSEN: I will have to get this focused for my bifocals here.

Members of the committee, it is an honor to be with you today to present findings from our recent research with western coal miners. Our names are Gary Madsen, G-A-R-Y, M-A-D-S-E-N, Susan Dawn, S-U-S-A-N, D-A-W-S-O-N, and David James, D-A-V-I-D, J-A-M-E-S. Dr. Dawson and I are professors at Utah State University. Dr. James is a pulmonary physician and on the faculty of the University of New Mexico School of Medicine, and Curtis Hunt is a statistician at the University of New Mexico School of Medicine.

We would like to identify the study in terms of the sample and the method for gathering the data for this particular study. In the fall of 1995, we conducted a randomly selected sample of 102 current and former male coal miners who were residing in the communities of Raton, New Mexico, and Trinidad, Colorado. The respondents ranged in

age from 31 to 92 with a mean of 56. The mean number of years mined was 17.

Ninety-seven coal miners worked underground with a mean of 12 years, 43 worked above ground in an underground operation with a mean of eight years, and 29 worked on the surface with a mean of nine years. Thirty-one worked all or most of their mining careers before 1970, 29 worked all or most of the time from 1970 or later but were not currently mining, and 42 were current miners who had worked all or most of the time from 1970 on.

In person interviews contained questions about mine related injuries and illnesses, including hearing impairment and the use of hearing personal protective equipment. All of the data were self-reported based upon the perceptions and knowledge of the respondents.

In terms of the findings, almost 60 percent of the respondents reported suffering from hearing impairment, which is identified in Chart 1.

(Overhead shown.)

Furthermore, the highest reported prevalence was found among the pre-1970 miners, approximately 80 percent,

compared with about half of the 1970 or later non-working and working miners. The differences between the earlier working subgroup and the later ones were statistically significant using the Pearson chi square statistic.

One might expect a higher prevalence among the pre-1970 subgroup. Their mean age was 74, as compared with 52 for the non-working and 46 for the current working 1970 or later subgroups. While the earlier working group was employed prior to the creation of MSHA, the latter two subgroups worked primarily under the MSHA noise regulations which are currently in effect. Certainly this is about 50 percent in terms of the prevalence of hearing impairment.

The National Center for Health Statistics conducts annual interviews with a large representative sample of the U.S. population. Included in this survey are percentages of those reporting hearing impairment. The national data are reported for three age categories for males: Under 45 years, 45 through 64, and 65 and older. The coal miner sample allowed for direct comparisons with the latter two age categories. This is presented in Chart 2.

(Overhead shown.)

We did not compare the 45 years and under because our youngest person was 31. When you go back to childhood, there is not much of a comparison there, so we compared the latter two subgroups.

The coal miner sample, in allowing for the comparison, will view the two older subgroups. The 45 through 64 year aged miners reported hearing impairment three times the percentage of the national sample. The 65 years of age and older miners reported twice the percentage of the national sample.

Of the 60 respondents who identified hearing impairment, 28 or 46.7 percent attributed hearing problems to noisy mine machinery and blasting. Furthermore, nine or 29 percent of the miners from the pre-1970 subgroup, six or 27.7 percent of the 1970 or later non-working miners, and 13 or 31 percent of the 1970 or later current miners attributed their hearing problems to mining. The subgroup differences were not statistically significant using the Pearson chi square test.

The following are examples of respondents' perceptions of noise: "I was a roof bolter for five years.

That's where my hearing went." "It's really noisy with the fans used for ventilation. It sounds like an airport." "The noise from the machinery is constant. It leaves your ears ringing. High pitch and constant hum. Dragline house is noisy. Shovel was real loud." "I was a prep plant operator for about ten years. It was noisy in the plant."

"When I was underground, the noise from machinery caused my ears to ring for a long time after work." "Everything I worked with was noisy. Even in the mine, the mine cars were noisy." Another commented, "Real noisy in the mine. You could hear it for a mile in there."

Furthermore, several miners described their hearing impairment. Typical examples included the following: "I notice the hearing loss the most. It bothers my wife the most." "I can't separate voices in a group. Can't hear the secretary at work very well because she speaks in low tones." "People complain that I can't hear them." "I have a lot of problems understanding people." These were typical comments that we identified.

Respondents were asked if they used hearing protective devices, that is earplugs or earmuffs or both.

The possible responses were never used, used part of the time, used most of the time, or always used. Only five respondents answered always. Consequently, most of the time and always were combined. In Chart 3, we present the results of the use of hearing protective devices.

(Overhead shown.)

What is striking about the results relates to results of ever having used any hearing protection. Among the pre-1970 subgroup, only one miner reported having worn any hearing protection at all. It was only among those mining post 1970 that ear protection was used with any regularity, with the highest levels among those who were currently employed. The differences in subgroup use were highly statistically significant using the chi square test.

It is noteworthy that among the currently working miners, half reported hearing loss, and almost one-third felt the loss was attributed to their mine work.

Our recommendation. The results of this study are generalizable to the Raton, New Mexico, and Trinidad, Colorado, coal miner population. However, there is no reason to assume that they would not be applicable to the

entire U.S. coal mining population since the mechanization of mining is system wide. Therefore, this research indicates a need to further reduce the risks of developing hearing impairment among coal miners.

Thank you.

MR. THAXTON: Ms. Dawson, are you talking next?

MS. DAWSON: No. Dr. James will.

MR. THAXTON: Is it possible to get copies of your slides that you were using?

MS. DAWSON: Yes.

MR. THAXTON: Thank you.

MS. DAWSON: How many copies?

MR. THAXTON: Just one.

MR. THAXTON: Dr. James?

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STATEMENT OF DAVID E. JAMES, M.D., DEPARTMENT OF INTERNAL MEDICINE, UNIVERSITY OF NEW MEXICO SCHOOL OF MEDICINE

DR. JAMES: Good morning. I am David James, J-A-M-E-S. I am with the University of New Mexico in Albuquerque. The work I am going to be presenting here is some results of an ongoing screening program of miners in New Mexico, as well as coal miners from southern Colorado. I am also on the staff at the Miners' Colfax Medical Center where this work originates from.

The funding for the study is from the Miners' Colfax Medical Center in Raton, New Mexico, as well as a federal Black Lung grant from the Health and Human Services. The title of the work is Hearing Loss in Miners from the Southwestern United States.

Since 1987, miners from New Mexico and southern Colorado have been screened through the Miners' Outreach Screening program with the Miners' Colfax Medical Center. This is a voluntary screening program which takes place in the local communities of the miner on a mobile facility and is offered at no charge.

The screening protocol consists of an in depth respiratory health and mining work history questionnaire, a chest x-ray, spirometry and pure tone audiometry. Audiometry is performed in a sound booth using a pure tone audiometer at frequencies from 500 up to 8,000 Hz. Testing is performed by a technician who is accredited by the Council for Accreditation in Occupational Hearing Conservation. Otoscopic examination of the external ear is not routinely performed as part of our screening protocol.

For the analysis of the audiometric data, results are presented from the best ear. Results are not included if there was testing for whatever reason in only one ear or if the subject reported a recent head cold, ear drainage or had been around loud noises in the prior 14 hours.

Miners with low frequency hearing loss defined here as a hearing threshold of greater than 25 dB at frequencies of 500 Hz and 1,000 Hz were excluded for this analysis. High frequency hearing loss was defined as a hearing threshold of greater than 25 dB at frequencies of 4,000 Hz and 6,000 Hz.

To control for several factors at a time which may

result in high frequency hearing loss, logistic regression modeling was used. In this technique, results are presented as odds ratios which express the likelihood of high frequency induced hearing loss compared to the control.

An odds ratio or OR of greater than one indicates increased risk of high frequency hearing loss from that factor when you compare it to the control group. An odds ratio of less than one indicates that there is less risk of high frequency hearing loss when compared to the control.

The statistical significance for each estimate is given by 95 percent confident intervals. If a confidence interval includes one, then the results would not meet other tests of statistical significance.

The results. A total of 1,364 miners had acceptable audiometry results. The demographics of the miners are given in Table 1 and are shown on the overhead.

(Overhead shown.)

It is primarily a male population. The ethnicity varied quite a bit with a large population of not only a Hispanic white population, but non-Hispanic whites and Native Americans. The mean age of the miners was 56 years

of age. Self-reported hearing loss occurred in 48 percent of all miners, and 52 percent reported working in other noisy occupations or industries other than mining. The majority of miners were retired, 70 percent.

The predominant type of mining, location of mining and years of mining are given in Table 2 on the second overhead.

(Overhead shown.)

The predominant type of mining performed was in uranium mining. The predominant type of mining as well as predominate mining location were determined by the maximum number of years that a miner may have worked in any one location or type of mining.

Miners frequently worked in different types of mines. For example, 18 percent of miners who worked predominantly in coal mines also worked in non-metal mines, and 17 percent of miners who worked predominantly in metal mines also worked in uranium mines. As a whole, miners did different types of mining work. The predominant location of mining was in underground operations. The mean years of mining was 17 years.

(Overhead shown.)

In the next figure, the mean hearing thresholds at frequencies from 500 to 8,000 Hz by age group for all miners is shown. The increasing hearing thresholds at higher frequencies in the older age groups is well observed here. On the Y axis we have decibels starting at the top from zero on down to 100 dB. On the X axis starting at the left-hand part of the screen 500 Hz going out to 8,000 Hz on the right-hand side broken down again by age group.

Using logistic regression, there was no statistically significant difference in the odds ratios for the development of high frequency hearing loss in different ethnic groups or between active or retired miners. Miners reporting work in the other noisy industries or occupations were 36 percent more likely to develop high frequency hearing loss than miners without this factor.

(Overhead shown.)

In Table 3, the results of logistic regression modeling are given for the variables of predominant mining type, predominant mining location and years of mining.

Although the prevalence of high frequency hearing

loss was high in miners who performed different types of mining, there the first column of numbers is the percent of miners who mined predominantly coal, uranium, metal or non-metal, the percent of miners with high frequency hearing loss. That ranges from 68 percent up to 75 percent. Even though the prevalence was high, there was no difference between the groups in terms of the occurrence of high frequency hearing loss.

Underground miners were more likely to have high frequency hearing loss than miners who worked predominantly above ground or at open pit or surface mines. For example, above ground miners were 39 percent less likely to have high frequency hearing loss than underground miners.

The longer a miner worked, and this is the last set of rows there, Years of Mining, the more likely he was to develop high frequency hearing loss. A miner with more than 20 years of mining experience was 231 percent more likely to have developed high frequency hearing loss than miners with less than ten years of experience. That is shown on Table 3 and on the overhead in that last row, Years of Mining, greater than 20 years.

Eighty-nine percent of miners had high frequency hearing loss if they worked more than 20 years, and that worked out to this odds ratio, looking at the overall risk, of 3.31, which is highly significant.

Conclusion. In this voluntary sample of predominantly retired miners from southern Colorado and New Mexico, high frequency hearing loss was common and occurred most frequently in miners who were older, had more years of mining and who worked underground.

In the current analysis, we did not attempt to determine how much of the miners' high frequency hearing loss was due to age related changes or presbycusis and how much was due to noise induced damage from mining or other work in other industries.

All the figures and tables are included in the handout.

MS. PILATE: I have some questions.

DR. JAMES: Sure.

MS. PILATE: You stated in the study that you had 1,364 miners who took the audiometric test. Were there any that refused to take the exam?

DR. JAMES: We don't have that information. Again, this is a summary of all individuals who were tested, but we do not have a refusal rate.

I could say, though, that that rate is very low since this is a voluntary program, but I do not have the exact -- that information just is not available.

MR. NICHOLS: How long do you estimate that it took to give an audiometric exam?

DR. JAMES: In our protocol as outlined here, the one person who does the majority of the testing, it takes him about 15 minutes.

MS. PILATE: Thank you.

MR. THAXTON: Any other questions?

VOICE 1: Do you have a percentage of the total mining population versus your sample?

MR. THAXTON: I am sorry. Excuse me, sir. You need to direct questions to the panel, not to individual speakers. If you have comments or concerns about the individual speakers' material, that is what the record is held open until June 20 for.

MR. CUSTER: Dr. James, is there a reason that you

did not make presbycusis loss adjustments from standard tables?

DR. JAMES: Partly, yes. Partly we wanted to just present the raw data.

At least in my understanding of the literature, there is still some debate as to how best to do that. We are working on that. I think eventually we will attempt to submit this material for publication, and we would try to include some of the age corrections that have been used in the literature.

The main reason is, at least in my mind, there is still some debate how best to do that, so we did not do it.

MR. CUSTER: Thank you.

MR. THAXTON: Dr. James, on Page 2 of your report in the first paragraph under Results --

DR. JAMES: Yes.

MR. THAXTON: -- you state that self-reporting hearing loss occurred in 48 percent of miners, and 52 percent reported working in other noisy occupations or industries.

DR. JAMES: Right.

MR. THAXTON: The 52 percent that reported working in other industries, is that 52 percent of the 48 percent that reported hearing loss?

DR. JAMES: No. That 52 percent is the entire sample of 1,364.

MR. THAXTON: Thank you.

Any other questions?

MR. VALOSKI: I have questions for both Dr. James and Dr. Madsen.

You said underground coal mining. What type of underground coal mining? Was it long wall? Conventional? Continuous? Do you have that data?

DR. JAMES: We do have that data to an extent. We have some information on what the main occupation that the miner would report, but we do not specifically ask them how much time they may have spent on different main areas in the mine, so we have limited data on that.

I have not done this analysis looking at changes in audiometric results based on more specific mine site location of work.

MR. VALOSKI: Do you record the occupation of the

miner or just coal miners in general? In other words, a roof bolter versus a continuous miner operator.

MS. DAWSON: We do have that for the 102 miners. Would you like me to read that to you?

MR. VALOSKI: Yes, please.

MS. DAWSON: The job categories?

MR. VALOSKI: Yes.

MS. DAWSON: Under roof bolter/timber man, there were 32 miners, and that is 31.4 percent of the 102. Under laborer/pick and shovel category, there were 26 miners. That is 25.5 percent. Under mechanic/equipment maintenance --

Excuse me. What we could do is send you a copy of this paper if that would help.

MR. VALOSKI: Yes, it would.

MS. DAWSON: Under mechanic/equipment maintenance, there were 24 miners. This is 23.5 percent. Under continuous miner/coal cutter category, there were 22 miners. That is 21.6 percent. Under foreman/supervisor, 19 miners, 18.6 percent. Under long wall operator category, there were 18 miners at 17.6 percent. Under conveyance operator, 17

miners, 16.7 percent.

Those categories represent probably the largest number of workers associated with those particular occupations.

MR. VALOSKI: Thank you very much.

MS. DAWSON: You're welcome.

MR. MADSEN: They are not mutually exclusive either.

MS. DAWSON: Right.

MR. MADSEN: Also in the end of our presentation, the first publication that is identified is being published this year. That will include all of this. It has been accepted for the journal Society and Natural Resources. Included in that are the data that she presented, so there will be two sources to identify that.

MR. THAXTON: Excuse me, Dr. Madsen. Could you come to the podium when you are making statements, please?

MR. MADSEN: A breakdown of the occupational categories for the miners for the 102 randomly selected sample that we received from Trinidad, Colorado, and Raton, New Mexico, will be published in the journal Society and

Natural Resources under the title Working Environment and Respiratory Health: A Case Study of Western Coal Miners.

The material that we presented today, with some other materials concerning arthritis and other areas that look at general health, is under review by the same journal. It is also listed. Hopefully it will be published this year.

MR. THAXTON: Thank you.

Our next speaker is Stuart Sanderson.

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STATEMENT OF JERRY POWERS, COLORADO MINING ASSOCIATION

MR. POWERS: I am not Stuart Sanderson, but I am Jerry Powers, and I represent the Colorado Mining Association in Mr. Sanderson's absence. He apologizes for not being able to be here today, but he is involved in other hearings.

The Colorado Mining Association, of course, is an industry association that represents both large and small operators in the State of Colorado and throughout the west. Many of these companies are represented here today or will be represented at other hearings and will present testimony at the other public hearings.

Because of Mr. Sanderson's absence, we will only file additional comments following these hearings. We did file comments on April 7, 1997, which we would like to have incorporated into the testimony.

As such, that is all I have to say.

MR. THAXTON: The next speaker is Wayne Jeffery.

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STATEMENT OF WAYNE JEFFERY, CHAIRMAN, SAFETY COMMITTEE, WYOMING MINING ASSOCIATION

MR. JEFFERY: My name is Wayne Jeffery, J-E-F-F-E-R-Y. I am chairman of the WMA Safety Committee, and I am presenting these comments on behalf of the Wyoming Mining Association.

The Wyoming Mining Association is an industrial association that represents bentonite, coal and uranium mining associates throughout Wyoming. Wyoming leads the nation in production of bentonite, coal, soda ash and uranium.

We are proud of the fact that our members have some of the safest mines in the country. The Wyoming Mining Association supports MSHA in its efforts to provide a safe and healthy working environment for all miners.

While the members of the WMA agree with the need to prevent hearing loss to miners, we disagree with MSHA's position that there is a need to change current regulations. These current regulations are more than adequate to minimize hearing loss. However, MSHA has not enforced them

effectively.

The issuance of new regulations under Part 62 will only put additional burden on those operators who are presently complying with MSHA. To illustrate this point, the mines in the Powder River Basin have conducted audiometric testing for their employees, and there has never been one case of a 25 dBa shift in over 4,000 audiometric examinations. In addition, there have only been two cases of a ten dBa shift that might be constructed as occupational hearing loss. One of these individuals is also an avid shooter, and the other is a snowmobile racer.

We are concerned that the equipment that enhances safety of employees in our operations, for example, two way radios, AM-FM radios, will become a casualty in the pursuit of compliance with regulations. MSHA needs to address whether or not these noise regulations shall have a priority over other safety communications and warning devices.

This same scenario would also apply to mine radios used for two way communication, particularly the AM-FM radios that are placed in the operator's cab to help them overcome monotony and drowsiness which could lead in an

accident.

We do not believe that MSHA in these new proposed regulations has allowed for the advancement of new technology in the area of noise reduction. An example of technology showing potential that clearly would not fit these regulations is the application of active noise cancellation technology and personal hearing protection. This technology does not necessarily lower noise levels, but it attenuates noise by generating a wave canceling mirror image. This is just one example.

If these regulations are to be meaningful and exist for another 20 years, they must be written in such a way as to allow for the utilization of the best and most current technology whether it is classified as personal protection or administrative or engineering controls.

Since MSHA has published the proposed rules and is seeking comments, the following is the position of the Wyoming Mining Association on some of these areas:

First of all, MSHA has indicated that the new proposal will save coal companies over $3,000,000 or $3,500,000. We strongly disagree with MSHA's assessment of

savings.

In order to comply with this proposed 62.120, the operator has to continue to conduct noise surveys at the same level. The proposed regulations will require surface operators to implement hearing conservation programs for a large segment of our work force, along with extended record keeping.

We do not feel that MSHA has adequately calculated the potential cost of engineering and administrative controls should these proposed regulations become law if operators are expected to reduce noise levels to the lowest possible level. Therefore, we ask MSHA to reassess the cost of the proposed regulations on the industry to realistically portray the cost to our industry.

MSHA has indicated that there will be a savings of 88,740 paperwork hours in coal as a result of these proposed regulations. We disagree. We feel that the paperwork necessary to meet all aspects of the proposed regulations will actually increase.

While it is true that MSHA does not require the maintenance records in the proposed regulations, in reality

records will have to be maintained on all surveys, training, audiometric testing, administrative and engineering controls to prove compliance under the proposed regulations. Therefore, we believe that MSHA has significantly understated the time required to comply with the proposed regulations.

MSHA has indicated that it is committed to publishing a compliance guide prior to the effective date of the regulations. We would request that all aspects of compliance be contained in the regulations rather than relying on MSHA policy to determine how operators are to comply with the regulations.

If MSHA insists on publishing a compliance guide outside the rule making process, then we believe that it should at the very least be available for review prior to the closing of the comments to allow operators to better understand MSHA's position.

Too often operators have been surprised by MSHA's interpretation of a regulation which resulted in lengthy and costly litigation to clarify issues. Therefore, we request that the comment period on the regulations remain open until

such time as the compliance guide is published.

In the supplemental information, MSHA has requested comments on how to minimize the burden on mine operators to provide audiometric examinations for those miners with only a temporary attachment to the mining work force.

Applying the proposed regulations to temporary miners, especially at service mines who utilize a high number of specialty contractors to perform certain jobs on the mine site, will be a significant problem if MSHA does not allow for the usage of hearing protection as a method of preventing hearing loss while they are working on mine property.

Some major construction projects require the presence of construction personnel for several months. Because contractor employees will work on and off mine property, the mine operator cannot be held responsible for any hearing loss that occurs off the mine property.

Unless MSHA provides the operator with the ability to rely on hearing protection, the operator may be forced to conduct a baseline audiogram each time a contractor employee

comes to work on the mine property and again each time a contractor employee completes a job. We believe that MSHA should allow a minimum of six months continuous work on a mine before audiometric testing would be required.

The proposed rules require that no miner be exposed at any time to a sound level exceeding 115 dBa. There are times just by the nature of the work where miners will be exposed to noise levels exceeding 115 dBa for instantaneous periods of time; for example, a door slamming, a piece of steel dropping on concrete, an engine or starter pressure relief valve. Another example is with regard to blasting warning sirens, ambulances, emergency equipment, a pressure relief valve popping off.

Because this noise is infrequent and unpredictable as to occurrence, the only realistic means of preventing exposure is with personal hearing protection. We believe that MSHA should take this into consideration and allow for higher levels of noise exposure up to a maximum of 140 for short durations or instantaneous exposure with hearing protection.

The proposed rules require that the primary means

of preventing hearing loss should be all feasible engineering and administrative controls. We would request that this be changed to establish that the primary means of preventing hearing loss should be based on what is the most effective and technologically feasible for a given application between personal protective equipment, engineering or administrative controls.

MSHA defines hearing protection as any device that has a scientifically accepted indicator of noise reduction. If MSHA by its definition requires that hearing protection have a scientifically accepted indicator of noise reduction, we believe that MSHA should recognize that scientifically accepted value for calculations of noise reduction.

Section 62.123(i) should be changed to read adjusted to account for the use of hearing protection.

In conclusion, as we stated earlier, the members of the Wyoming Mining Association do support MSHA in its efforts to provide a safe and healthy work environment for all miners. We do, however, take strong exception to the regulations as proposed.

We believe these regulations as proposed will not

positively impact reduction in hearing loss and may at times expose our miners to higher noise levels. We believe these regulations will have a negative impact on safety and the quality of work for many of our miners.

It is clear that there will be an increased cost to operators. It is also clear that these regulations do not allow for advances in personal protection technology.

Last, but not least, we request that the comment period remain open until the compliance guide has been published and the industry has had a chance to consider it in their comments.

We thank you for this opportunity to comment.

MS. PILATE: I have some questions. You spoke of the engineering control costs being underestimated. Can you elaborate on that?

MR. JEFFERY: The engineering costs being underestimated? Well, it depends on what definition ultimately comes out under the area of feasible and what MSHA considers to be feasible.

There have been stories out there particularly in the metal area where there has been over $100,000 spent to

try to reduce the noise level by three dBa on a continuous miner.

I guess really it depends a lot on what you determine as being feasible. If money is no object, I think you have underestimated the cost.

MR. VALOSKI: Do you have a specific example where somebody requested $100,000 be spent on a continuous miner?

MR. JEFFERY: Yes. It was one up there in Wyoming.

MR. VALOSKI: Could you provide us with the report?

MR. JEFFERY: Yes. I can get that information.

MR. VALOSKI: I would like to ask a couple questions on the 4,000 audiometric exams in the Powder River Basin.

MR. JEFFERY: Right.

MR. VALOSKI: Were they on 4,000 miners?

MR. JEFFERY: No, no, no. This is over the 20 years in operation up there.

Some of the mines have a hearing conservation program. Not all do. During that period of time, we just

totaled them up. There were over 4,000 audiometric exams conducted.

MR. THAXTON: Is it possible to get copies of that data?

MR. JEFFERY: I will go back to the member companies and ask for it.

MR. THAXTON: It could be summary data. We do not want to know the names of the people.

MR. JEFFERY: Oh, no.

MR. THAXTON: Something similar to what Dr. James and Dr. Dawson and Dr. Madsen presented.

MR. JEFFERY: One of the things I think MSHA has to keep in mind, at least in surface mining, is our trucks and our equipment now run consistently somewhere between 84 and 86 dBa. That is the noise inside the cab with the windows rolled up.

If you put in the mine radio, the AM-FM radios, everybody is going to be above the actual level. We found that the AM-FM radios, while not required by regulations, have been very beneficial to the safety of the miners for helping them maintain alertness on the night shifts.

I just hope that you keep in mind the whole scheme of things, the safety of the people and your interest in noise reduction.

MS. PILATE: I have another question. You spoke of the proposal not having record keeping requirements for training and other areas. Are you aware that there are --

MR. JEFFERY: Yes, I realize that there are, but it is going to take a lot more than what is required in the regulations per se in order to maintain the records necessary to assure compliance.

MS. PILATE: What in particular are you thinking of?

MR. JEFFERY: For example, that we offered anybody that would be an actuarial we would have to show a record of the date and when we offered them to be in the hearing test, the hearing testing program, this type of thing.

That is just one example off the top of my head that I can come up with real quick.

MR. THAXTON: Have you gone through and prepared like an itemized listing then of what time costs you think are involved with this rule?

MR. JEFFERY: I think one of our members will present that today.

MR. THAXTON: Today?

MR. JEFFERY: Yes.

MR. THAXTON: Okay. If they do not present that, is it possible for you to provide us something like that?

MR. JEFFERY: I can get it, yes. I believe that they are going to present that.

MR. THAXTON: Okay. Thank you, Mr. Jeffery.

At this time we would like to take a 15 minute break. We will recess until 10:30 a.m.

(Whereupon, a short recess was taken.)

MR. THAXTON: The next speaker will be Steven Laird. Am I pronouncing that right?

MR. LAIRD: That is correct, yes.

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STATEMENT OF STEVEN LAIRD, MANAGER OF LOSS PREVENTION, BELAIR MINE

MR. LAIRD: Good morning, Administrator Nichols, ladies and gentlemen of the panel. My name is Steven Laird, L-A-I-R-D. I am the Manager of Loss Prevention of Belair Mine up in Gillette, Wyoming, and I represent Amax Coal West.

I am here this morning to comment on MSHA's newly proposed occupational noise exposure regulations found in the Federal Register, Volume 61, No. 243, dated Tuesday, December 17, 1996, Pages 119 through 123.

Today I want to talk specifically about three subjects. Number one, I want to talk about Belair's audiometric program, one that we have had in place for ten years. Secondly, I would like to talk about the cost of compliance with MSHA's proposed program based upon our current program. Third, I would like to talk about the requirements concerning feasible and reasonable engineering and administrative controls.

By way of background, Belair Mine is located in

the Powder River Basin of Wyoming. Geographically, the Powder River Basin is bounded on the west by the Big Horn Mountains and on the east by the Black Hills of South Dakota. It extends as far north as central Montana and as far south as central Wyoming. It covers conservatively approximately 30,000 acres.

Historically, mining in the Powder River Basin began just about as soon as the settlers arrived in that area. Farmers, ranchers, loggers, miners, railroaders -- all kinds of people -- converged into that area. They mined the easily accessible coal to heat their homes, their businesses and their campfires.

Most of the early mining in the Powder River Basin was localized. It was small scale. Powder River Basin coal runs the gamut from about 8,200 BTU to about 9,000 BTU, plus or minus a few hundred BTUs in there.

It wasn't until the 1970s that coal mining in the Powder River Basin really became large scale. Now, 25 years after the first large mines were put in in the Powder River Basin, there are 24 producing coal mines. These mines directly employ around 5,500 people, and they supply

approximately 30 percent of the nation's coal needs.

Belair Mine itself where I work was actually opened in 1972. It is a classic open pit truck and shovel operation.

(Overhead shown.)

If I may, this is an overhead of our truck and shovel operation stripping overburden in the Powder River Basin. That is a Marion shovel. That is a 54 yard bucket. It is loading out a 240 ton cab truck.

Sequentially, what we do when we load out overburden is we strip off the overburden, we drill it, we blast it, and then we load it out with these shovels and haul it to the dump. The truck is 240 tons, as I said. It has been likened to pulling your favorite easy chair up to your front room window and driving your house. That is how big they are.

After we strip off the overburden, we mine the coal. At Belair, we have approximately an 80 foot thick seam of coal. As compared to people that mine in the east, they might be two to three feet upwards of ten feet. We have one seam. Some mines in the Powder River Basin have

three seams upwards of 120 foot thick.

The above comments are important, I believe, because they provide a setting for our mining operation. As you can see, we have a large scale, world class coal mining operation. We have mined coal in the Powder River Basin for approximately 25 years. During that period of time, we have had an extremely good safety record. We have won Sentinels of Safety awards in 1987, 1989, and we were runners up in 1994.

How do these comments relate to the proposed regulations? Well, several ways. First, the regulations require that companies provide an audiometric testing program for their employees. Amax Coal has provided this program of its own accord since 1987.

(Overhead shown.)

I do not know if we can get that all on there, but this is a stripped down version of the audiometric testing program that we provide. It was originally Amax Coal Company, but since we were bought out several years ago it is now Amax Coal West. As you can see, this is our policy loss prevention guideline concerning our particular program.

Pursuant to this policy, we first require that each employee fill out a personal history form. This allows us to see what they do on their spare time. Many times our miners are a rough and tumble bunch. You know, it is not a prissy operation. The people that you employ are pretty rough characters in some instances.

They do a lot of shooting in our area, a lot of hunting, a lot of snowmobiling, snowmobile racing. You name it. If it has a motor on it, they like to do it. They do a lot of skeet shooting, trap shooting and those kinds of things.

As you know, these kind of off job activities can greatly impact a person's hearing. We see in our hearing program a lot of right side hearing losses with our people. When you go back into their background, you can see that they are shooters, hunters, or they do other things off the job that we cannot control.

When a new employee comes on, the first thing that we do is conduct a baseline examination for that employee. Thereafter, we conduct yearly audiometric tests. They are compared with the baseline and with the previous year's

test.

Employees found to possess a 25 dBa hearing loss in either or both ears within the speech ranges of 1,000 to 3,000 Hz are referred to a hearing specialist for further testing and evaluation.

Employees with a hearing loss greater than 40 dBa within the speech range in either range are required to be equipped with a hearing aide device if the hearing loss is correctable. If it is not correctable, then we review the individual's job responsibilities to insure that it does not adversely affect that person's safety in the job and in the work place.

If a person is found to have either a 25 dBa or a 40 dBa hearing loss, then we put that person on a six month testing program. Very seldom do we ever find that kind of a hearing loss in any of our employees.

It is our policy that all employees use hearing protection of some kind, usually plugs or muffs. We furnish the hearing protection, and it has been our experience that when used they are highly effective in preventing job related hearing losses.

Because we do have a ten year track record of a hearing conservation program, we also have certain facts available to us about that program. For example, because we have to be cost accountable to our corporation, we do track the costs of such a program.

MSHA asserts that the cost of the program will be offset by less paperwork for the noise monitoring requirements. We disagree. We believe that the tangible cost of the program will greatly exceed the cost of the current noise monitoring noise regulations and that intangible or undefined costs have the potential of being extremely large.

For example, I went through the proposed regulations on a line by line basis and looked at the requirements of these particular regulations. Using the regulations, it is my understanding that companies will have to develop a hearing conservation program, a monitoring program, a training program, a hearing protection program, and they will also have to institute administrative and engineering controls.

(Overhead shown.)

As you can see, you are going to have one, two, three, four, five major programs. Under each one of those programs, you are going to have to institute sub-programs of various kinds.

Now, what I did for this particular handout was try to define exactly what the sub-programs might be.

On the right-hand side, the defined sub-program is the area in the regulations, in the proposed regulations, where you would find a mandate or requirement for that particular program.

I looked at the implementation costs of our program, the hours per year that I thought, based upon our current information and background, it would take to do the sub-program, the cost of that program and the total dollars just for implementing the program. After the program is developed and implemented, you have the total yearly cost of running that program.

As you can see, let's just take an example. If you develop and maintain an audio test program as required by 62.140 et seq., we think that will take 16 hours to develop at a cost of about $30 per hour for a total cost of

$480 on that line item.

If you follow that same pattern on down through, you can see that the total cost in developing and implementing the program proposed is about $62,760. Thereafter, you will see the yearly cost of developing and maintaining your audio test program -- that is, keeping it up to speed -- is about five hours at $30 an hour, which totals about $150.

Those are all, of course, added up on line items at the bottom of each one of the major programs so that you can see the total cost of the yearly cost of administering the program is about $48,000.

In the Powder River Basin, if you assume about $50,000 for the cost of administering the program and assume about 5,500 employees employed by the mines in the Powder River Basin, you can see that that is about $200 per employee, if my math is right.

I am sorry. Let me rephrase that. If you have $50,000 for your program, and we have 250 people at our mine site. That is about $200 per employee. If you take that $200 per employee and apply it to the 5,500 people employed

in the Powder River Basin directly by mining companies, you are already approaching $10,000,000, so it far exceeds in the Powder River Basin the $9,000,000 that MSHA has said is the cost of the program.

By the way, I do not have this available at the present time, but I will submit this particular overhead with my written comments at a later date.

MS. PILATE: Could I ask a question real quickly?

MR. LAIRD: Yes.

MS. PILATE: For example, you have to report a hearing loss to MSHA at five hours initially, five hours annually. What is included in that five hours?

MR. LAIRD: That will include my time. That will include the EMT's time. That will probably include writing the report, maintaining the records of the report, those kinds of things.

The cost that you see and the hours that you see are a conglomeration of our EMT, who keeps track of our noise records, and my time.

MS. PILATE: What are you going to do? I am going to guess you are going to give yourself two and one-half

hours to do what?

MR. LAIRD: You would have to review the audiometric exam, decipher exactly what caused the hearing loss, the kinds of hearing loss. You would certainly have to have some kind of a report for MSHA. You would have to prepare a letter, for example, to send it off to MSHA. You would have a secretary, for example, that would either type your letter, etc.

The cost that you see, the five hours, I think are fairly credible when you sit down and start looking at all the manpower associated with making a report and getting that report to MSHA's headquarters.

MS. PILATE: I cannot really see it that well. Does that say $60 an hour?

MR. LAIRD: On which one?

MS. PILATE: In I guess that is the hourly cost or hourly wage rate for that item.

MR. LAIRD: I am sorry. I do not see which one you are talking about there.

MS. PILATE: Reporting a hearing loss to MSHA. Is that $60 an hour?

VOICE 2: It is $30.

MS. PILATE: $30? Okay.

MR. LAIRD: Yes, $30.

MS. PILATE: And that is the average of the mine operator's time?

MR. LAIRD: That is what I would estimate would be the average of our particular set up. If we had to develop a program and report to MSHA, I would assume that it would take me about five hours throughout the year for all of the people that we work with.

We have 250 people, actually 270, at our property. Any hearing losses that should be reportable to MSHA will have to be reportable to MSHA. Five hours might be a very conservative estimate when you look at that.

Any other questions about that particular overhead?

MS. PILATE: Do you have an overhead with the cost of your existing audiometric program?

MR. LAIRD: I do not have that. I think in the preamble to the regulations the statement was made that the cost of the current noise monitoring program would

significantly offset the cost of the proposed program.

I guess my comment is I don't agree with that. Our current noise monitoring program, just the noise monitoring program itself, takes about 100 of our EMT hours. At $15 an hour, that is only $1,500.

As you can see, if we do this proposed program according to the regulations, it will cost us right around $48,000 to do every year. There is a greatly increased cost in maintaining this kind of a program.

I can go on with my prepared text here if you would like, and I can address that.

Compare the cost of our noise monitoring program, which runs about 100 EMT hours per year. At $15 an hour, the noise monitoring program costs us about $1,500 per year. The cost of implementing the new regs will be 4,184 percent greater. The cost of operating the program will be 3,250 percent greater.

On Page 3 of the preamble to these regulations, MSHA asserts that the cost of control will be significantly offset by the elimination of the paperwork intensive noise monitoring and reporting requirements. Logically, replacing

the current program that costs us about $1,500 per year with one that costs 30 to 40 times as much does not seem to result in significant offsets.

Finally, I would like to comment on the requirement of proposed Rule 62.120(c)(1) that if a miner's noise exposure exceeds the PEL, the operator shall use all feasible engineering and administrative controls to reduce the miner's exposure to the PEL.

The term all is quite inclusive. All means everything. All means all. That is what all means, regardless of the cost, availability or other limiting factors that might be tried. One could even envision a Goldberg design for equipment in which control is piled on top of control to abate noise. I suggest that the term all be stricken.

The same concern applies to the term feasible. Feasible is defined in Webster's dictionary as that which is capable of being done. In my experience, a task may be feasible, but it may not be reasonable.

For example, you could use administrative control to shut down a coal crushing operation until engineering

defines a quieter rock crusher. That may be years. The shutdown would certainly be administratively feasible, but absolutely unreasonable from a business standpoint.

I suggest that this rule be revised to provide that engineering and administrative controls not only be feasible, but they also be reasonable.

These terms are completely undefined except that in the preamble to these regulations, Page 5, in the answer to Question 4 MSHA makes the comment that a cost that is one percent of revenue does not have an appreciable impact on a mining operation.

When I read this passage, I question the conclusion reached by the author. That aside, several other factors arose in my mind. For example, is this one percent of revenue for each and every control? What if a regulator decides that 20 different controls are required? Is that one percent of revenue for each control so that the aggregate could be 20 percent of revenues?

I could envision numerous scenarios that would take place if the regulatory agenda included trying to expand the scope of these regulations. Is it one percent?

Is it less? Is it aggregated, or is it not?

In summary, my concerns with the proposed regulations are threefold. First, our hearing conservation program is simple, it is cost effective, it is successful, and it is voluntary. Our current controls work quite well. Our records show that hearing protection works.

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MR. LAIRD: As you can see, if we do this proposed program according to the regulations, it will cost us right around $48,000 to do every year. So, there's a greatly increased cost in maintaining this kind of a program.

You know, I can go on with prepared text here, if you like, and I can address that. Compare the cost of our noise monitoring program which runs about 100 EMT hours per year. At $15 an hour, the noise monitoring program costs us about $1,500 a year. The cost of implementing the new regs will be 4,184 percent greater. The cost of operating the programs will be 3,250 percent greater.

On page three of the preamble to these regulations, MSHA asserts that the cost of controls will be significantly offset by the elimination of the current paperwork intensive noise monitoring and reporting requirements. Logically replacing the current program that costs us about $1,500 a year with one that costs about 30 to 40 times as much does not seem to result in significant offsets.

Finally, I would like to comment on the requirement of proposed Rule 62.120(c)(1), that if a miner's

noise exposure exceeds the PEL, the operator shall use all feasible engineering and administrative controls to reduce the miner's exposure to the PEL. The term "all" is quite inclusive. All means everything, all means all, that's what all means, regardless of the cost, availability or other limiting factors that might be tried.

One could even envision a Rube Goldberg design for equipment in which control is piled on top of control to abate noise. I suggest that the term "all" be stricken.

The same concern applies to the term "feasible". Feasible is not defined in Webster's Dictionary as that which is capable of being done. In my experience, a task may be feasible, but it may not be reasonable.

For example, you could use administrative control to shut down a coal crushing operation until engineering designs a quieter rock crusher. That may be years. The shut down would certainly be administratively feasible, but absolutely unreasonable from a business standpoint.

I suggest that this rule be revised to provide that engineering and administrative controls not only be feasible, but they also be reasonable. These terms are

completely undefined, except that in the preamble to these regulations, page five, and the answer to question four, MSHA makes the comment that a cost that is 1 percent of revenue does not have an appreciable impact on a mining operation.

When I read this passage, I question the conclusion reached by the author, but that aside, several other factors arose in my mind. For example, is this one percent of revenue for each and every control? What if a regulator decides that 20 different controls are required? Is that 1 percent of revenue for each control so that the aggregate could be 20 percent of revenues? I could envision numerous scenarios that would take place if the regulatory agenda included trying to expand the scope of these regulations. That is, 1 percent, is it 1 percent, is it less? Is it aggregated or is it not?

In summary, my concerns with the proposed regulations are three-fold. First, our hearing conservation program is simple, it is cost effective, it is successful and it is voluntary. Our current controls work quite well. Our records show that hearing protection works quite well.

We do not see the need for cluttering our successful program with additional mandates, rules or other undefined requirements.

On the other hand, the proposed rules are complex and extensive. As you can see, there are numerous -- I think I counted 27 -- subprograms required by the proposed rules. I can visualize, and many terms in the proposed rules are undefined -- I can visualize years of litigation trying to define those undefined terms.

Secondly, the mandate found in the proposed regulations are quite expensive. By my analysis, they cost 30 to 40 times more to develop, implement and maintain than our current program.

Finally, the clause, "All feasible engineering administrative controls..." seems to be a blank check. This clause must be more clearly defined and some form of reasonableness must be inserted into that clause.

Ladies and gentlemen, these are my comments. I will submit written comments, including this particular overhead at a later date, but for today, I thank you for your time and bid you good day.

MS. PILATE: I have one more thing.

MR. LAIRD: Yes?

MS. PILATE: You mentioned earlier in your comments that, as part of your job or as part of the company's policy that you have done, the company has done a cost analysis of the existing audiometric testing program.

MR. LAIRD: Yes.

MS. PILATE: Is that something that you could submit to us in writing in the form that you've given us?

MR. LAIRD: Under our current program, I could do that. I believe, and I'm just recalling this from memory, I believe that costs us about $1,500 per year to do the noise and about $5,000 per year to maintain, implement and administer our current program. But, I will get you those numbers.

MS. PILATE: I think we might be speaking on different things. I'm not particularly interested in the cost of monitoring those determinations, I'm interested in the cost of the audiometric testing program, providing hearing protective devices, doing the test.

MR. LAIRD: Okay, I can do that. Thank you.

MR. CUSTER: Sir?

MR. LAIRD: Yes?

MR. CUSTER: A question here. To follow up on a statement that you made in regard to miners who demonstrate a 15 or 25 dB loss that at least in the 15 dB or 25 dB loss, you refer them for further evaluation.

MR. LAIRD: Right.

MR. CUSTER: In those cases where the hearing is correctable, then you go ahead and do that, I assume?

MR. LAIRD: Yes.

MR. CUSTER: Now, in those cases where the hearing is not correctable by use of hearing aids, what happens to that miner? Does that miner transfer, because you mentioned you do a re-evaluation of their duties. The question I have, then, is do you transfer these miners to other occupations or is their employment generally terminated for reasons that they cannot hear or cannot communicate or work effectively?

MR. LAIRD: I would like to answer that question straightforwardly. I don't know that I can. I've been in my present position for two years. In my term here, I've

not seen any person like that come through. I'm sure, according to our personnel regs, what we would do is analyze anything like that on a case by case basis. We very seldom terminate anybody for any reason such as you suggested.

If they are in a hazardous area where they need to hear, we will probably evaluate their job and transfer them to another job of equal or like character and pay.

MR. CUSTER: I was merely trying to determine if your company's policy has an implicit miner transfer provision, for example?

MR. LAIRD: It does. I don't think that it is written. We handle those particular types of things on a case by case basis, so we would probably, in my experience, we would probably not terminate a miner, the kind you talked about.

MR. CUSTER: Thank you.

MR. VALOSKI: You said that you had an audiometric testing program, but you didn't give any results of it, of the testing, like our first several speakers. Do you have any summary results, number of people tested and how their hearing has changed over the course of the, what, ten years

of the audiometric testing program?

MR. LAIRD: I have those graphs and charts. I provided those to the next speaker, and I think that he will summarize what I gave him and tell you more about the results.

MR. THAXTON: You had indicated that you would provide us with a copy of the chart that's on the overhead at this time. You also used a chart of your loss prevention guidelines, employee audiometric testing program, which detailed your program.

MR. LAIRD: Yes.

MR. THAXTON: Would you be willing to share a copy of that with us, as well?

MR. LAIRD: I'll certainly cover that with my BPGM, and if he approves that, I will have no problem providing you with that guideline.

MR. THAXTON: Thank you.

The next speaker is Link Derick. You're not going to read this to us, are you?

(Laughter.)

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STATEMENT OF LINK DERICK, TECHNICAL SAFETY MANAGER, TWENTYMILE COAL COMPANY

MR. DERICK: My name is Link Derick, L-I-N-K, D-E-R-I-C-K, one R. I'm with Twentymile Coal Company, and that's one word.

Ladies and gentlemen, Chairman Nichols, I appreciate the opportunity to talk today. I actually have two separate testimonies and I'll stop in the middle. One covers one mine, one previous employer that was bought by our company and then our current. They address separate issues.

I'm an active member in the Colorado Mining Association Health & Safety Task Force and also with the National Mining Association Task Force on this noise issue. I'll take just one second and Bruce is going to help me with some overheads.

MR. THAXTON: Before you start with your overheads, if you don't mind, we want to adjust the screen, because we have trouble up here seeing the screen.

(Pause.)

MR. DERICK: Again, my name is Link Derick, and I'm currently the Technical Safety Manager for Twentymile Coal Company, a division of Cypress AMAX Coal Company. Our operation is located near Oak Creek, Colorado. I previously worked at the Orchard Valley Mine in Paonia, Colorado.

MSHA has requested any information that demonstrates the effectiveness of hearing protection, especially with regard to earplugs. MSHA has made reference to several studies which suggest that earmuffs should receive a considerably lower reduction rating than they presently have and they further propose the same lower rating for earplugs, due to a lack of information available to evaluate their effectiveness.

Furthermore, MSHA states that earmuffs are less effective for low frequency noise, a fact that has always been known, but which should not be expanded to earplugs. Several of the reference reports in the preamble refer to lost data on western mines. Apparently, these documents were purged due to their age, but they will now be retrieved from company records and submitted to MSHA.

MSHA has also proposed that industry should rely

primarily on feasible engineering and administrative controls for exposures above the 90 dBA levels. MSHA should consider the limited success of reports previously written by their technical support staff, which demonstrate the difficulties associated with controlling noise with engineering controls.

I intend to discuss the effectiveness of hearing protection versus the effectiveness of engineering controls. I will present information that will support that hearing protection is effective for exposure to high noise levels, where the benefits of engineering controls are questionable.

Some background. In the early 1980s, extensive work and research on the noise levels and resulting employee noise exposure from the newly purchased fleet of four wheel drive haulage units was undertaken at the Orchard Valley Underground Coal Mine, in conjunction with MSHA technical support from Denver. I will submit four MSHA technical support reports, two which summarize engineering control efforts and two which summarize the effectiveness of personal protection. I will submit an internal company report written at the same time.

At the conclusion of this project, MSHA technical support personnel stated that this work was the final supporting data that the national office would use to support the use of hearing protection to comply with the noise regulations and underground coal mines, which would be similar to surface coal mine operations. This data could be regarded as actual experiences versus expert testimony.

However, the benefit of this data may actually be greater than any of the professional reports I reviewed in the preamble of the proposed regulations.

At Orchard Valley, we realized that our newer fleet of haulage units drastically raised the employee noise exposure levels. Therefore, we met with the MSHA district manager, who offered technical support and assistance from the noise control group of District 9, which proved to be invaluable. These experts in this field who possess the equipment to match their skills defined the problem and implemented sound engineering controls. These experts suggested a reasonable and practical approach concerning the type of controls that would be feasible and would not cause overheating, safety or other problems. If you'd put that

first overhead up?

This overhead illustrates the noise exposures that were involved. The differences between monitored and unmonitored noise dosimeter samples and the limited effectiveness of engineering controls. These were, after all, engineering controls recommended where implemented.

You can see we were dealing with eight hour exposures in the average of an 97, 98 decibel area. While in the process of evaluating several engineering control recommendations, the haulage units did overheat, the noise reduction fiberglass fan disintegrated, and the sound barrier material became a nuisance by collection of water or other materials and interfered with adequate head room.

The overall benefit obtained appeared to be approximately a three decibel improvement in noise levels, however, the difference in noise exposure by dosimeter readings was negligible. Actually, that ended up being about one tenth of a decibel. It quickly became obvious that engineering controls were not the answer to our immediate concern, and an effective hearing conservation program would be required. At that time, hearing protection

was not accepted or utilized, except when noise caused pain or where it was obvious that protection was required.

In order to encourage use of proper hearing protection, we explored methods to demonstrate the negative health impact and the hazard of noise. A joint decision was made by MSHA and the company to perform before shift and after shift audiograms on high risk employees. This route was chosen because hearing loss is a result of daily temporary threshold shift over the employee's working lifetime and beyond.

A textbook description demonstrates that hair cells in the ear canal will wear down after each exposure and recover after each rest period. Eventually, those hair cells fail to return to the normal position. It becomes apparent that an employee who had a daily temporary threshold shift that returned to normal during a rest cycle, then a measurable temporary threshold shift should occur each day.

A more significant threshold shift should occur when the noise exposure is greater. If noise exposures were similar each day, the temporary threshold shift should be

easily distinguishable if effective hearing protection was utilized.

Because of the importance of demonstrating the need for hearing protection, MSHA did not object to performing these tests with and without hearing protection being utilized. On the screen now is a copy of the approval letter. The bottom paragraph is from the district manager. It says they would cooperate in anyway and would have no objections to not wearing hearing protection.

When MSHA technical support finalized their observations and conclusions of the audiometric testing data from the before and after shift tests, they did not include the shifts which did not utilize hearing protection. There are about two pages of overheads, Bruce, if you'd put it up quickly, that showed just the format that MSHA technical support used. They were interested in the before and after shift, temporary threshold shift for categories like frequencies, age of miners, and a few other variables that are all in the technical reports.

As shown on the overhead, we both added up the hearing levels and divided by the number of frequencies

tested in order to reach an average number for the audiometric data. If you'd put that next overhead up, please, Bruce. This overhead shows a typical audiometric test and an example of how we calculated the single number for comparison purposes. Because of the type of printout produced from the audiometric test, it was easy to arrive at an estimate of the hearing level. You can see what we're doing there. We take all 14 frequencies, divide by 14 and come up with just a single useful number to talk to the employees with.

The equipment used at this time was MSHA technical support equipment. The final audiograms, after we used them for our internal use, would be shipped to Denver.

Because we wanted to minimize the potential that the temporary threshold shift would return to normal before the after audiometric test, we only tested employees who trammed the haulage unit up a significant grade to the surface and performed the after test as soon as possible thereafter. Several sample summary sheets of the test employees will now be reviewed.

The haulage unit noise levels were higher in the

lower frequency, which demonstrates that earmuffs were not the optimum type of protection from a diesel engine, diesel fan noise source. However, no changes were undertaken until several additional tests were performed. This graph indicates the severity of a temporary threshold shift, when hearing protection was not utilized, and demonstrates that the measured temporary threshold shift was reduced when the employee was switched from earmuffs to earplugs. The haulage unit noise levels were high in the lower frequencies.

If you look at that graph, it may not look as significant as it is. If you look at the stars, those are after shift audiograms, when hearing protection was not worn. That difference in the first few days there is an average of 17 decibels over all 14 frequencies, so the number is a little more significant than it appears.

You can see it on the days the hearing protection was worn, we still were not happy with the before and after shift temporary threshold shift, so the last columns over is that employee was switched from earmuffs to earplugs and that temporary threshold shift was closed.

The next graph illustrates the effective use of hearing protection and the increased threshold shift when hearing protection is not utilized. Again, the stars are shifts when hearing protection was not worn. In this case, there are some teletram out that says no. That's because the mining section was real close to the mine portal.

The next graph -- this illustrates that when an employee is exposed to higher noise level haulage unit, the temporary threshold shift higher than the other employees still existed when earplugs only were utilized. This employee was eventually instructed to utilize both earmuffs and earplugs, thus minimizing the temporary threshold shift. So, by tracking the audiograms, you can look at the dosimeter reading averaged around 101 on this teletram for an eight hour shift. So, it was significantly higher than the others.

Later, in an effort to control noise through an effective hearing conservation program, MSHA assisted us in evaluating the effectiveness of earmuffs. They did this by installing recording noise instruments inside and outside earmuffs, while operators, or while employees operated their

haulage units in a normal manner. The overhead, the results of these tests indicate an almost exact match of the R rating for two types of earmuffs, as expected. Protection from lower frequencies was less than higher frequencies, however, noise levels are also lower in those lower frequencies. If you'd put the next overhead up first?

That shows the octave band breakdown of inside and outside the muff. The top part is the tape that they use to determine the octave bands. Over on the left side, it's clear that the protection from lower frequencies is less than higher frequencies.

The next two slides or overheads are examples of the teletram noise, actually the diesel haulage noise, with the black being the difference with and without control. That's what we gained in the black range. But, as you can see, the lower frequency has lower levels of sound, too. You can put the other one up. It's just similar.

In conclusion, I believe that the use of hearing protection is critical to an effective hearing conservation program. I also believe that relying on engineering controls, in order to avoid exposure to high levels of

noise, would be difficult and may ultimately lead to a near compliance level of achievement without encouraging the use of hearing protection. The type of testing which was done at the Orchard Valley Mine could be repeated in other mines, if the effectiveness of hearing protectors continues to be of primary importance to MSHA. In that book, there are four MSHA technical support reports and then quite a bit of Orchard Valley reports.

I can't retrieve, we don't own that mine at the current time, and I couldn't retrieve the actual audiograms, because they were forwarded to MSHA tech support. I was hoping to be able to retrieve those so I could look at individual frequencies now that this issue came up. I'm still going to try to pursue that data.

If you have any questions, it would probably be better now before we move on to Twentymile comments.

MR. THAXTON: Proceed.

MR. DERICK: As I stated before, my name is Link Derick and I'm currently the Technical Safety Manager for Twentymile Coal Company, division of Cypress AMEX Coal Company. Our operation is located near Oak Creek, Colorado,

with the neighboring cities of Craig and Steamboat Springs close by.

Our mine consists of two continuous miner sections and one long wall section. We presently produce approximately six million tons annually. We're planning in progress to produce more than eight million tons annually. The mine has steep haulage ways that range from 6 percent to 26 percent entry grades, with up to 17 percent cross-cut grades. The continuous miners we utilize have dust scrubber systems and auxiliary fan face ventilation. The long wall shearer speed is normally operated at approximately 125 feet per minute, and shift production of 18,000 to 22,000 tons is frequently reached. The mine operator operates on ten hour shift schedule, because of the long drive to the property and employee preference. These facts are pertinent to the comments I'm about to make.

Although many of my comments will touch on a variety of subjects, my focus is towards MSHA's request for data on employee noise exposures, related use of hearing protection and the related audiometric testing results. MSHA has stated in the preamble that because information is

unavailable to correlate the above items, and utilizing only reports submitted to MSHA from NIOSH, the hearing loss observed by NIOSH in a select group of audiograms, either is a result of ineffective use of hearing protection or the lack of use of hearing protection.

Our experience indicates that hearing protection is effective and must be worn in all areas or occupations where the six month noise surveys indicate exposures above 90 decibels. The process utilized to assemble this data has been intense. First, since our employees are offered a complete voluntary wellness physical each year on their birth date at their choice of several participating medical clinics in several communities, assembling this data takes time. These physicals are considered to be confidential, and each request for audiogram history was accompanied by a signed medical release form. I'll put that up after. The copy of the release form by letter sent to each employee is displayed.

If you'd put the other one back up, Bruce, just for a second, this wa sin answer to MSHA's statement about the data correlating exposure to work history to audiograms,

to the use of hearing protection was not available. That's what we requested our employees to provide. If you could put the other one back up, Bruce?

We mailed out 385 of these medical releases to each employee, did find out that then, when we wanted a follow up audiogram, the clinics insisted on a new, fresh date, because they would not release any information without the available release. So, it was kind of a burdensome process.

Knowing that the process of receiving the audiometric testing results would be slow, all of the available six month noise survey data that is submitted to MSHA was reviewed from the start of the mine until December of '96. Two data bases were established. One compiled with long term employees who were still at the mine, including some high risk employees that are still performing the same duty. A second data base was established that included all over exposures reported to MSHA in the six months surveys. Noise dosimeters were used for the data collecting. The over exposures are being submitted as they were compiled by miner and by occupation, so three sets of noise data are

being submitted.

This is an example of taking all of the over exposures reported to MSHA and then selecting it by occupation. These are just examples of what are in the book.

The next is then separating them by name, and as we said on the medical release, no names would be used, but so you can tie these to some audiometric results and everything, the miner's name has been turned to miner number. So, that was the first chart, but this is separating it by their job title.

The third was targeting people that we could that were at the mine for the longest. The mine started underground coal mining in 1983, so this was taking a select group of people that were still at the mine. Both target groups, high risk and long term employees, were personally contacted for releases and follow up audiograms if a current one was not available. The noise exposure data and audiograms have been assembled on a two page report for each employee. This data is corrected for aging for the MSHA method and also for the OSHA method. We recommended that

the OSHA method replace the MSHA proposed methods for noise regulations.

Only the first and last audiogram were used for age correction, however, some of the intermediate audiograms may normally have been used for a new baseline. When the medical profession would go through these, there may be one of the cases where a more recent one would be a new baseline, but I didn't correct for that.

By assembling data on both high risk employees and long term low risk employees, if hearing protection was affected, it should be difficult to distinguish which type of employee was being studied. This was the apparent noticeable result. If you could go ahead and put up the first, and then we'll just look at that.

This is page one of a two page summary of each employee. It's all their audiograms. The bottom two are just looking at their first and last audiogram. If you'd put the second page up, I'm going to reuse those, Bruce, too. This is then taken, the audiometric results, correcting them for the OSHA and the MSHA, and then at the bottom is the summary data, their exposures.

If we quickly look at the overexposures reported to MSHA, there's quite a few columns on there. One is the percent dose -- I know it's hard to read, but I'll just explain them -- the percent dose that would have to be used to be reported to MSHA with a corresponding dBA level for 480 minutes and then we're on ten hour shifts, the dose is corrected for the length of shift, and a new dBA average, and then the hearing protectant value that is submitted on the MSHA noise card is included, and then it's an adjusted dose.

What's important on that is when we're talking about noise protection, the length of shift, the actual percent dose is not what's important. It's the equivalent, actual dBA average that's important, because you're trying to use a hearing protector for that level of noise, not the dose of noise.

One major difference that could be noticed was the impact of apparent exposure and loss to one ear from big game hunters and target shooters. Many of our employees at our operation hunt big game. Some of the largest elk herds in North America are bordering our mine site. I asked our

environmental department, who administers hunting on our mine property, like I say, the clerk informed me that we also have a handicap season, which is one of our benefits that we do for the local area and all over Colorado, plus some of our customers. But, we have 380 people. You can see this is just on mine property that we had 260 people apply for hunting licenses of big game. Most of them succeed.

If you put the overheads back up, the first audiogram, please -- if you put that up, you can see the gap on the left ear. If you put the second page up, now. If you notice, the right ear actually had on the MSHA, 2,000, 3,000 and 4,000 Hz range he actually gained versus hearing versus aging, I'm sorry, by one decibel. Yet, on the left ear, he had a 12 decibel. I personally know this employee's family is from Paonia all the way up through Cypress Empire and over to the Cypress Twentymile, very avid hunting family. In fact, his brother was a safety rep for me at Orchard Valley and when the elk were starving, I lost him because he'd quit if I wouldn't let him go out and feed the elk. So, very active hunting family. Typical one ear loss.

The next audiogram, the employee with the right ear loss displayed was asked if he was a left handed hunter. The comment back was, how did you know that? We know that from this data. We continue to encourage hearing protection while target shooting and suggest the use of a single opposite handed earplug while big game hunting. That is, you're not going to talk the big game hunters into wearing their typical sighting ear protection, but our recommendation now is, if you're right handed, where a left ear plug. That way, you can still talk and that when that instant elk jumps out there and you want to shoot, you're going to turn a protected ear.

The proper hearing protection while off the job can be stressed to reduce the potential of a standard threshold shift. However, the off the job exposure must be considered when investigating the on the job effectiveness of hearing protection.

In gathering this data, one employee's audiograms were unusual and warrants discussion. Put the next up, please. It should be miner 19. It should have been in order there.

This miner was asked to participate because of his length of time operating a shearing machine on the long wall face. He suggested that we use someone else, since he had a serious ear problem in the left ear, from an accidental gunshot going off in the 1980s, before coming to work for Cypress Coal. I told him that did not matter, because the baseline would indicate the impact of the traumatic injury, which required surgery.

In obtaining the audiograms, three early audiograms did not indicate this loss. He was then sent for another test in 1997, which indicated a very severe loss in the left ear. We have been working with the specialists who are assisting this employee. The hearing loss was present in 1995, when the employee saw the specialist. They have stated that a loss can occur in this delayed manner. The specialist recommended that we remove this employee from the database, but we believe including this type of data supports the use of medical explanations for unusual audiograms. The proposed regulation also recognized this situation, however, as proposed, this may only be a decision of the medical profession.

Looking at the right ear is an example of an effective use of hearing protection. This operator, you can't get him to even eat lunch if that shearer is running, and his right ear shows an actual gain in hearing versus age. But, if you look at his left ear, a 70 dBA loss, which didn't show up on three baselines. I thought because it didn't show up on three consecutive earlier tests, it's kind of a good example of a medical situation. The specialist continues to work with this employee. They're doing an MRI, doing lots of others, to make sure it is strictly the result of a gunshot wound, or gunshot accidently going off in his ear back in the '80s.

Okay, we've discussed some of the unusual findings, but now let's look at the typical findings. We targeted three occupations that have regular overexposures: long wall shearer operators, continuous miner operators and diesel scoop operators. All of these employees work ten hour shifts.

I was going to put back up the list of the overexposures, but I'm not going to do that. Previous overhead showed the effect of the extended shifts, and I

covered it there, where we have to look at what I'm trying to present testimony on, the effectiveness of hearing protection. It's important that we define the underlying dBA level, not the dose. A lot of our other operations work 12 hour shifts. The dose could be way high, but when you do them on a corresponding dBA level to produce that, it's a lot lower.

MR. VALOSKI: Before he goes on, could you please explain that last statement?

MR. DERICK: Right now, if we put a noise dosimeter say in our operation where Steve Laird was talking about, and they run 12 hour shifts, it's going to produce a dose. Most people are going to take that dose, look at the corresponding eight hour dBA equivalent, okay.

MR. VALOSKI: Okay.

MR. DERICK: However, the 12 hour dBA level is much lower than that. So, what I'm trying to emphasize is how little we need of the R rating of a hearing protector to actually provide adequate protection.

If hearing protection is being utilized at either level, and we're talking about eight hour or ten or 12 hour,

the level of protection required from the hearing protector is very low to obtain an equivalent low 80 level of noise exposure. This would reasonably imply that the audiograms of the two groups, high exposure wearing hearing protection and low exposure, not wearing hearing protection, should be similar.

The next overhead are three examples, I'm going to put two examples of low exposure. Can you put the second page up, please? This is a typical low exposed female office worker. In this case, the low exposure resulted in seven decibel gain and a four decibel gain, respectively, in the two ears.

The next is a low exposed underground miner. If you put the second page up, it will show the exposures. You can see on the six months back to December of '84, this employee is typically a beltman fire boss. All of his exposures using a 90 dBA threshold were in compliance, and he showed a two decibel loss and a zero decibel gain or loss in the other ear.

The next one, in case you want to ask any questions, I put my own up. I know there's questions about

presbycusis and aging -- of course, I'm just about ready to turn 30 -- the numbers lie up there. I wanted to put my own up there, in case there are any real questions. You look at the left ear, starting to see significant threshold shift. If you then correct for aging on the second page, you can see over my time at Twentymile or Empire and Twentymile, had an eight decibel gain versus aging in my right ear, and a four decibel loss in my left ear.

Now, let's quickly look at several examples of high risk occupation employees. The scoop operators travel extremely steep grades throughout their shifts, which require high RPM and work load. The continuous miner operators have additional noise sources with the auxiliary fan noise and dust scrubber systems on all of the continuous mining machines.

The shearer operators are sometimes cutting coal the entire shift. Shift tonnages of 25,000 tons have been reached and this level is expected to be fairly common in the future. To look at the entire -- well, let's put some of those up. We'll go through them.

This is scoop operator with the ages, I'm having

trouble seeing, but I think they're nine years difference. I think it was 49 to 56. You can see the overexposures reported to MSHA. If that is a snapshot in time on a six month noise test, we take it every working day those are the levels he's exposed to. You can see high levels and with hearing protection versus the aging process, he's actually gained in his hearing threshold by five decibels in both ears.

Put the next one up is another scoop operator that was our primary material handler for years in the mine. Again, he had a one decibel gain in one ear versus aging, a four decibel gain versus aging in the other ear.

Next, there are some shearer operators. You can see the length of the time operating the long wall shearer. The time operating the long wall shearer, five decibel loss, standard threshold shift, six decibel. This is another shearer operator, gained in one ear, lost in the other. I do need to ask him about whether he's a hunter, and I'm pretty sure he is.

To look at the entire database of this limited study, I've developed a chart of anticipated results as

compared to the actual results that are indicated by the data. It's important to remember that employees selected for the study were selected by length of service and frequency of overexposure. The employee selection was made prior to obtaining any audiometric data. We actually biased the study with high risk employees so that we would be investigating the worst case situations.

The fact that hearing protectors are being regularly utilized can easily be confirmed by the purchasing data of such devices. We utilize quite a few earmuffs, but usually as an additional control, the earplugs. An example of this is the concern of flying chips of coal from the long wall face. The shearer operators will regularly wear earplugs for noise control, whether or not their air stream helmets are being used, and then utilize earmuffs on the air streams for protection from the possible flying coal.

The use of earplugs is so economical that boxes are provided throughout the operations near any high risk area. You can see that that represents probably under 25,000 sets of earplugs, just 12 month purchasing data taken off the computer.

With a number of employees and defined occupations of reported overexposures to MSHA, compliance requiring hearing protection has never been a concern for MSHA or company officials. Use of hearing protectors is taken for granted, as employees consider it a matter of culture, similar to wearing safety glasses at all times or never operating the shearer without air stream helmet protection.

In fact, hearing protection really seems to be the easiest employee adoptable device. It's one that, as far as I've seen, all the way back to the Orchard Valley data, it's not even a question.

Administrative controls, rotating operators in any one of the high risk areas is only feasible when it's performed at the convenience of the normal operating practices. Some crews do this for flexibility and some do it for training reasons. When mining conditions warrant, there are times when only a select few employees are chosen to operate certain pieces of equipment. We are discriminating when it comes to a selection of scoop operators to drive on steep grades and severe cross-pitches.

Similarly, we are selective on who operates the

continuous miner in steep cross-pitching, steep grades or adverse roof conditions. Not all employees are capable of maintaining proper horizon control while walking 11 miles on a steeply pitching long wall face, wearing an air stream helmet and other safety equipment. These dedicated employees don't want to perform other tasks, and it is difficult to find suitable replacements.

It takes an extended period of time to train someone to be a skilled professional miner in today's current technology. The fact is that administrative controls are implemented as a matter of normal operation, rather than a matter of compliance with the regulation. Exceptions to this are areas where the only manner of achieving proper hearing conservation is through administrative controls due to very high noise levels.

We believe that hearing protection provides adequate protection to our employees, relative to the levels of exposure that we experience and that the results of audiometric testing verifies this effectiveness. In conclusion, we support the proposed regulations for the 80 dBA measuring threshold and the 85 dBA action level. We

also support the adoption of the MSHA method of allowing hearing protection in the exposure ranges from 90 dBA to 100 dBA. In this range, compliance would be achieved with the method of subtracting seven dBA and dividing by two of the R factor of each hearing protector.

These employees would be part of the action level group requiring audiograms. Extended shifts that have noise levels below 100 dBA would be adequately protected with the use of hearing protection. Exposure to over 100 dBA would be addressed by the feasible and reasonable engineering controls first, and/or dual protection at 105 dBA levels, as specified by the regulations. Additional written comments will be submitted before the close of the public record, however, we suggest that MSHA keep the record open for a longer time period so that additional audiometric data can be assembled.

We are participating with the National Mining Association that requested a 60 day opening of the record past the close, and I'm not sure where that stands as of yet today. Part of what Steve Laird talked about is, as Cypress AMEX, there will be additional speakers in Las Vegas from

our topper operation in Cerita and Baghdad, and then audiometric data will be forwarded to the National Mining Association for additional inclusion.

Thank you for the opportunity to speak here today.

MS. PILATE: I have some questions. On the overhead that presented the audiometric testing data, it stated the person that gave the exam was the company safety manager, yourself. Are you normally the person that administers the exam?

MR. DERICK: You are looking at the Twentymile or the Orchard Valley?

MS. PILATE: It was one of the first ones.

MR. DERICK: One of the first? That was all before and after shift done right on the property for evaluation of hearing protection, not really establishing baselines. All of them were done under my direction. I have been, I am a certified audiometric tester, but I haven't kept that up current in the last decade.

One of the concerns I had personally is back in the 1980s, with the help of MSHA tech support, we felt we adequately chose the right direction for protecting people

from loud noise, and that was hearing protection. Then we see, 13 years later, we see reports written as early as the mid-80s that questioned the use of hearing protection, but we were never notified of now that questionable use of them.

So, noise has been one of the many issues from mine rescue to mine fires to ventilation to roof control that we worked on that I felt we really had the right answer, and that was encourage hearing protection and insist upon it in the high risk areas.

When I went to Twentymile Coal, they were a step ahead of where I'd been at Orchard Valley, not doing the testing results, but it is just without question, you will wear hearing protection. You will never operate the shearer without an air stream helmet, and you will never work anywhere without safety glasses. Those are just imbedded in the culture of that operation.

MS. PILATE: On the records for the first company, it stated that the tests were administered, one was given in the training room, the other one was given in the mine office. Was a hearing booth used in either case?

MR. DERICK: No. In the MSHA tech support report,

you'll see where they did background testing of those rooms, to make sure they would use the data. We used the audiometric testing as a safety tool versus a medical tool. It was trying to evaluate and demonstrate to employees -- some of the other employees in that sheet refused. You'll see where there is no shifts where they didn't wear hearing protection, because once we went through the whole subject, they refused to work the shift without hearing protection, which they were working them without universally until all this was analyzed.

MS. PILATE: How long do you estimate that it takes to administer an audiogram?

MR. DERICK: The actual test itself is probably about 15 minutes, once you get the person there. In order to complete this -- when I said we selected that group, as of Friday, I had one person that promised he'd go in and get his after, and another guy that was one of the first miners, and their first day back to work was Friday. We put him in the car, drove him 38 miles to Craig and got the sample and brought him back. I mean, that's how much we wanted to get a complete database of the people we chose.

On a normal, it would be part of their wellness physical, and so the timing would be, when I have mine, it's about 15 minutes, but it's while you're waiting for them to look at your chest x-ray. If you have the instrument on site, which I know some of our other operations in Colorado do it with a booth on site, I would assume probably 20 minutes would be an accurate timing.

MR. THAXTON: Thank you, Mr. Derick. It's now 11:50 and we're going to recess until 1 p.m. for lunch. The hearing will reconvene at 1 p.m.

(Whereupon, at 11:50 a.m., the hearing was recessed, to reconvene at 1:00 p.m. this same day, Tuesday, May 13, 1997.)

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A F T E R N O O N S E S S I O N

1:00 p.m.

MR. THAXTON: Okay, at this time we'd like to reconvene the hearing, if everybody would please take a seat.

Before we get started with the next speaker, one item of clarification. Is Steve Laird still here? He left? Link, I guess you're the only one left of the people that presented this morning.

If you have the data that you've referenced in making your comparisons, if it's available on diskette or computerized, we'd request that you submit a copy to us of that data, computerized. In order for us to be able to do any meaningful evaluation of the data, we would almost have to have some type of database. So, if it's possible, if you have it available, we'd request that you send us a copy of it on computer disk, as well.

MR. DERICK: The only thing that wouldn't be would be the overheads from Orchard Valley, because they were right out of the report.

MR. THAXTON: Okay, we appreciate it.

One other matter of clarification and business. Vicky would like to make a request of those people that are doing comparisons for the cost.

MS. PILATE: I have a suggestion, that if you have a copy of the readout, that you mark up the areas that you disagree with. For instance, if we have something that says one hour and you believe it should be two hours, mark that down. If we have a wage rate of $16 for a secretary and you think it should be $25, mark that down and submit a copy of the marked up readout to the address that's listed in the proposed rule.

MR. THAXTON: Okay, with that, we'd like to go back to the schedule of presenters. Our next speaker is Jim Stevenson.

STATEMENT OF JIM STEVENSON, INTERNATIONAL HEALTH AND SAFETY REPRESENTATIVE, UNITED MINE WORKERS OF AMERICA

MR. STEVENSON: Thank you. I appreciate the opportunity to be here today to make some comments or an overview of the proposed rule. My name is Jim Stevenson, S-T-E-V-E-N-S-O-N. I'm an International Health and Safety Representative for the United Mine Workers of America, covering the Western United States, including Arizona, Utah, Wyoming, New Mexico, Colorado, Montana, North Dakota, Washington state and Alaska. I've been in the mining industry for 28 years. Twenty-three and a half years of that was in an underground in Sunnyside, Utah, which I worked in conventional filler sections with drilling and shooting, using joy loaders, continuous miner development sections, and 14 years on a long wall, about 11 years as a shearer operator.

What I'd like to do, for the record, is I have detailed comments on each section. You may already have this, I'm sure you do, but I don't want to go through the whole thing. I'll just do an overview. I've got four

copies of this and I'll give them to you now.

What I'd like to do is, like I say, just give an overview of what we feel about the new proposal, the improvements, which we think are technical improvements that we like in the proposed rule, and also the negative aspects of it.

First of all, in the technical requirements, there's definite improvement, because establishing an action level at a time weighted average exposure above 85 decibels, which requires the operator to require training to the exposed miner and enroll the miner in a hearing conservation program, if the miner so chooses. When a miner's exposure to noise exceeds the TWA of 90 decibels, the operator must use all feasible engineering and administrative controls to reduce the miner's exposures to the PEL. We feel that's very important that you have to deal with the noise at the source.

Exposure above 90 decibels in practice measured the exposure at or above 130 percent of permissible exposure limit, which is equal to an average exposure of 91.7 decibels. This is a continuation of MSHA policy, and is

designed to accommodate uncertainty in the measuring equipment or instrument.

The noise exposure, and we feel this is very important, too, is not reduced if the miners are wearing hearing protectors, earmuffs or plugs. For purposes of issuing a citation requiring engineering controls and enrolling the miner in a hearing conservation program, the miner is given no credit for the use of hearing protectors, muffs or plugs in calculating exposure. In the past, operators were allowed to reduce major exposure by subtracting the noise reduction rating minus seven decibels from exposure as measured from dosimeter or sound level meter.

Mine operators must monitor exposure to noise and inform exposed miners annually if it is above the action level. When measuring noise, all noise above 80 decibels, the threshold has to be measured for its contribution to the average exposure. The present policy considers only noise above 90.

If a miner has a hearing loss by specified amount, it has to be recorded and he or she is required to be

offered hearing protectors and annual hearing tests. When a hearing loss has occurred, a significant threshold shift, recording is done according to Part 50 regulations, the way all other injuries and illnesses are recorded.

When a miner is enrolled in a hearing conservation program, the operator must offer the miner the opportunity to have a baseline audiogram and subsequent audiograms, as long as the miner remains in the hearing conservation program. The time weighted average of an eight hour shift will not be affected by extended work shifts, since the noise exposure will be measured for the entire shift. Compliance will be based upon their measured dose. If the measured dose exceeds 100 percent, the miner will be considered to be overexposed to noise.

Example, if a miner works eight hours at 90 decibels, in compliance, then works an additional four hours at the same level, exposure would be calculated to eight hours plus the four by eight, which is 150 percent of the PEL and thus, sufficient to issue a citation, since it's greater than 130 percent of the PEL originally.

The negative aspects. We feel that although the

proposed rule appears to provide clear improvements over the current noise standards, much of this is subverted by the lack of sound agency monitoring and enforcement requirements. The most damaging aspect of the proposed rule is the fact that it is performance oriented, or, in other words, self-enforced by the operator. The operator will be solely responsible for establishing a system of monitoring noise and taking appropriate action under the rules whenever they find themselves out of compliance. The entire language of the rule consists of 14 words. "Operator shall establish a system of monitoring, which effectively evaluates each miner's noise exposure," 62 120 at paragraph one.

Compare the regulations covering monitoring respirable dust. Four pages on when, how, under what conditions and who does the sampling, and five pages on the sampling method. Under these rules on respirable dust, mine operators have been perpetuating fraud for 25 years.

The proposed rule on monitoring noise is an invitation to abuse. Furthermore, MSHA's role will be limited to taking their own measurements whenever they deem appropriate and checking the operator's records at the mine

site for compliance. I don't see many operators admitting they have a noise problem and self-imposing costly engineering controls.

Under the proposal, the operator will no longer be required to report the results of their noise surveys to MSHA. Instead, a record is maintained at the mine site and made available to the agents' authorized representatives. The miners' representative will not have access to some of these records without written consent of the affected miner.

The rule does not conform to recommendations by NIOSH. The rule proposes to permit the operator to apply correction factor for presbycusis or presbyacousias acuity associated with aging, to the results of the audiograms, when determining whether a reportable hearing loss has occurred. NIOSH recommended the presbycusis factor not be used, because the data on age related hearing losses described only the statistical distributions of populations and cannot be generalized to the presbycusis experience by an individual in the age group.

The proposed rule sets a 90 decibel permissible exposure level, the level at which mine operators are

required to use all engineering and administrative controls feasible to reduce noise. However, MSHA admits that it's concluded that there's significant risk of material impairment from noise exposures at or above the threshold limit of 85 decibels. The agency rationalizes that this could not require a PEL of 85 decibels, because it would require about two-thirds of the mining industry to use engineering and administrative controls to reduce current exposures, which would be too costly. We strongly disagree with that.

Under the proposed rule, whenever a miner's noise exposure exceeds the action level, the operator must provide training. Although the agency strongly argues against including this training as part of Part 48 annual refresher training, the rule permits the operators to do so. With all the training we have to cram into that eight hours now, we just don't think there's a sufficient place to put that.

Interlaced throughout the preamble are breaks to small operators. Some include a longer phase in period, consideration of economic feasibility of corrective actions for each operator and the possible redefinition of a small

entity to include mines employing less than 500. If that's going to be the definition of small operators, I don't think we're going to have two mines in the country that aren't going to have to fall under that. Most of them have less than 500 miners.

The proposed rule adopts a five decibel exchange rate. NIOSH recommends, and most other industrial countries use a three decibel exchange rate. The exchange rate is the amount by which loudness, measured as decibels, can be increased if exposure time is reduced to half. For example, with a PEL of 90 decibels for eight hours, a five decibel exchange rate allows exposure to 95 decibels. If exposure is reduced to four hours or half of eight, with a three decibel exchange rate, the time of exposure could be decreased to four hours, if loudness is increased to 93 decibels.

A three decibel exchange rate has stronger scientific foundation, is more protective and is used in other industrial countries, therefore, it is feasible. Thank you, that's all I have. Thanks for the opportunity.

MR. THAXTON: Thank you.

The next speaker is Robert Dobie.

STATEMENT OF DR. ROBERT DOBIE, CHAIRMAN, DEPARTMENT OF OTOLARYNGOLOGY, UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER

DR. DOBIE: Mr. Nichols and committee, thank you for the opportunity to testify today. My name is Robert Dobie. I'm an otolaryngologist, a physician specializing in diseases of the ear, nose and related structures. I'm chairman of the Department of Otolaryngology at the University of Texas Health Science Center in San Antonio. I'm also chairman of the Medical Aspects of Noise Subcommittee of the American Academy of Otolaryngology Head and Neck Surgery, and a member of the Council on Accreditation and Occupational Hearing Conservation.

However, my testimony today reflects only my own views and not necessarily the views of those organizations.

I want to apologize for coughing and throat clearing. I'm just getting over a cold, so I'll ask your indulgence in that regard. The substance of my comments will really be directed not so much to the MSHA proposed rule, as to the NIOSH draft criteria that came out last year. The reason for that is that while the NIOSH

recommendations have not been explicitly adopted in the MSHA rule, they are mentioned favorably, and also, there's a sense in the MSHA document that this NIOSH document might, once it ceases to be a draft criterion, to have greater weight with MSHA. I suspect that other commentors, for example, Mr. Stevenson, who just spoke to you, may endorse some of the NIOSH recommendations.

Really, the substance of my comments is to suggest that that document is seriously flawed, was offered to the community with inadequate time for response and really does not offer an appropriate basis for affecting your policy.

My comments were given in detail in a letter I wrote March 27 to the MSHA office in Arlington, so I believe you have that. I'm not going to read that into the record, because I assume it will become part of the record in some fashion, is that correct?

MR. THAXTON: Yes, it is.

DR. DOBIE: So, I'll just hit some of the high points. The first point I would make is that the NIOSH document argues for an 85 dB time weighted average permissible exposure level, based in part on a criterion for

hearing impairment that I think is inappropriate. NIOSH used the pure tone average of one, two, three and four kilohertz as the basis for estimating hearing handicap. This is an idiosyncratic choice. It's one that is not in use in any state or federal jurisdiction that awards compensation for hearing loss that I'm aware of. It was recommended by a committee report of the American Speech and Hearing Association several years ago, but that committee report never became a policy of that organization.

Again, I think it's an unusual choice. It's one that's not justified in the literature, and no data were given that support the choice of that criterion for hearing impairment. So, I think that's a serious problem with the NIOSH draft criteria.

Based in part on that, NIOSH goes on to recommend an 85 decibel deviated time weighted average, with hearing conservation programs required for exposures above an 82 deviated time weighted average.

Leaving aside the question of the definition of hearing handicap that went into that recommendation, I think there's a serious confusion here between standards and

protection. Just by making a standard stricter, one doesn't necessarily prevent more hearing loss. It's my opinion, based on the thousands of workers with noise induced hearing loss that I've seen over the years, and based on talking to people who are active in managing hearing conservation programs, that when these programs fail -- or rather, when workers accrue noise induced hearing loss, it's usually due either to failure to run the program appropriately or, in some cases, there are industries, for example, that are not covered either by OSHA or MSHA or other federal regulators, and not due to the placement of the permissible exposure level.

It's my belief that if one were to more adequately protect the people whose time weighted averages exceed 90 dBA, one would, in a far more cost effective way, protect hearing than by reducing the permissible exposure level to 85 dBA. In that range between 85 and 90 dBA, the level of hazard is small. Based on the recently adopted American national standard, and that, in turn, is based on an international standard from 1990, the amount of pure tone threshold shift in the speech frequencies at a time weighted

average of 85 dBA for 40 years, is only about two decibels.

As already has been commented, NIOSH has recommended a change in the exchange rate from five dB to three dB. Again, I think that standards and protection are not always the same thing. To begin with, the three dB exchange rate is not necessarily even more restrictive. For short exposures and particularly highly time varying exposures, the three dB exchange rate will, indeed, end up labelling a larger, a higher time weighted average than would the five dB exchange rate.

But, the opposite is true for long shifts and it's already been commented this morning that ten to 12 hour shifts are common in this industry. If you look at the graph that's on page 66352 of the Federal Register of December 17, 1996 in which the MSHA rule is proposed, you'll see that for exposures of eight hours or less, the three dB rule is, indeed, more restrictive or stricter than the five dB rule. But, the graph stops at eight hours. If you were to continue that graph on to ten, 12 and higher levels, you'd find that, in fact, the three dB rule is less restrictive. In other words, the three dB rule will permit

more exposure for long shifts than will a five dB rule.

Another point to be made, which I think is even more important, is that I don't agree that three dB has superior scientific support in the literature. The three dB rule has the advantage of being, from a scientific and engineering standpoint, attractive, perhaps even beautiful, because it simply says that the hazard level of an exposure is proportional to the total energy delivered, and that's an attractive concept.

But, when research has been done, while the optimal training ratio will vary from study to study, it's almost never three dB. Sometimes it's three dB, sometimes it's five, sometimes it's eight. As Dr. Jack Mills has commented, there's probably no one exchange rate that's right for every situation. But, to simply say, then, that we use three dB because we don't know what the right rate is seems to me to fall far short of an appropriate rule making approach.

I personally think that the evidence in favor of a protective effect of intermittency is so great that to accept a three dB rule will result in findings that are over

restrictive, perhaps not overprotective, but at least over restrictive for short work shifts and time varying work shifts, and under restrictive and perhaps, underprotective, for those long shifts that are common in this industry, at least.

The NIOSH document has labelling requirements or work place labelling requirements that I think are unusual and inappropriate. They would recommend that your regulations require warning signs for every work place where a noise exposure would every exceed 85 dBA. This could include, for example, a kitchen in which a garbage disposal was turned on for a few seconds, five or six times a day. And, this is the sort of thing that makes these regulations subject to ridicule, subject to less respect, and less respect means, I think, poor enforcement.

I think that in the NIOSH draft, they also recommend that workers should be required to wear hearing protection when their exposure exceeds 85 dBA, regardless of duration. Again, to require that kitchen worker to either put on earplugs whenever the garbage disposal is turned on or even, perhaps, all day long, depending on you read the

NIOSH draft, based on the requirement for assigned, saying use of hearing protectors required, is simply excessive.

Moving onto another point, the NIOSH draft proposes that audiometric test rooms meet the requirements of ANCI S3.1, 1991. This ANCI standard is the standard that we all use in clinical medicine and in audiology when doing our hearing tests. It's important for clinical purposes, because it allows us to measure hearing levels down to zero dBHL, in other words, to be able to tell the difference between exceptionally good hearing and just good hearing. That kind of audiometric ambient noise requirement would be nice to have in industry. I just don't really think it's feasible.

The American Academy of Otolaryngology Head and Neck Surgery for many years has recommended an intermediate standard. I'll remind you, the OSHA standard permits ambient noise levels that are up to 22 decibels higher than the ANCI standard. Our Academy for many years has recommended ambient noise level requirements that would be ten dBA less stringent than the ANCI standard and about ten dB more stringent, 10 to 12 dB more stringent than the

current OSHA standards. We think this would strike an attractive balance between feasibility and the desirability of measuring very sensitive thresholds.

The NIOSH standard recommends that significant threshold shifts be defined in a different way. Currently, OSHA and in your MSHA draft, as well, requires that a significant threshold shift, or actually, it's called a standard threshold shift, be required as an average change of ten decibels or more in either ear, for the pure tone average of two, three and four kilohertz. I think that's an appropriate choice, and the suggestion in the NIOSH draft that an any frequency rule be used is, I think, inappropriate. The any frequency rule basically says that a 15 decibel change for the worse at any frequency, in either ear, when seen on two consecutive audiograms, be considered to be a real shift.

There are a couple of problems with this definition. The first is that while the authors of the unpublished manuscript that influenced the NIOSH draft tested the any frequency rules twice, they didn't test the pure tone average rules twice. So, it wasn't a level

playing field. When pure tone average rules have been compared against any frequency rules in a comparable fashion, they've always outperformed them.

The second problem, and really the more troublesome problem, is that the definition of a true positive, in other words, a real shift for every rule tested, was simply self-defined. In other words, if the definition of a shift being looked at was a 25 decibel change for the worst. There had to be a subsequent 25 decibel change for it to be counted as real. Whereas, if they were going to look at something like a five decibel change, the subsequent test only had to reconfirm a five decibel change. This is circular reasoning, and it leads really to a reductio ad absurdum, as we were taught in logic class. If you take a very small shift like five decibels, you'll find that to be the best rule possible under this kind of analysis.

The NIOSH draft proposes that confirmatory retesting within 30 days be required. At present, OSHA permits companies to either do the retest or accept the annual test change as real. I find it hard to understand

why the employers couldn't continue to have that flexibility. If the employers are willing to accept this as a real change, this could -- the only negative outcome of that could be that some workers whose changes weren't real would then be required to wear hearing protection devices, when they otherwise wouldn't be so required. I don't see that as necessarily harmful. I think employers should have that flexibility.

Further, the NIOSH draft proposes that after every STS that's confirmed, the baseline be revised. There are two problems with the way this is raised in the NIOSH draft. The first is that it mandates revisions of the baseline when the hearing gets worse, and it says nothing about what to do when the hearing gets better. Program supervisors, I think, need to have the flexibility to change baselines in some situations when hearing genuinely improves over what the baseline audiogram showed.

Secondly, although the NIOSH draft endorses the otologic referral criteria that our Academy, the American Academy of Otolaryngology Head and Neck Surgery has recommended, and we appreciate that, the mandatory revision

of baseline can lead to a very unfortunate situation in which a series of small shifts can accumulate, none of which are large enough to trigger referral guidelines, and a person could literally go deaf without ever having met the numerical or computer driven recognition of a referral criterion.

To solve this problem, it is essential that when baselines are revised, that the initial baseline be retained for purposes of rules for outside referral to detect the serious problems, the serious medical problems that sometimes can occur. We have to remember that not every hearing loss in industry is due to noise or aging. Some are due to ear disease that requires treatment.

The NIOSH document requires that whenever an STS occurs, the audiometric manager determine the etiology of that STS, taking all possible steps and considering all possible etiologies. If I read that in a literal fashion in plain English, that goal can only be met by referring every worker who has an STS to an otolaryngologist or otologist for a work up which would probably include an MRI and lab tests and would probably cost over $1,000 per worker. We

don't think that's probably what was intended and certainly we don't think that's appropriate.

We think that the referral guidelines that our Academy has recommended provide very appropriate guidelines for referral, and that this language of taking all possible steps to consider all possible etiologies probably should be changed, because, as a physician, I couldn't do that without spending an awful lot of money.

The NIOSH draft does speak to the issue of age correction and recommends against age correction. While there are some arguments against age correction in the current OSHA framework, for example, an age correction could lead to a worker not getting the additional fitting or refitting that he or she needs, because a loss that was really noise induced gets age corrected out and then doesn't meet the criterion for an STS.

The NIOSH proposal, if you'll recall, doesn't even call for a gray zone like we currently have between 85 and 90. The NIOSH document calls for no particular action to be taken upon finding an STS, other than reporting and determining the etiology. In these instances, if you avoid

some kind of age correction, granted, you can have an argument about what particular tables to use and so forth, but if you don't do age correction at all, you're going to end up grossly exaggerating the number of genuine noise induced shifts that occur. When you evaluate hearing conservation programs, you're going to have a lot of errors you don't want to have.

A work place that has a lot of older workers will look worse than a work place that has a lot of younger workers, even though neither one may have any noise induced shifts. If you want to compare hearing conservation programs from one work place to another, and if you want to look at the percentage of STS's that are reported, you know, you really can't do that, come close to doing that properly, without some degree of age correction.

(Continued on next page.)

DR. DOBIE (Cont'd.): -- the annual test change as real. I find it hard to understand why the employers could not continue to have that flexibility. If the employers are willing to accept this as a real change, the only negative outcome of that could be that some workers whose changes were not real would then be required to wear hearing protection devices when they otherwise would not be so required and I do not see that as necessarily harmful. I think employers should have that flexibility.

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and we appreciate that, the mandatory revision of baseline can lead to a very unfortunate situation in which a series of small shifts can accumulate, none of which are large enough to trigger referral guidelines and a person could literally go deaf without ever having met the numerical or computer derived recognition of a referral criterion.

To solve this problem, it is essential that when baselines are revised, that the initial baseline be retained for purposes of rules for outside referral to detect the serious problems, the serious medical problems, that sometimes can occur. We have to remember that not every hearing loss in industry is due to noise or aging. Some are due to ear disease that requires treatment.

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would probably cost over $1,000 per worker. We do not think that is probably what was intended and, certainly, we do not think that is appropriate.

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and determining the etiology.

In these instances, if you avoid some kind of age correction, granted, you can have an argument about what particular tables to use and so forth. But, if you do not do age correction at all, you are going to end up grossly exaggerating the number of genuine noise-induced shifts that occur and when you evaluate hearing conservation programs, you are going to have a lot of errors you do not want to have. A workplace that has a lot of older workers will look worse than a workplace that has a lot of younger workers, even though neither one may have any noise-induced shifts.

If you want to compare hearing conservation programs from one workplace to another, and if you want to look at the percentage of STSes that are reported, you really cannot come close to doing that properly without some degree of age correction.

I only have a couple more points. One is that the noise-reduction ratings for hearing protection devices are recognizably -- everyone realized that the current NRR that the EPA recommended years ago are not working very well. They overstate real world protection and attenuation.

The recommendation in the NIOSH draft of arbitrary discounts for different types of protectors is, I think, far less convincing that the recommendations of a recent task force of the National Hearing Conservation Association. The NHCA task force recommendations have been endorsed by American Speech and Hearing Association, American Academy of Otolaryngology, Head and Neck Surgery, the Council for Accreditation on Occupational Hearing Conservation, the Acoustical Society of America and virtually every relevant professional organization has recommended to the EPA that they adopt these NHCA recommendations. I would make the same recommendation to MSHA, that there is now a better way to provide a real world estimate for hearing protection device attenuation.

Finally, the NIOSH draft would permit only technicians and audiologists to perform hearing tests. I do not believe that physicians should be excluded from that role in the occasional instance when a physician would find it appropriate to carry out the hearing test themselves. And, in addition, the role of audiometric program supervisor presently permitted by OSHA to be played by any audiologist

or physician is recommended by NIOSH to be limited only to otologists, occupational physicians and audiologists. I think that is inappropriate.

An otologist, for the sake of discussion, is an otolaryngologist who limits his or her practice just to diseases of the ear. My own practice, for example, is limited in that way. But there are many otolaryngologists -- ear, nose and throat physicians -- who are highly competent to manage these types of programs and I do not think this should be limited to physicians who treat only ear diseases.

Well, I thank you for the opportunity to discuss these matters with you today and I would be more than happy to respond to any of your questions.

MS. PILATE: I have two questions. How long does it take to give a basic otological exam?

DR. DOBIE: Well, in my office, you mean. Not in the workplace, but in the physician's office.

Are you excluding the audiometric part of it? Because most of these stations, if they come from a hearing conservation program to my office, we will usually -- in

fact, just about always -- conduct a clinical audiogram as well because the audiograms that are done in industry are not quite as good in a couple of important respects as the ones we get in the office. Do you want to exclude that or include that?

MS. PILATE: That was the second question. How long does it take to give an audiometric exam?

DR. DOBIE: If the worker is reasonably straightforward, and most of them are, the audiometric evaluation we do is going to take 15 minutes or so -- 15 or 20. I am kind of surprised to hear people say this morning that the audiogram in the workplace takes the same amount of time because it is a much more limited kind of a test in the workplace.

In my evaluation for a new patient from an occupational hearing conservation program, usually if it is not a compensation case, if it is just a referral out of the hearing conservation program because, "Doctor, we found a shift. We do not know what the shift is due to," 15 or 20 minutes. If it is a compensation case, it is often going to take longer.

MR. VALOSKI: I would like to ask you a question.

DR. DOBIE: Yes.

MR. VALOSKI: You said the qualifications for people to conduct the audiometric test program, you would like to expand it to include otolaryngologists in that. Would you restrict it to the physicians who have specialized in otolaryngology, otology and occupational medicine and leave the general practitioners as being unqualified to conduct the programs?

DR. DOBIE: I do not think I would make that restriction. I think that there are many physicians overseeing occupational health programs who are family physicians and yet I think do a very good job of it.

This is a little off the subject, but the CAOC, the Council for Accreditation in Occupational Hearing Conservation, CAOC is preparing, within the year, to offer our first program supervisor course and we expect that occupational physicians and family physicians will be the people most interested in that. I will tell you that a family physician who took that course would, in my opinion, be better qualified to supervise such a program than the

average occupational physician. So, I think it ought to be case by case. If it was my rule to write, I think I would write it the way OSHA does -- audiologist or physician. I would like to see a time when these program supervisor courses would become widespread and I do think that the role of the program supervisor is one of the real weak links in the hearing conservation programs as now mandated by OSHA.

MS. PILATE: I have two more questions. Were you finished?

MR. VALOSKI: Yes.

MS. PILATE: For the basic otological exam, MSHA estimated that to cost, on average, around $250 per exam. Does that agree, basically, with what you charge?

DR. DOBIE: Well, I do not know. It really is not going to be highly variable. But I can tell you that for workers who are referred to me from a hearing conservation program in a non-compensation setting, because that is an important difference, it would not be that much.

MS. PILATE: Can you give us a basic idea of how much you would charge for a screening audiometric exam?

DR. DOBIE: Well, we do not do in the office very

many screening exams. The only screening exams we do -- well, the only screening tests we do in our office are on the noise-exposed workers of the hospital, per se. And they send them over to our office because we are there. And I think we charge 25 bucks for a pure tone audiogram and the physician does not even see the patient. It is the audiologist.

We, essentially, are providing the same kind of hearing -- I would call it monitoring audiometry, rather than screening audiometry. And it is the same kind of audiometry that you are thinking about and that OSHA requires is pure tone audiometry on an annual basis. Again, we charge $25 a head. I am sure we are not terribly cost-effective because we do not do a high volume of those.

MS. PILATE: Thank you.

MR. CUSTER: In regard to the audiometry that you do, do you have your clients, your subjects, adhere to the 14-hour quiet period, or do you prefer that to be done?

DR. DOBIE: Well, in a compensation setting, we are extremely strict about that. And, in fact, I really would require a longer period of time. But you are not

really asking about the compensation setting, I think, as much as the -- you know, there are two ways that we see workers in our office.

One is in a compensation setting and the other is a referral from a hearing conservation program when they have detected a baseline shift or an asymmetry or something like that. And, in that latter case, we do, indeed, want them to be free of noise when we do our clinical tests. But I will interject that in the hearing conservation program itself, there are arguments being made pro and con.

Some people think that it is better not to make that requirement because then you will actually catch the temporary threshold shifts and have an early warning of trouble to come, and others will argue for the added reliability of requiring the quiet period so the data is cleaner. So, you can have that debate. But in the clinical setting, we would always require it, yes.

MR. THAXTON: Okay. Thank you.

Our next speaker is Dave Hutchinson.

STATEMENT OF DAVE HUTCHINSON,
FMC / SOUTHWEST WYOMING SODA ASH PRODUCERS

MR. HUTCHINSON: I am Dave Hutchinson with FMC, but today I am representing the Southwest Wyoming Soda Ash Producers, H-U-T-C-H-I-N-S-O-N.

Members of the committee, thank you for allowing me to address you. Soda Ash Producers are made up of five companies. We are FMC, OCI, General Chemical, Solvay Minerals and Tg Soda Ash. Each of these producers operates an underground room and pillar mine and surface processing facilities. Employment is approximately 3,600 people. We are committed to improving the miner's safety and hope you find our suggestions helpful.

I would like to voice our support for the comments submitted by the Wyoming Mining Association. We are members of the group and have shared our concerns and questions about the proposed standard with them.

I will not reiterate all the written comments we, the Soda Ash Producers, have made, but instead focus on a few high points.

Past experience, particularly in the guarding standards, raises some concerns when the inspectors have a large degree of freedom. In the past, we have changed machine guards on a quarterly basis to abate citations. What one inspector is satisfied with, another is not. Our concern in the proposed standard are the phrases, "feasible engineering controls" and "ensure."

We request that MSHA provide an interpretation of "feasible engineering controls." We suggest that MSHA should retain and state that "feasible" means significant, such as the 3dBA reduction that has been used in metal and nonmetal mines. As the proposed standard is written, any reduction, no matter how small, would have to be implemented. We feel that this is unwarranted.

The Soda Ash Industry also requests that MSHA include in the rule-making process a guidebook for noise-reduction controls. This was part of the Metal/Nonmetal Program Policy at one time. We believe that the guidebook should go through the rule-making process so industry may have input into its development. This guidebook should be developed in conjunction with the noise standards.

We request that a definition of "ensure" be included. We do not understand what lengths an operator must go to to "ensure" a miner complies with the standard. Another concern is that an operator would be cited for each miner that is caught by an inspector not complying, even though the operator has provided and required the use of appropriate measures. An operator should make good faith efforts, which would include the required training, providing enough and a choice of hearing protection, and requiring a miner to comply with the MSHA standard. If a definition is not possible, we suggest that "ensure" be replaced by "require."

We also request that the standard incorporate allowances for new technology. One area that is in its infancy is noise-cancellation technology. Would this be viewed as engineering controls? The Soda Ash Industry believes that it would be.

The Soda Ash Industry would like to see allowances for hearing protection and determination of a miner's exposure expanded to the rest of the mining industry, as the coal standards presently do. The goal is to prevent

occupational noise-induced hearing loss. Allowing the use of hearing protection would accomplish this while reducing the economic burden on the industry. If a miner's noise exposure exceeds the action level or PEL with the use of hearing protection, then engineering and administrative controls should be used. Also, much of the equipment used in mining, milling and refining is not manufactured to meet any noise limitations. Until more work is done by the manufacturers in eliminating noise at the source, add-on controls would be difficult to develop. The manufacturers are in the best position to do that research.

As proposed, Section 120(a)(3)(i) would not take into consideration wearing hearing protection. We suggest that that section be reworded to: Adjusted to account for the use of hearing protection. In Section 120(b)(2), a miner is required to be provided with hearing protection and the operator to ensure that the miner wears it. In the sentence, "Moreover, the operator shall, with respect to any miner enrolled in such program, provide hearing protection in accordance with the requirements of Section 62.125 until such time as a baseline audiogram has been obtained," MSHA

recognizes that hearing protection is an effective method of protecting a miner's hearing.

Sections 120(b)(1) and 190(a) address time intervals for the operator to take specified actions. We request that the time intervals be increased to allow the operator greater flexibility in meeting the actions.

Section 120(b)(1) requires the miner to receive training at the time noise exposure exceeds the action level. We agree with the need to initially inform and train the miner in a timely manner but "at the time the exposure exceeds the action level" could mean the same shift. We suggest that a reasonable amount of time be allowed for this training to take place, 30 calendar days. This would allow the operator to schedule the training, possibly training several miners at the same time, without unduly affecting operations. We believe this will still accomplish the goal of the section but allow operators flexibility in scheduling the training.

Section 190(a) requires the miner to be notified within ten days. We suggest the time period for notification also be extended to 30 days. This will allow

time to collect all pertinent data, have the proper personnel involved and allow time for scheduling, such as vacations and things like that.

Section 120(d) addresses the requirement for dual hearing protection. We believe this requirement should be deleted. As written, dual hearing protection would be required at a TWA8 of 150 dBA. Typically, hearing protection has an NRR of the mid-20s to the low 30s. The addition of a second layer typically adds only three or four decibel reduction. Wearing only a single layer of protection would lower a miner's exposure to below the PEL. We ask that this section be deleted.

Another concern is the lowering of the ceiling level to 115 dBA. Section 120(e) states: "At no time shall a miner be exposed to sound levels exceeding 115 dBA." This does not take into account allowance for impact or impulsive noises. Current metal/nonmetal rules and OSHA address this. We suggest that the existing metal/nonmetal language be retained. At no time shall a miner be exposed to sound levels exceeding 115 dBA. Impact or impulsive noises shall not exceed 140 dB, peak pressure level.

Another are of ambiguity is Section 120 (f)(1). This section reads, "Operators shall establish a system of monitoring which effectively evaluates each miner's noise exposure." Our concern is this could be interpreted to mean that each and every miner would need to be monitored. We believe the intent is to have an effective and timely method to evaluate a miner's exposure. In most cases, sampling by job classification would provide an acceptable evaluation. MSHA has stated that this section is to be performance-oriented and we support that principle. We suggest this section be revised to read, "Operators shall establish a system of monitoring which effectively evaluates miners noise exposure." By eliminating the word "each" and making miners plural, not possessive, the goal would be achieved and make the section more performance-oriented.

As proposed, Section 140(b)(2) requires the miner to have at least 14 quiet hours before a baseline audiogram is taken. The use of hearing protection is prohibited. The Soda Ash Industry believes that not allowing for the use of hearing protection during this quiet period is too restrictive. Typically, hearing protection has an NRR of

the mid-20s to the low-30s and this would provide the miner with protection prior to an audiogram. OSHA allows the use of hearing protection during this quiet period per 1910.95(g)(4)(3). "Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protectors may be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise." We suggest that this language be included in the MSHA standard.

Thank you for the opportunity to address you. By working together, we can develop a set of regulations that increase miners safety while allowing industry flexibility to develop new solutions. MSHA's standards have been performance-oriented and we look forward to the new standards being the same.

MR. THAXTON: Thank you.

MR. VALOSKI: I have a question for you. Back at the beginning, you suggested that we change the word from "ensure" to "require" the miners to comply with the wearing of hearing protectors and training and audiometric testing

and that.

MR. HUTCHINSON: Yes.

MR. VALOSKI: If the miner did not comply, what would be MSHA's alternative?

MR. HUTCHINSON: We believe that the operator should take all the appropriate steps in having an effective hearing conservation program and protecting the miner. But, at the same time, at our operation and some of the other operations, we have problems with getting people to wear the PPE. We require safety glasses, hard hats and, in certain areas, hearing protection be worn but, still, some miners make the choice not to wear that. We do not feel that an operator should be cited if they have taken good-faith efforts, made everything available, and the individual at that time has chosen not to wear the equipment.

MR. POWASNIK: Excuse me. What do you do when a miner decides not to wear some other type of personal protective equipment?

MR. HUTCHINSON: Depending upon what happens --

MR. THAXTON: Excuse me. Can you stay close to the microphone.

MR. HUTCHINSON: Excuse me.

Depending upon what happens, the operator may enter our discipline system. Typically, it remains at a coaching and counseling stage. I do not know of any PPE-type infractions that have gone past that. Usually, the foreman just reminds the person to put it on. They put it on and that is the end of it.

MR. VALOSKI: By using the word "require," are you wanting MSHA to put some requirements on the individual miners?

MR. HUTCHINSON: No. That was not our intent.

MR. VALOSKI: Okay.

MR. THAXTON: If you are advocating that you would prefer personal hearing protection to be the primary means of control, wouldn't you agree, then, that the operator should require the use of that as the means of control, if you have noise problems?

MR. HUTCHINSON: If I understand your question, yes. If we do have an area that exceeds, if the proposed standard goes through, 85, then hearing protection should be required. At 90, hearing protection, we believe, would

still be required but engineering controls would not be implemented unless the noise levels were so great that personal hearing protection could not protect the miner.

MR. THAXTON: But you were saying that you do not want us to require that miners wear the hearing protection, that you would not be cited as the operator if we found miners not wearing the personal hearing protection. If they are then being exposed to noise levels that are greater than the standard allows, why would we not take action then to protect that miner's hearing?

MR. HUTCHINSON: Some of the cases that we have dealt with, we have had a hard time getting individuals to comply with existing standards -- tie off, things like that -- where the operator is cited because an individual makes a personal choice at that time. And that was what the thrust of my comment was is that if the operator provides the equipment, provides the training, requires the company policy and through actions and the individual still determines that they do not want to do it, we do not feel that the operator should be held liable for that person's actions at that time.

MR. THAXTON: But would not it be the same as a miner that, say, goes out from under a supported roof? That is not a condition that the mine operator condones. But if we determine that a miner is doing that, we are going to cite the mine operator because you have control over your people.

MR. HUTCHINSON: To a degree, we do. That is another case where, in principle, we do not believe that the operator should be held liable for that person's decision at that time. Presently, the operator is. We just received a citation for one of our people not wearing a safety belt at a height and company policy, training and everything requires tie off. But that person made the decision.

MR. THAXTON: Okay. Thank you.

MR. HUTCHINSON: Thank you.

MR. THAXTON: Let's take a 15-minute break. It is two o'clock. We will be back in session at two-fifteen.

(Whereupon, a short recess was taken.)

MR. THAXTON: Okay. If everybody is ready, we would like to get the hearing started again. If everybody will please take a seat.

Our next presenter will be Randy Tatton.

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STATEMENT OF RANDY TATTON, INTERWEST MINING COMPANY

MR. TATTON: Good afternoon. I appreciate the opportunity to address the group today on this proposed rule, the health standards on metal coal mines and coal for noise exposure.

MR. THAXTON: Excuse me, Randy. Could you spell your name and state your affiliation?

MR. TATTON: Yes. My name is Randy Tatton, R-A-N-D-Y T, like Tom-A-T-T-O-N. I am the manager of health and safety at Interwest Mining Company. We are a Utah-based firm that operates and manages mines in the western United States, both coal and both surface and underground. We are also faced with the responsibility for the protection of our employees against industrial noise-induced hearing loss.

We have submitted written comments to the Agency, but I want to address a couple of specific provisions in the proposed rule today.

First, and probably foremost, Part 62123(i) requires that miner's noise exposures measurements shall not be adjusted on the account of the use of any hearing

protector. Part 62120(c)(1) requires that when a miner's noise exposure exceeds the PEL, that the operator use all feasible engineering and administrate controls to reduce the minor's noise exposure to the PEL. If these two provisions become part of a final regulation, our operations will be dramatically impacted.

Our experience shows that many of the essential processes at our mining operations generate noise that is very difficult or impossible to suppress with engineering controls. Very often, it even becomes very difficult to locate the noise source in the areas where a lot of different noise-generation sources are present. Some examples are -- long wall and continuous mining methods in our underground mine, our work areas and drag lines, shovels and preparation plant at our surface mining operations. Also, noise adjacent to air-arcing operations in our shops also presents a very unique and difficult noise-generation source to control.

If this proposal, in our mind, is not changed to allow credit for the use of hearing protectors and noise-generation sources cannot be controlled with the use of

feasible engineering controls or administrative controls, there is really no means to comply with the regulation, nor is there a means to abate a violation.

Secondly, in the context of this proposed rule, what really is the definition of "feasible"? How many dollars must be spent for engineering controls and what corresponding reductions in noise-generation levels constitute feasibility? How many workers is it feasible to rotate through job functions where high noise levels are present? These are only a couple of questions that will surround the ambiguous term, "feasible," and, unless well defined or changed, it will certainly generate very expensive and non-productive litigation.

Let me talk a little bit about a project that is in progress at one of our surface mining operations that really demonstrates some of our experience with typical noise-abatement efforts. High noise levels were present in the immediate vicinity of two blowers located in our preparation plant. The blowers were enclosed in noise-insulated metal housings in an attempt to reduce the noise levels there. The overall cost of that initial project was

$13,988. As a result, the noise levels in the immediate vicinity of the blowers were reduced by about 3dBA. The level of reduction in the area where the workers spend the majority of their time was really insignificant and almost unmeasurable.

We are now having problems with the motors and the blowers heating up. We presently have a contract in place to provide additional cooling capacity for an additional cost of $12,517 to resolve that problem. So, in essence, we are going to spend about $27,000 and really, as far as we can see, there is no significant health benefit to the workers in that area. And, also, these employees are required to wear hearing protection whenever they work inside of that plant.

Third, Part 6283(ii) requires that all noise from AD dBA to 130 be integrated into sound levels during the miner's entire work shift and this presents a real problem that is unfair to operators with work shift schedules that exceed eight hours. Noise at the 85 dBA level is really not harmful and it will be included in the dose reading and could subject operators to possible citations and activity

required by Part 62120(b) when an action level is exceeded.

We hope that the Agency will reconsider the issues that we have discussed. It is clear that this rule-making was developed using present OSHA rules as a model, but it has some very significant and critical changes. We suggest that the OSHA standard be followed even more closely and that standard serves to protect the vast majority of the workers in the country and it really should not be any different, in our mind, for our nation's miners.

Thanks for the opportunity to be here. This concludes my comments for today.

MR. THAXTON: The next speaker is Gordon Brannon.

STATEMENT OF GORDON BRANNON, BIG SKY COAL COMPANY

MR. BRANNON: Good afternoon, ladies and gentlemen of the panel. My name is Gordon Brannon, G-O-R-D-O-N Brannon, B-R-A-N-N-O-N, and I am the safety manager from Big Sky Coal Company in Big Sky. Big Sky is located around Coal Strip, Montana, which has a population around 4,500 people in that town, and it is located in the southeastern part of the state about six miles south of Coal Strip. Big Sky employs about 125 people at the mine and we mine about 5.2 million tons per year right now. Big Sky has been mining there since 1968 in that area and I have worked there since 1973. I have been working in the field of safety since 1968 and I have been with Peabody Holding for 25 years.

After looking at these proposals, Big Sky management believes that the MSHA-proposed noise regulations would be a hardship on the mine and recommends MSHA on using the OSHA hearing conservation program as a model for their regulations. Big Sky supports the hearing conservation and protection and believes the use of PPEs, personal protective equipment, hearing protection, is an integral part of our

program. We do not support MSHA's proposed rule changes because the number of people at risk is small; the PPEs offer adequate protection for the at-risk group; engineering controls, especially at the mine, running with 30-year-old trucks like we have and 50-year-old drag lines, would be costly and probably ineffective. If our equipment cannot be brought up to compliance with the new rules, we cannot justify new expensive equipment and the result may be closing of our mine.

At the present time, Big Sky has about 103 union personnel there and we have about 22 companies. Seventy-two employees are wearing hearing protection and 55 workers are using it daily and faithfully. Big Sky Coal Company believes in the use of PPEs. We use Desidents -- those are ear plugs; Max, which are ear plugs; the 3M-1100, which are ear plugs; and Bilson Viking 29 ear muffs. The majority of the workers like the foam-type disposable ear plugs and prefer Desidents by North. The ear plug boxes are located in all working areas for easy convenience for our employees to get them and we place them down by our drag lines. We have two drag lines, a 1260 and a 1700. We place them in

the warehouse where they can get them, the shop, the tipple, the preparation plant and load-out facility that we have. Also, the bath house. Big Sky has never had a worker's compensation claim on noise and a noise injury.

Right now, we have really been concentrating on courts and dust standards so all of our equipment at the mine, we have been sealing our cabs and weatherstripping and changing the doors and hinges on them. And this has really helped our noise, probably, quite a bit, too. But I do not think that our equipment will comply with the new regulations. Almost all of our equipment at our mine is really old. We have a D-9 dozer, D-10, and D-9Ls, and they range from 1984 to 1988. We have some 637 D and E scrapers. They are 1978 through 1987s. We have three 992 front-end loaders. They are 1986 models. Our 1260 drag line is a 1980 model. Our 7800 drag line is a 1947 model. And what we are concerned about our drag lines is inside the house and whether they would comply.

Also, our tipple structure and our load-out facility -- our tipple structure is a 1968 and right now, anybody working in that facility almost has to wear ear

plugs. There is almost no way to quiet the facility down.

Big Sky has talked to Caterpillar and representatives from Caterpillar about maybe complying with the law. They were suggesting maybe putting lead flooring down on our mats; sealing our cabs, you know, a little better; more soundproofing in the cabs and replace the doors. This might help it, but there is no guarantee. We could spend all this money and still cannot get it in compliance. We also have 150-ton Remple haul trucks and they range from 1972 to 1975 models.

Big Sky did contact a manufacturer that supplies parts for our drag lines. They did say they could give us a covers for our sets, but they are pretty expensive. And they do not even know whether they would reduce the noise and whether we would be in compliance in our house because we still have the gear cases. They still cannot be reduced to noise.

I have heard numerous occasions of MSHA technical service reports which document numerous cases where operator utilization of engineering controls has failed to achieve compliance with the 90 dBA permissible exposure limit.

In conclusion, Big Sky management would like MSHA to support the OSHA hearing conservation program as the model for their regulations and believes that the PPEs are a necessary and essential part of our overall noise compliance program and that MSHA must recognize their successful use.

One last thing. I was sitting in my bedroom last night and on the NBC Nightly News a special came on and it was on why are so many Americans losing their hearing. One of the things they pointed out was you go outside and play. That is about 60 dBA. You got out and use your lawn mower or weedeater, that is about 90 dBA. You go turn your television on and, if you have a home feeder on it, that is about 75 to 90 dBA. Your children, they do have toys out there that are way over the permissible level. Teenagers are listening to music and stereos. So, to make a long story short, they were saying ten percent of our young children have hearing losses in the United States.

The U.S. is a technological society. At homes, they have appliances, computers, machines. A lot of people, after they leave work from our place, they go to nightclubs and listen to music there, concerts, which are loud. Loud

stereos in their cars and homes. A lot of people shoot guns and do not wear hearing protection. A lot of them like game hunting. They like black powder. They like to trap shoot. Also, they do a lot of operating equipment at home and, as far as, they run jet skis, snowmobiles, motorcycles and boats.

The United States is a technological society. We are not a non-technological society. And, like the special said on television, non-technological societies have a lesser noise problem than the technological societies do. I believe, and at the end of the show they said, the prevention of this is to wear ear plugs. That was the main gist of the whole program. Or change your lifestyle, which is kind of hard. If you are in a working environment, you pretty well much have to work in that environment and do that job. But wearing hearing protection, I think, is the answer right now.

Thank you.

MR. CUSTER: Sir, do you conduct audiometric testing of any of your employees?

MR. BRANNON: We are starting that in the near

future.

MR. CUSTER: You do not do any now.

MR. BRANNON: Only time we do that is if we hire a new employee.

MS. PILATE: You made a very general statement that these regulations could quite possibly drive your organization out of business. Do you have any data to substantiate that?

MR. BRANNON: I can get that for you.

MS. PILATE: Okay. And, if you would, in that report that you are going to submit, attach any receipts or -- I do not want to go so far as to ask for IRS data -- but anything of that nature that is not confidential.

MR. BRANNON: Okay.

MS. PILATE: Thank you.

MR. THAXTON: Gordon, you listed an awful lot of equipment that was old and you said it does not meet the standard. It would not meet the standard. The standard is not changing. Are you indicating that your equipment at this time does not meet the 90 dB standard?

MR. BRANNON: It could be, probably, right on the

borderline.

MR. THAXTON: So, if it is on the borderline, it is meeting the 90 --

MR. BRANNON: Right.

MR. THAXTON: So, the new standard is not going to effect --

MR. BRANNON: Right now, we have not had any citations by MSHA. But if they do lower it and they do not require personal protective equipment, we might not be in compliance.

MR. THAXTON: On your surveys that you conduct every six months, are you reporting that anybody is exposed to over 90 dB?

MR. BRANNON: We have not had anybody essentially over 90 dBA.

MR. THAXTON: Now, you realize our rule does not allow you to consider personal hearing protection in that calculation. So, if it is over 90, whether they are wearing hearing protection or not, you still have to report it. So, you have not reported 90 dB or greater exposures for your people, that you know of.

MR. BRANNON: Well, right now, we do not have anybody over 90.

MR. THAXTON: Okay. So, the new rule would not really affect you, except for the people that are above 85.

MR. BRANNON: Right.

MR. THAXTON: Okay.

MR. VALOSKI: I will ask a question. You said you have all these old pieces of equipment. What do you have on them? Do you have cabs and what-not?

MR. BRANNON: Right.

MR. VALOSKI: Are they just running with rods?

MR. BRANNON: They're running with cabs.

MR. VALOSKI: Do they have mufflers?

MR. BRANNON: Yes, they do.

MR. VALOSKI: And you do not think you can get them in compliance.

MR. BRANNON: If they lower the standard, no. And if they do not recognize personal protective equipment. Every time we have been tested, we have been okay. But if they do not require personal protective equipment and if they did, let's say, test a little bit over, we would be out

of compliance.

MR. THAXTON: Okay. Thank you.

The next speaker is Bob Payovich.

STATEMENT OF BOB PAYOVICH

MR. PAYOVICH. I do not have any comments.

MR. THAXTON: Next is Melinda Pon and Company. I understand she has three people but I only have her name on the list.

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STATEMENT OF MELINDA PON, BHP MINERALS

MS. PON: This is usual here.

Good afternoon, Chairman Nichols, Moderator Thaxton and members of the MSHA Noise Hearing Panel. BHP Minerals appreciates this opportunity --

MR. THAXTON: Excuse me. Could you spell your name and --

MS. PON: Alas, you jump ahead. I will. I will get to that.

BHP Minerals appreciates this opportunity to participate in the MSHA public hearings on the proposed noise rule.

Today, we would like to highlight some of our concerns regarding the proposed noise rule and to provide an overview of our experience with hearing conservation at BHP Minerals. I am Melinda Pon, M-E-L-I-N-D-A, Pon, P-O-N, manager of occupational and environmental health for BHP Minerals based in San Francisco. With me here today in the audience is Bert Wisner, safety and health supervisor; Larry Jim, industrial hygiene technician; and Daisy Bejay,

occupational nurse. Bert, Larry and Daisy work at San Juan Mine's New Mexico operations and we will refer to this as NM or NMO.

Larry is qualified by MSHA to conduct and report on noise sampling for the NMO. Daisy is currently certified by the Council for the Accreditation in Occupational Hearing Conservation, or CAOC, to conduct audiometric testing and has been conducting our audiometric evaluations since the mid-1970s.

BHP Minerals is an operating group of Broke and Hill Proprietary Company, Ltd. and operates three surface coal mines, large surface coal mines, in the Four Corners areas of New Mexico. In 1957, the Navajo nation granted the original mining lease to Navajo Mine and in 1960, Utah International signed a contract with the Arizona Public Service Company to supply water and coal to the Four Corners power station outside of Farmington, New Mexico. Coal deliveries began at Navajo in 1963 and, later, Utah International went on to open and operate surface coal operations at San Juan Mines and La Plata Mines located west and north of Farmington, New Mexico, respectively, to supply

coal to the San Juan generating station. BHP purchased Utah International in 1984.

Today, our New Mexico operations have a workforce of 976 employees. Eighty-seven percent are Navajo and they hold many supervisory, production and technical positions. Last year, we sold 14 million tons of bituminous coal using drag lines at Navajo and San Juan and truck and shovel at all three mines.

BHP Minerals is proud of our commitment to protect the health and safety of our employees. San Juan Mine and its employees are proud recipients of the Sentinels of Safety Award. We have developed and implemented many safety and health initiatives in our quest for continuous improvement. We have an excellent relationship with our employees and work well with our unions in addressing their concerns. We recently embarked on Zia Quest, the NMO Occupational Safety Health and Environmental Program implemented at our operations. Part of the program is predicated on the National Occupational Safety Association Program in South Africa that we have adopted and implemented throughout all of BHP Minerals. And BHP Minerals operates

40 some odd operations around the world. The remainder is made up of those processes that have made NMO a world leader in safety.

We commend MSHA for proposing the uniform health standards for occupational noise at all mines. We appreciate MSHA's attempt, in explaining the rationale for the proposed rule in the 110-plus pages of the preamble. We recognize the important intent of this proposed rule as stated in the preamble and agree that our miners should not suffer any material impairment to health and safety from exposure to industrial noise, and the emphasis here is on industrial noise.

While the nature of this rule is performance-based, we are puzzled at the outset why MSHA chose to provide no to little guidance in certain areas and opted to deviate from the regulatory approach taken by its sister agency, OSHA. One area where the pendulum swung too far in favor of a performance-based standard was in the audiometric testing area. MSHA erroneously refers to this as a non-traditional approach to, quote-unquote, "hearing conservation." On its own, audiometry does not preserve

hearing but measures hearing loss. The OSHA hearing conservation amendment and ANCI standards are abundant with regard to audiometry performance and quality control. The saying, "garbage in - garbage out," applies especially in audiometry.

We urge MSHA to draft a rule with the proper audiometric controls, procedures and equipment outlined and require a program in audiogram review and validation by CAOC-certified audiometric technicians and American Speech and Hearing Association or ASHA-certified audiologists, and also medical referrals by ear, nose and throat specialists. Further, we believe that hearing protectors are a necessary and essential part of the effective hearing conservation program. Not only should the use of hearing protection be encouraged to protect employees from hearing loss, but the use of hearing protection should be recognized as a control measure to achieve compliance.

The shift in hierarchy of controls to engineering and administrative instead of/or is technologically and economically infeasible and an inappropriate allocation of resources. However, we do support the use of engineering

controls where it is cost-beneficial to do so. Otherwise, we believe that flexibility should be allowed for operators to use a suite of controls to protect miners' hearing.

MSHA should also acknowledge the contribution of genetics, age, dangerous hobbies and ototoxins, such as prescription drugs, that affect hearing and hearing loss. The contribution on non-occupational noise exposures to hearing loss is ignored in its rule. MSHA disregards the value and functionality of noise-reduction ratings for hearing protection and recklessly negates all scientific research and data supporting noise-reduction ratings for hearing protection. MSHA should acknowledge the age correction factors on audiograms.

MSHA should not try to regulate in a vacuum. Loss of hearing due to aging and society noise sources are facts of life. It is not within MSHA's jurisdiction to attribute all noise exposures to industrial noise. It is not within MSHA's jurisdiction to attribute all hearing loss to occupational exposures. And it is not within MSHA's jurisdiction to issue a rule that assumes that our miners live in the Garden of Eden. In sum, although MSHA's

intention is good, MSHA's approach to hearing conservation in the proposed rule is flawed.

I will now ask Bert to describe the hearing conservation program at the New Mexico Operation. He is on his way.

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STATEMENT OF BERT WISNER, BHP MINERALS

MR. WISNER: Okay. Good morning or afternoon, I guess, isn't it? I am Bert Wisner, B-E-R-T W-I-S-N-E-R. I am the safety supervisor at San Juan Mine. I have been involved in hearing conservation since the early 1970s.

To avoid any confusion, I am not using hearing conservation to mean only audiometry. MSHA's non-traditional use of the term "hearing conservation" for audiometry is confusing. When I speak of hearing conservation, I am describing a program that not only can prevent hearing loss, but improve employee morale, generate a feeling of well-being, and improve quality and production in life. It involves not only management commitment and adequate resources but also the support of the employees and their families. BHP Minerals hearing conservation includes noise measurement, noise controls, audiometric testing, hearing protection and training and education.

In 1973, the Navajo Mine received a noise citation on a 1350 drag line. As part of the program, we instituted a hearing protection program at Navajo Mine. We started

collecting baseline audiograms in 1973 on all of our employees and all efforts in this area have been expanded to all of our New Mexico operations. To date, we have enrolled over 1,650 employees in our hearing conservation programs. All employees are given audiograms as part of their pre-employment examination. However, our contract physician retains these exam results upon hire. The employees given another audiometric exam are conducted in-house by Daisy, our occupational nurse.

The periodic audiometric exams are given to all employees regardless of noise exposures. Our exam frequency ranges from one year to every two or three years, depending on exposure. The average cost for New Mexico operations for our audiometric program ranks right at $100,000 a year. The cost of our consultant to read our audiometrics is about $1,300 to $2,000 a year.

In the late 1970s, we contracted with Industrial Health to provide professional audiologist oversight for the audiograms we collected in-house to validate our audiometric testing program and maintain our audiometric testing database of over 7,000 audiograms. An IHI ASHA-certified

audiologist reviews the audiograms to identify employees needing medical referrals, employees with previous medical history for ear or hearing disorders, re-tests the employees who show significant threshold shifts and OSHA 200 recordable cases. Our audiograms are adjusted for age.

One interesting aspect of this -- we found an employee who has had absolutely no hearing in one year and, through the efforts of our nurse and the otolaryngologist, he was operated on and has recovered almost completely the hearing in the one ear that he never had since birth.

Around two percent of our workforce are classified as OSHA 200 recordable cases. Of these cases, less than half of them are in high-risk occupations of mechanic, mechanic's helper, welder, dozer operator or coal haul drivers. In these cases, we have found five cases of binaural hearing loss, seven involving the right ear hearing loss and 25 involving left ear hearing loss. Although a number of these cases are work-related, a third of these cases are previous medical histories and medical referrals. We find that five percent of our workforce either has a previous medical history or needs a medical referral with an

ear, nose and throat specialist.

Significant threshold shifts, a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2,000, 3,000 and 4,000 hertz in either ear is also tracked for our employees. The use of the STS as an indicator has its inherent problems because the individual variability in hearing sensitivities and from conditions which affect hearing and audiometric tests, including allergies, head colds, non-occupational noise exposure, noise prior to audiometric testing and impacted wax. At our mines, most employees drive from 30 to 40 miles just to get to work and to assume that they have a 14-hour non-exposure to noise with that kind of driving is absurd.

We recognize that engineering controls are the ideal way to control occupational noise exposures. However, the reality of this method of controls is difficult, especially in our drills, drag line houses, heavy equipment and maintenance operations involving compressed air and air-arc welding.

One of the occupations with high noise exposures and increased risk to noise including hearing loss are

welders. Their noise exposures average around 90 dBA for an eight-hour day. The noise can hit peaks of 140 dBA during air-arcing operations. These are not continuous operations. They are intermittent and last for just a few minutes. But that is the peak noise level we have been able to measure.

Although welders use ear plugs, they cannot use the dual hearing protection with ear muffs because of the welding helmets. We are working with welders to determine how best to bring down their noise exposures. We are evaluating options and bringing down the arc as a means of controlling pressure during cutting operations.

We have taken noise samples in many noisy areas. In the drills, the drill monitor and compressor generates from 108 to 109 dBA during drilling. The noise on the drill deck can range from 96 to 97 dBA. The drill operator's cab can be quiet, idling at 80.6 to 81 dBA, increasing to 84 to 86 dBA during drilling operations. Outside the drill operator's cab, noise exposures from 99 to 102 dBA can be found.

Noise ratings within the house of an average drag line -- and we are talking, from experience at our mines,

six drag lines; internationally, probably 25 drag lines -- can range from 86 to 85 dBA with a new swing motor, from 105 to 106 dBA at the motor-generator sets. Although employees are not exposed to these noise levels during an eight-hour day, full day, the noise generated in drag and hoister and walk motors, motor-generator sets, are difficult to engineer out using current engineering programs.

Another aspect of our hearing conservation program is the use of hearing protection. We offer at least two different brands of ear muffs and two brands of ear plugs. The hearing protection is available at the warehouse, freely accessible by our employees. Our workers use and accept hearing protection. They have been using hearing protection since, I think, 1973, 1972. And a greater preference for ear plugs because of their ease of use and comfort. The ear muffs are more difficult to wear with a hard hat and tend to create more problems. We have one employee who uses custom-molded silicone plugs due to an allergic reaction with the other plugs.

While we try to control work noise exposure, we cannot often control off-the-job exposures. We feel that

team efforts for managing noise have been good and that our programs are effective. However, Harley motorcycles, guns, stereos, earphones and what we euphemistically call Navajo air conditioning -- it's where you roll down the left window of your pick-up and drive 60 to cool off -- is part of our noise exposure. And Larry will get me for this one. They make our job more difficult.

Recently, Daisy mentioned that one of our employees came in on swing shift for a hearing evaluation and showed a significant threshold shift in his second resample. Up until then, he had had excellent hearing. After speaking with the employee, she found out that he had been working around the house with his Sony Walkman on loud. Although we do not allow employees to wear headphones that cover their ears at work, we cannot do the same for them in their homes. And one of the real important parts -- and I know we were discussing earlier that physicians say they can do an audiogram in seven minutes and the actual test can be done in that, but the discussion that ensues between the technician and the employee to get this kind of information out generally runs an audiometric test from 15 to 30

minutes. It is not done that simply.

Other elements of our hearing conservation program include noise monitoring, audiometric testing and training and education. Larry will now describe our noise-sampling program, audiometric testing and training provided for our employees. Larry has been collecting noise data since the late seventies and is very knowledgeable in our employees and their noise exposures.

MS. PILATE: I would like to ask some questions before we change speakers.

MR. WISNER: Sure.

MS. PILATE: How many employees did you say that you have in your HCP program now?

MR. WISNER: I told you 1,650. Currently, we employ a little less than a thousand, but this is our historical database.

MS. PILATE: And you gave a figure of $100,000 annually to conduct the HCP?

MR. WISNER: Yes.

MS. PILATE: How many employees are tested annually? You said some are tested every two years. Some

are tested annually.

MR. WISNER: I would suspect, and this is just a rough guess, about 500.

MS. PILATE: You also mentioned that your company performs monitoring, testing and training. How long do you take to train employees, per employee?

MR. WISNER: Per employee? They are trained every year at least for a half-hour.

MS. PILATE: And what about monitoring?

MR. WISNER: They are monitored -- can you save that one for Larry?

MS. PILATE: Okay.

And what about testing?

MR. WISNER: Testing? That is the audiometric testing?

MS. PILATE: Yes.

MR. WISNER: It is either every year, every other year, or every third year, depending on their exposure.

MS. PILATE: For how long?

MR. WISNER: For --

MS. PILATE: How many minutes?

MR. WISNER: How many minutes? Generally, about a half-hour per person.

MR. VALOSKI: I would like to ask a couple of questions also. You said one to three years on exam based upon exposure. Could you elaborate on who gets it every three years, versus who gets it every second year, and who gets it every third year?

MR. WISNER: Every third year is the guy that escapes. Every second year is generally the salaried employees, office workers. Every year, we try to get all of what we would consider our exposed employees, which would be mechanics and operators.

MR. VALOSKI: Okay. Out of the 500 people you test annually, what is the number of STSes and what is the number of OSHA-recordable cases?

MR. WISNER: I do not have that in front of me. I could not answer that right now.

MR. VALOSKI: Will you submit that at a later date? Earlier in your testimony, you said that you had some cases that were OSHA-recordable and then you sent them for a follow-up evaluation.

MR. WISNER: Yes. We can provide that.

MR. VALOSKI: Okay. Thank you.

MR. THAXTON: Vicky was not finished with you yet.

MR. WISNER: Oh. I was done.

MR. THAXTON: Go ahead.

MS. PILATE: Do I have this correct that for some employees, you do need to get otological exams?

MR. WISNER: We refer them to an otolaryngologist, yes.

MS. PILATE: Okay. But you do not have one on staff or on contract?

MR. WISNER: We do not. We have a physician on contract. We do not have an otolaryngologist on contract.

MS. PILATE: Do you know, offhand, how much you have paid, on average, for an otological exam?

MR. WISNER: No, I do not.

MS. PILATE: Thank you.

MR. THAXTON: Now, there is one other question. You gave a lot of information, so you have to stand for a lot of questions.

You indicated that you had over 7,000 audiograms

that have been administered, I guess, since 1973.

MR. WISNER: That is correct.

MR. THAXTON: Are you able to provide that audiometric data to MSHA?

MR. WISNER: Melinda?

MR. THAXTON: That is good. I was going to ask you to come back up because you got away before we could ask you questions.

MS. PON: Sure, yes.

One of the problems that we have had with the comment period is the shortness of the comment period and I would love to give you more information about our experience with noise exposures and any particular hearing loss. The difficulty is that we have a lot of information and to give you a quality management summary and analysis requires time and you are looking at the solo person that is doing this analysis with the help of some of our operations. So, I would beg that the Agency consider extending the comment period. That is not a blackmail threat. This is basically asking or pleading. And, yes, we will provide -- at the end of my talk I will tell you this -- that we are providing

follow-up testimony and written documentation to support what we have given you.

MR. THAXTON: Are you planning to come back, then, and sum up at the end of all this?

MS. PON: Yes. You guys were running ahead of the ball game. You still have Larry to talk yet and then I will come back up and then you can ask me questions then.

MR. THAXTON: Okay. We will hold yours until then.

MS. PON: All right.

MR. THAXTON: Anything else? Thank you.

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STATEMENT OF LARRY JIM, BHP MINERALS

MR. JIM: Good afternoon. I am Larry Jim, L-A-R-R-Y J-I-M. I happen to work in the Navajo, San Juan and La Plata Mines for the past 19 years. Prior to working there, I worked for Kerr-McGee Corporation as an underground mine ventilation technician in Churchrock, New Mexico.

The past 23 years, I have worked in the health and safety field and my primary job at San Juan, La Plata Mine now is to monitor employees that are exposed to mining and mechanical noise during any eight-hour shift, whether they be day shift, swing or graveyard. And my overtime has been questioned quite a bit, but Bert has been very understanding.

The noise monitoring is not only conducted during the day shift and the maintenance people, the maintenance support group, the managers that I have to track down and we do some basic monitoring on, and also the mining and the mining support people. And there are people that do get away, as Bert had mentioned, but our employees learn that I do not give up easily.

And MSHA has said that I can do my noise sampling on a biannual basis every six months. But I have been turning in my reports on a quarterly basis so I do go through a number of employees and I have to divide my shift and my sampling between the maintenance and production to try to get all the employees.

Our monitoring equipment includes -- dosimetry and we check the calibration prior to each use and I send them in on an annual basis to a laboratory for laboratory calibration, as my inspector always asks for that, so I have to keep that up. And, by trade, I am a certified industrial instrumentation technician also.

In addition to MSHA-required noise samples, I do collect samples at target locations such as drag lines, trails and our prep plants and also occupations.

And with me is Daisy Bejay, D-A-I-S-Y B-E-J-A-Y, our industrial nurse. We do the audiometric testing also. And the reason why sometimes there are two of us working on, for employees it is difficult in translating. Some of our employees are older employees and they do not understand English that well. So, we have to kind of team up in order

to interpret what to do.

We use a trimetric RA-500 microprocessor audiometer for hearing tests and use an audiometric booth for background noise and calibration. The audiometric is calibrated on a daily basis. So, prior to each use and we do a lot of calibration and that is what takes up a lot of our own time.

We follow procedures according to those outlined on the OSHA hearing conservation amendment and has revised by Industrial Health. Our employees are provided hearing tests prior to their work shift before they can be exposed to any noise on the job. Prior to our hearing test, we examine their ears and take three to five minutes and ask them questions on their noise-exposure history. We ask things such as their use of hearing protection, noisy hobbies, medical conditions and something that may affect their hearing tests.

During the tests, which take up to 20 minutes to give, we explain what will occur during the test and the function of the audiometer and how they administer the test. Once a month, the audiograms are collected and shipped to IH

for an audiologist to review and validate. We receive the management report within 15 days and with the end of the next week, we send a notification letter to each employee explaining the results of the examination.

If an employee is a medical referral, then the referral is made to an ear, nose and throat specialist. We provide one-to-one counseling to each employee who has experienced a hearing loss, an STS and an OSHA-recordable or a medical referral. This is usually done in English and also in Navajo, but we are yet to come across Spanish. But we can understand a bit of that.

We provide information, education and speak at length to the employee regarding the benefits of preventing hearing loss on the job and off the job. Some of our education deals with noise exposures and potential hearing loss to family members as well. Our employees like to take home -- I have a little sample of our knife in your ear posters that we try to have them take back to their kids. So it is just not only the employees that we are concerned about. It is also their family members.

I gave it to my family and I think they just threw

it in the trash can.

We also train on noise during the annual refresher training sessions. I show the employee the results of their noise monitoring, especially in the high-risk occupations, and advise employees on hearing loss prevention measures. We talk about the physical sound and that is hard to do in Navajo because we do not have any technical language and I use the illustration as a puddle of water. With high frequencies, I use little pebbles. And noise, put a big rock in there. And it is strange how they eat away at these curves and stuff like that. We use a lot of illustrations to where they can understand it and I have been approached by some of our older employees, especially when I worked for Kerr-McGee Corporation, "Where have you been all these years?"

So, we have worked with NIOSH people that do testing and taking in-house sampling for us and they commented that they have never seen employees wear ear plugs or noise reduction in areas they do not need to, and this is where we come into play. We have people that do wear ear plugs, even though they do not need to.

Most employees wear their hearing protection in noisy jobs. Some even wear them in areas where it is not required because hearing protection has proven to be effective in protecting workers from noise-induced hearing loss. We believe that MSHA should recognize usefulness of hearing protectors as a control for noise exposure and our workers' accept and use them. However, it will be more difficult if MSHA requires a 14-hour quiet period without hearing protection.

Not only do we have some 10 to 12-hour shifts, but the 14-hour quiet period will lock us into bringing in our employees at the start of their shift for their hearing tests. This greatly reduces the number of tests that one audiometric technician can give during a shift. We also fear that we will lose the quality time the company nurse can take time to talk with exposed people. This time provides benefit not easily gained in other manners.

I have seen firsthand how our workers appreciate the work we have taken to monitor their noise exposure, to provide them hearing protection, and to evaluate the results of their hearing tests. Over the many years that we have

had our hearing conservation program, we have taken a broad approach that takes in noise monitoring, audiometric engineering and administration, and personal protective equipment, and training and education.

We have tried to limit hearing tests to those who have high exposure. However, even those who have little exposure have asked for the audiometric testing. We continue to test all employees at baseline and offer periodic exams to all employees, regardless of noise exposure. Daisy and I feel that a comprehensive hearing conservation program is beneficial for all our employees.

And I thank you. Do you want that in Navajo now, or --

MS. PILATE: You spoke of having to send your equipment off, your dosimeter, to be tested, to be laboratory-calibrated?

MR. JIM: Yes.

MS. PILATE: How much does that cost?

MR. JIM: I do not sign the check. I just let the purchasing department take care of that.

MS. PILATE: Do you know how much a dosimeter costs?

MR. JIM: About a thousand dollars. So, I carry about $1,500 -- or $15,000 in my truck.

MR. THAXTON: Okay. Thank you.

FURTHER STATEMENT OF MELINDA PON, BHP MINERALS

MS. PON: In conclusion, BHP Minerals is concerned about MSHA's cookie-cutter approach to the proposed noise rule. We see no reason, based on our experiences, why MSHA should not take an approach consistent with the regulatory approach of the OSHA noise standards. In fact, Section 101(a)(6)(a) of the Mine Act requires the Secretary of Labor in promulgating mandatory standards dealing with harmful physical agents to develop such standards based on the experience gained under the Mine Act and other health and safety laws, such as the OSHA Safety and Health Act of 1970. In MSHA's attempt to cut out the cookie for its proposed noise rule, MSHA's left out most of the cookie dough. Therefore, BHP Minerals urges MSHA to withdraw this proposal and use as a template for a new proposal the current occupational noise exposure standards of OSHA.

We have submitted our preliminary comments to Arlington back in April and we would like to provide a copy of this testimony and additional written comments by the deadline of June 20, 1997. However, again, I reiterate that

we are requesting MSHA to extend the post-hearing comment period to address some of the questions that you have asked us to provide and we would also like to provide that to you. But we do need some additional time to collate that information together for a more thorough analysis of the data, our experiences and views of MSHA's proposed noise rule.

Thank you, and I will be glad to handle any questions.

MR. THAXTON: Okay, Melinda. You stated on your first time you were up that you should include engineering controls as a means of control, if it proved to be cost-effective.

MS. PON: Yes.

MR. THAXTON: What variables would you use in determining whether the engineering control would be cost-effective because if the only thing that you are comparing to is the cost of the hearing protector versus an engineering control, of course the engineering control would always lose out when just comparing that cost. So, what variables would you include in that?

MS. PON: Maybe I can give an example of a dozer, for example. Okay. When you are looking at that, you definitely want to look at the noise reduction that would be included in a package, for example, on a particular bulldozer. And Bureau of Mines has done a lot of work in this area where we can cut down on noise, whether it is the mufflers or the gaskets around the doors, the cabs, things like that. So, that would be beneficial for what I consider cost-beneficial.

Comparing with a hearing protection program, it would be difficult for me to say that because we have an open box on use of personal protective equipment. Our guys come up and grab by the handful and they use it regardless of whether the noise exposures warrant that extra protection or not. So, I do not think we would be the fair example as to comparing the cost of personal protective equipment. We would not be the right example because we do allow our workers free reign with that.

MR. THAXTON: Okay. In regards to your final comments, you stated that MSHA should be using the OSHA rule as a guideline considering that part of our Act requires us

to use other rules that have been promulgated as a guide. Do you not agree that that Act also requires us to look at the latest technology and the latest information that is available and improve upon those guidelines, if it is possible?

MS. PON: Well, I agree if the Agency would allow the industry to also use the latest science and technology related, for example, on hearing protection. So, I think, on the one hand, yes, I agree. But, on the other hand, I think the playing field has to be fair in the data that is out there. And I think if you look at Link's data, for one, that is good data that MSHA should evaluate, okay?

MR. THAXTON: We are hoping that Link provides that to us.

Any other studies that we neglected to include?

MS. PON: Well, it seems, I do not know, I was a little puzzled that in the rule there were no references to any ANCI standards that have been out since 1969 or 1977 and these are consensus standards. So, I do not know why that big chunk of information was not available. There is some information through the National Hearing Conservation

Association and their coalition seem to have pooled together as well. So, I think if you look at their comments, there may be some data there as well.

What we wanted to offer today was basically our experience going back to the mid-1970s. It works.

MR. THAXTON: Okay. Thank you.

MS. PON: Okay.

MR. THAXTON: We would like to ask first, before we go to the next speaker, Mr. Patrick James, you passed earlier this morning. Is he still here?

MR. JAMES: Yes.

MR. THAXTON: Do you still wish to pass, or are you planning on speaking today?

MR. JAMES: I will pass.

MR. THAXTON: So, you do not plan to speak today, or --

MR. JAMES: I will pass.

MR. THAXTON: Mr. Payovich, are you -- okay.

Our last commenter, then, or person that has signed up so far, is Roger Connett.

MR. CONNETT: You are one of the few people who

pronounce that right.

MR. THAXTON: I have been working at it for the last three weeks.

STATEMENT OF ROGER CONNETT, GLEN ROCK COAL COMPANY

MR. CONNETT: Good afternoon. My name is Roger Connett, C-O-N-N-E-T-T. I am with Glen Rock Coal Company and my comments will be brief and they are going to be directed toward administrative and engineering controls versus hearing protection.

I could talk about many areas of mining or equipment that we all run, but I am only going to talk about a few. I am going to talk about dozers, vacuum trucks and drag lines.

Talking about a drag line, I heard earlier that noise levels range from 86 to 106. That typically is what we found. The same ranges almost exactly. While normally there is no person that works in a drag line house for a full eight-hour shift, if they do, they wear hearing protection and when they are in there, no matter how long it is, but to be in there for eight hours is not normal. However, in some areas, when you are back in an area where you have the high level next to the MG sets, the exposure time is very limited.

Those kind of levels, with hearing protection, really do not present a problem. But, without that, an adjustment for hearing protection, even though we do not have people working in those areas usually long-term, it still is cause for concern -- not only where it will start but where it will go once it begins.

A drag line oiler is required to be in a house of a drag line probably the most of any person on a mine site. He has to monitor motors and generator stats, couplers, gear boxes, fans, drag drums, hoist drums, the electrical system meters, and lubrication systems to make sure that things are working properly, as well as to look for fires and other things that might be hazards. Another responsibility that they have is maintaining the cleanliness of the inside of the house of a drag line and sometimes that can require longer-term times in those areas.

Maintenance personnel, mechanics and electricians, almost all trouble-shooting regarding a drag line, is done with the drag line operating, unless there has been a major catastrophic failure that makes it obvious to detect what it is. But, a lot of times, trouble-shooting in a drag line,

as I heard mentioned earlier, when you are trouble-shooting a drag line, it transfers noise and sometimes it is hard to determine exactly where a problem may be occurring. Electrical trouble-shooting in a drag line sometimes can be an absolute nightmare and it can also require spending amounts of time.

We do quarterly vibration analysis on all our gear boxes and motors and couplers and one thing or another and that does not get done in one day. It takes longer to do all those types of things.

One of the things that concerns us is if we have to rotate people through these areas is the loss of continuity in the jobs and tasks that are being performed. Obviously, the efficiency that you lose and the production that you lose rotating people.

To engineer the noise out of a drag line, out of the house of a drag line, is, I would say, not only is not feasible, it is impossible because of the amount that you have. You have gear boxes that have gears that are 11 feet in diameter and, in some bigger drag lines, much bigger than that. And that is just the gears. That is not the gear

boxes themselves. You have motor-generator sets that create a tremendous amount of heat and to enclose those, one of the things that all over the house of a drag line, in the roof and in the walls, are three to six-foot diameter fans that pull the heat out of the house and take it away from those motors to enclose them and to try to engineer a noise reduction, I think, would be impossible.

Our drag line, which is small by comparison to a lot of them in the industry and in the Powder River Basin, is approximately 90 feet long, 50 feet wide and 30 feet high and it has an outer skin that is a quarter-inch steel plate which echoes and reflects the noise back also. It contributes to the noise levels that we see.

Another area of concern is what we call a vac truck or a vacuum truck that we use on the mine site. We use them generally around our tipple area for clean-up. At our mine site, there are usually two days a week that we do not ship coal. We are a captive mine, so we have a little better schedule than some mines that are regulated by railroad schedules. We use those two days, typically, to clean up around our tipple area and our load-out areas and

it is the major use of this truck, unless you have a spill on the railroad somewhere.

The levels with that truck can reach 94 dBA over an eight-hour period. Earlier this year, we actually recorded that in an eight-hour period. Typically, we do not run that vehicle that much, that long a period, to get that kind of a reading, but it can happen. This is a vehicle that would -- a vac truck is like a giant vacuum cleaner mounted on a two and a half ton chassis and if you think about how much noise a vacuum cleaner at home makes, you can relate to how much noise that a unit like this makes. And the exhaust on the vacuum is actually where the major amount of noise comes and to engineer that noise out would also be very difficult, if not impossible.

To use this truck for all day would mean instead of -- it is normally a two-person operation. It would become a four-person operation because you would have to rotate the people to meet administratively take the noise out.

Dozers, crawler tractors or dozers, have been mentioned a couple of times. We have had recent readings of

92 dBA on a dozer, a D-11 dozer with an AM/FM radio playing, and I heard earlier from the first testimony this morning about the benefits of allowing AM/FM radio. But it does contribute to the noise and, in fact, it is one of the things that can make you exceed.

An operator can run a machine like this probably six hours, maximum, if we do are not allowed credit for hearing protection. And they would have to be rotated, which on an eight-hour shift they are either going to do it four hours or you are not going to shut the machine down after running only six hours. So, it is another area that I think would be of concern once this begins.

You mentioned one other area of air-arcing. I did not have this in my text, but I have some past experience with another mine that I worked at in Paddle River Basin ten years ago who had a very large shop that would accommodate the 240-ton trucks that a lot of the larger mines use now. And we had a big welding shop on the end of it and we put a wall up between the two of them. It was about 20 feet high. But the shop itself was closer to 75 feet high. And the wall, the mechanics working on one side of the wall were

affected by the air-arcing. We had our own standards for noise, even though it was short periods of time with air-arcing, and we required them to wear ear plugs or hearing protection if they were close to the weld shop and air-arcing was going on in there. So, we looked at the possibility of extending the wall up and the cost of doing that project and insulating it and eliminating the noise. And I was actually pretty proud of the fact that I thought I could swing it, until I remembered that if I took the wall all the way up, I would have to buy a 50-ton bridge crane to put on that side of the wall because it would no longer be able to go over there. And a 50-ton bridge crane with an 80-foot span is about $120,000 ten years ago. So, just an example of how sometimes the engineering cost can escalate very quickly.

We do support hearing protection and engineering controls, when it is feasible. I guess, like some of the others, we are concerned about what feasible really means and think that it needs to be certainly very clearly defined. And hearing protection, we support further development in hearing protection and credits for hearing

protection, along with all the other suggestions that have been made and feel like that that ought to be one of the things that is taken into consideration before the final rules are adopted.

That is all I have. Thank you.

MR. THAXTON: I have a couple of questions for you. One --

MR. CONNETT: I thought I was going to get away.

MR. THAXTON: Not that easy.

You brought up the dozer being a reading of 92 dBA. What controls do you have in place now with that dozer?

MR. CONNETT: Well, typically, I think that with the hearing protection and, for the most part, what we do, we have looked at ways to dampen the sound and with about a two-inch foam mat padded on the floor, I could not guarantee you that that will always make it work. I think that, depending on how steadily an operator works that machine, it could exceed again. If he has an AM/FM radio, it depends, too, on the operator -- how loud they play it. It depends on whether --

One of the problems with a dozer, particularly in trying to engineer out noise, is the fact that 60 to 65 percent of the cab is glass and that makes it hard to dampen the noise. You have, from the floor is your major area that you can really address.

During the operation of a dozer, in taking readings, just sample readings of what the loudest or the highest levels that we recorded, were actually not when it was working. It was when it was backing up and the tracks were clanging. Actually, we got higher readings from that than we did when it was under full load. So, that is one of the areas we have to continue to work and do further work in.

MR. THAXTON: You were recommending that we continue to consider the use of personal hearing protection as a means of control. On this particular dozer, you indicated that the guy would probably have to wear hearing protection then. If your noise is being increased because of the use of the AM/FM radio and the operator would have to wear the hearing protection, what is the point of having the radio in there then? If they are wearing hearing

protection, they are not going to be able to hear the radio unless it is turned up extremely loud. If you get rid of the radio, then you do not have the problem with noise.

MR. CONNETT: Generally, like a lot of companies, some areas we require hearing protection all the time and for everybody we supply ear plugs; ear muffs, if they request; and, in some cases, we require muffs, depending upon what area that they work in. If they wear their ear plugs and they crank their radio, that is when we see the high reading and so one of the options is take the radios out because we are going to require the ear plugs.

But the other benefits of a radio, especially on evening shifts or midnight shifts, is the fact that fatigue and sleepiness is one of the things that operators tend to fight on off shifts. So, it is kind of a which way is the best way to go.

MR. THAXTON: Okay. On the drag line, you indicated that levels of 86 to 106 dB, I think, were measured?

MR. CONNETT: Correct.

MR. THAXTON: What do you have as a means of

control for the drag line operators cab?

MR. CONNETT: The operator's cab is far enough away from all that, up above it, and there is insulation between it and the house and it is actually attached to the house. It is not part of the house. And so the levels there are actually very low. We do not see anything that even reaches 80, usually.

MR. THAXTON: So, your operators are okay. It is the incidental people, maintenance-wise, that come inside the actual drag line equipment house that you would be concerned about.

MR. CONNETT: Well, on our drag lines, we also have what we call a drag line oiler who also can be the relief operator and he is the person who generally goes to the house and checks everything. He is considered an operations person, not a maintenance person.

MR. VALOSKI: How many people do you have on a drag line, excluding the operator?

MR. CONNETT: On our drag line crews, we have three people assigned. We have the operator, the drag line oiler and then we always have a dozer operator assigned to

the drag line crew. But he is not a relief operator on a drag line or anything like that.

MR. VALOSKI: So, the oiler is really the only person that spends any appreciable amount of time in the housing of a drag line.

MR. CONNETT: Typically, yes.

MR. VALOSKI: About how much time does he spend in there on a given shift? A typical shift?

MR. CONNETT: I'd say, on a typical shift, they probably spend maybe four to five hours, on and off. They are in and out.

If you were painting the inside of the house or cleaning or one thing and another, those are the type of situations where you would see them maybe being in there longer.

MR. THAXTON: Okay. Thank you.

That concludes all the speakers that we have signed up. At this time, we would like to make sure that everybody that is in the audience that still wishes to make a statement does come forward, sign the speakers sheet, and we will make the opportunity available to you.

In the meantime, though, it is three-thirty. We are going to recess the hearing until four o'clock, at which time, then, we will reconvene and if there are any further speakers present, then we will make the time available to them.

(Whereupon, a short recess was taken.)

MR. THAXTON: It is four o'clock. We have nobody present at this time at the hearing, so we will recess until five o'clock.

(Whereupon, a short recess was taken.)

MR. THAXTON: It is five o'clock and we have no other persons present that wish to make presentations, so therefore the hearings are closed.

(Whereupon, at 5:00 p.m., the hearing was concluded.)

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REPORTER'S CERTIFICATE

DOCKET NO.: N/A

CASE TITLE: PROPOSED RULES ON HEALTH STANDARDS FOR OCCUPATIONAL NOISE EXPOSURE

HEARING DATE: May 13, 1997

LOCATION: Denver, Colorado

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the United States Department of Labor, Mine Safety and Health Administration.

Date: May 13, 1997

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Official Reporter

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