

## MINE SAFETY AND HEALTH ADMINISTRATION

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DIESEL PARTICULATE MATTER EXPOSURE OF UNDERGROUND  
METAL AND NONMETAL MINERS

## PUBLIC HEARING

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MONDAY,  
JANUARY 9, 2006

+ + + + +

The public hearing was held at the Little America Hotel, Salt Lake City, Utah, Ed Sexauer presiding.

## PRESENT:

ED SEXAUER	Chief of the Regulation Development Division in the Office of Standards, Regulations, and Variances, MSHA
JIM PETRIE	District Manager, Northeastern District for Metal and Nonmetal, Chair of the Diesel Particulate Matter Rulemaking Committee, MSHA
DORIS CASH	Metal and Nonmetal Health Division, MSHA
GEORGE SASEEN	Technical Support Directorate, MSHA
BILL POMROY	Metal and Nonmetal North Central District, MSHA
DEBORAH GREEN	Office of the Solicitor for Mine Safety and Health

PRESENT: (CONT.)

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P-R-O-C-E-E-D-I-N-G-S

(Time not given.)

MR. SEXAUER: Good morning. My name is Edward Sexauer. I am the Chief of the Regulatory Development Division of the Office of Standards, Regulations, and Variances, Mine Safety and Health Administration and I will be the moderator for today's public hearing. On behalf of David G. Dye, Acting Assistant Secretary for Mine Safety and Health, I want to welcome all of you here today. In memory of the 12 miners who perished last week in the tragedy at the Sago Mine, let us begin the hearing with a moment of silence.

(Pause.)

Thank you.

The purpose of this hearing is to obtain input from the public on MSHA's proposed rule published in the Federal Register on September 7, 2005, addressing Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners.

Joining me on the hearing panel today are on my right, Jim Petrie, who is the district manager of MSHA's Northeastern District for Metal and Nonmetal and Chair of the Diesel Particulate Matter Rulemaking Committee; Doris Cash with MSHA's Metal and Nonmetal

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1 Health Division; William Baughman who is with the MSHA  
2 Office of Standards, Regulations and Variances. On my  
3 left is Deborah Green with the Office of the Solicitor  
4 for Mine Safety and health; George Saseen with MSHA's  
5 Technical Support Directorate; and Bill Pomroy from  
6 MSHA's Metal and Nonmetal North Central District.  
7 Also, from Office of Standards in the audience is Carl  
8 Lundgren who is an economist with our office.

9 Let me reemphasize that our purpose for  
10 being here today is to obtain your views on the  
11 September 7, 2005 proposed rule. This hearing is  
12 being held in accordance with Section 101 of the  
13 Federal Mine Safety and Health Act of 1977. As is the  
14 practice of this Agency, formal rules of evidence will  
15 not apply. Therefore, cross examination of the  
16 hearing panel will not be allowed, but the hearing  
17 panel may explain and clarify provisions of the  
18 proposed rule. Members of the public will not be  
19 permitted to cross examine speakers. Also, as  
20 moderator of this public hearing, I reserve the right  
21 to limit the amount of time each speaker is given as  
22 well as questions of the hearing panel.

23 Those of you who have notified MSHA in  
24 advance of your intent to speak will be allowed to  
25 make your presentations first. I will call speakers

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1 in the order that requests were made. Following these  
2 presentations, others who request an opportunity to  
3 speak will be allowed to do so. We invite all  
4 interested parties to present their views on this  
5 rulemaking at this hearing, and if you wish to speak,  
6 please be sure to sign in at the registration table.  
7 I believe I have that list up here now. You can just  
8 let me know later if you intend to speak and your name  
9 is not on the list.

10 We will remain in session today until  
11 everyone has an opportunity to speak, if you desire to  
12 speak. Also, if you are not signing up to speak  
13 today, we would like you to sign the general sign-in  
14 sheet, just outside the room, so that we have an  
15 accurate record of attendance of today's hearings.

16 We will accept written comments and data  
17 at this hearing from any interested party, including  
18 those who are not speaking at the hearings.

19 You can give written comments on this  
20 hearing to me today, or you can send them to MSHA's  
21 Office of Standards electronically, by fax, by regular  
22 mail or hand delivery, using the address information  
23 listed in the Federal Register notices. We have  
24 copies of the Federal Register document, again, on the  
25 table just outside the door, if you'd like to have a

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2 This is the second of four hearings. The  
3 first was held in Arlington, Virginia on January 5.  
4 The remaining will be January 11, 2006 in Kansas City,  
5 Missouri; and January 13, 2006 in Louisville,  
6 Kentucky.

7 The post-hearing comment period will end  
8 on January 27, 2006.

9 A transcript of the hearing will be made  
10 part of the record and it will be posted on our  
11 website, at [www.msha.gov](http://www.msha.gov). We hope to post this  
12 transcript in approximately one week from today.

13 Before I begin, I would like to give you  
14 some background on the proposed rule we are addressing  
15 today. On January 19, 2001, we published a final rule  
16 addressing the health hazards to underground metal and  
17 nonmetal miners from exposure to diesel particulate  
18 matter or DPM. The rule established new health  
19 standards for these miners by requiring, among other  
20 things, use of engineering and work practice controls  
21 to reduce DPM to prescribed limits. It set an interim  
22 and final DPM concentration limit in the underground  
23 metal and nonmetal mining environment with staggered  
24 effective dates for implementation of the  
25 concentration limits. The interim concentration limit

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1 of 400 total carbon micrograms per cubic meter was to  
2 become effective on July 20, 2002. The final  
3 concentration limit of 160 total carbon micrograms per  
4 cubic meter was scheduled to become effective on  
5 January 20, 2006.

6 On January 29, 2001, several mining trade  
7 associations and individual mine operators challenged  
8 the final rule. The United Steelworkers of America  
9 intervened in the case, which is now pending in the  
10 United States Court of Appeals for the District of  
11 Columbia Circuit. The parties agreed to resolve their  
12 differences through settlement negotiations with us  
13 and we delayed the effective date of certain  
14 provisions of the standard.

15 On July 5, 2001, as a result of Phase 1  
16 settlement negotiations, we published two notices in  
17 the Federal Register. One notice delayed the  
18 effective of Section 57.5066(b) relating to tagging  
19 requirements in the maintenance standard. The second  
20 notice proposed a rule to make limited revisions to  
21 Section 57.5066(b) and added a new paragraph to  
22 Section 57.5067(b) "Engines" regarding the definition  
23 of the term "introduced." We published the final rule  
24 on February 27, 2002.

25 Phase 2 of the settlement agreement was

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1 finalized on July 15, 2002 as a written agreement.  
2 Under the agreement, the interim concentration limit  
3 of 400 total carbon micrograms per cubic meter became  
4 effective on July 20, 2002. We afforded mine  
5 operators one year to develop and implement good-faith  
6 compliance strategies to meet the interim  
7 concentration limit, and we agreed to provide  
8 compliance assistance during this one-year period. We  
9 also agreed to propose rulemaking on several other  
10 disputed provisions of the 2001 final rule. The legal  
11 challenge to the rule was stayed pending completion of  
12 additional rulemaking.

13 On September 25, 2002, we published an  
14 Advance Notice of Proposed Rulemaking, ANPRM. We  
15 noted in the ANPRM that the scope of the rulemaking  
16 was limited to the terms of the Second Partial  
17 Settlement Agreement and posed a new series of  
18 questions to the mining community related to the 2001  
19 final rule. We also stated our intent to propose a  
20 rule to revise the surrogate for the interim and final  
21 concentration limits and to propose a DPM control  
22 scheme similar to that included in our longstanding  
23 hierarchy of controls used in our air quality  
24 standards for metal and nonmetal mines and that's  
25 156/57.5001 through 5006.

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1           In addition, we stated that we would  
2 consider technological and economic feasibility for  
3 the underground metal and nonmetal mining industry to  
4 comply with revised interim and final DPM limits. We  
5 determined at that time that some mine operators had  
6 begun to implement control technology on their  
7 underground diesel-powered equipment. Therefore, we  
8 requested additional information on current  
9 experiences with availability of control technology,  
10 installation of control technology, effectiveness of  
11 control technology to reduce DPM levels, and cost  
12 implications of compliance with the 2001 final rule.

13           On July 20, 2003, we began full  
14 enforcement of the interim concentration limit of 400  
15 total carbon micrograms per cubic meter. Our  
16 enforcement policy was also based on the terms of the  
17 second partial settlement agreement and includes the  
18 use of elemental carbon, EC, as an analyte to ensure  
19 that a citation based on the 400 total carbon  
20 concentration limit is valid and not the result of  
21 interferences. The policy was discussed with the DPM  
22 litigants and stakeholders on July 17, 2003.

23           In response to our publication of the  
24 ANPRM, some commenters recommended that propose  
25 separate rulemakings for revising the interim and

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1 final concentration limits to give us an opportunity  
2 to gather further information to establish a final DPM  
3 limit, particularly regarding feasibility. In the  
4 subsequent notice of proposed rulemaking, NPRM,  
5 published on August 14, 2003, we concurred with these  
6 commenters and notified the public in the NPRM that we  
7 would propose a separate rulemaking to amend the  
8 existing final concentration limit of 160 total carbon  
9 micrograms per cubic meter. We also requested  
10 comments on an appropriate final DPM limit and  
11 solicited additional information on feasibility. The  
12 proposed rule also addressed the interim concentration  
13 limit by proposing a comparable Permissible Exposure  
14 Limit, or PEL, of 308 microgram per cubic meter based  
15 on the Elemental Carbon surrogate and included a  
16 number of other provisions.

17 On June 6, 2005, we published the final  
18 rule revising the interim concentration limit. This  
19 rule changed the interim concentration limit of 400  
20 micrograms per cubic meter measured by TC to a  
21 comparable PEL of 308 micrograms per cubic meter  
22 measured by EC. The rule requires our longstanding  
23 hierarchy of controls that is used for our other  
24 exposure-based health standards at metal and nonmetal  
25 mines, but retains the prohibition on rotation of

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1 miners for compliance. Furthermore, the rule, among  
2 other things, requires us to consider economic as well  
3 as technological feasibility in determining if  
4 operators qualify for an extension of time in which to  
5 meet the final DPM limit, and deletes the requirement  
6 for a control plan.

7           Currently, the following provisions of the  
8 DPM standard are effective: 57.5060(a), establishing  
9 the interim PEL of 308 micrograms of EC per cubic  
10 meter of air which is comparable in effect to 400  
11 micrograms of TC per cubic meter of air; Section  
12 57.5060(d), addressing control requirements;  
13 57.5060(e), prohibiting rotation of miners for  
14 compliance with the DPM standard; 57.5061, compliance  
15 determinations; 57.5065, fueling practices; 57.5066,  
16 maintenance standards; 57.5067, engines; 57.5070,  
17 miner training; 57.5071, exposure monitoring; and  
18 57.5075, diesel particulate records.

19           On September 7, 2005, we proposed a rule  
20 to phase in the final DPM limit because we are  
21 concerned that there may be feasibility issues for  
22 some mines to meet that limit by January 20, 2006.  
23 Accordingly, we proposed a five-year phase-in period  
24 and noted our intent to initiate a separate rulemaking  
25 to convert the final DPM limit from a total carbon

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1 limit to an elemental carbon or EC limit. We set  
2 hearing dates and a deadline for receiving comments on  
3 the September 7, 2005 proposed rule with the  
4 expectation that we would complete the rulemaking to  
5 phase in the final DPM limit before January 20, 2006.

6 After publication of the September 7, 2005  
7 proposed rule, we received a request from the United  
8 Steel, Paper and Forestry, Rubber, Manufacturing,  
9 Energy, Allied Industrial and Service Workers  
10 International Union, USW, for more time to comment on  
11 the proposed rule. The USW explained that Hurricane  
12 Katrina had placed demands on their resources that  
13 prevented them from participating effectively in the  
14 rulemaking under the current schedule for hearings and  
15 comments. We recognize the USW's need to devote  
16 resources to respond to the aftermath of Hurricane  
17 Katrina and the impact that would have on their  
18 participation under the established timetable.

19 We also received a request from the  
20 National Stone, Sand and Gravel Association, NSSGA,  
21 for additional time to comment on the proposed rule  
22 and for an additional public hearing in Arlington,  
23 Virginia. Accordingly, due to requests from the USW  
24 and NSSGA, we published a notice on September 9, 2005  
25 that changed the public hearing dates from September

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1 2005, to January 2006 and extended the public comment  
2 period from October 14, 2005 to January 27, 2006.

3 In addition, on September 19, 2005, we  
4 published a notice in the Federal Register temporarily  
5 delaying the applicability date for Section 57.5060(b)  
6 published in the Federal Register on January 19, 2001  
7 from January 20, 2006 to May 20, 2006, to provide  
8 sufficient time to complete the September 7, 2005  
9 proposal to amend the 2001 DPM rule.

10 At this time, Jim Petrie, the Chairman of  
11 the Diesel Particulate Committee, will present a short  
12 overview of the proposed rule, and after Jim's  
13 presentation I will begin calling speakers.

14 MR. PETRIE: If my voice gives out during  
15 this presentation, I may pass the ball here to Bill  
16 Pomroy to fill in for me, but this proposal is fairly  
17 narrow in scope. It would revise the effective date  
18 of the final DPM limit and delete the existing  
19 provision that restricts newer mines from applying for  
20 extensions of time for meeting the final limit.

21 Additionally, we request public comment on  
22 a number of significant issues including the  
23 appropriateness of including in a final rule a  
24 provision for medical evaluation of miners required to  
25 wear respirators and the transfer of miners who are

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1 unable to wear them. And the appropriate factor for  
2 converting the final limit from total carbon to  
3 elemental carbon although, as Ed said, MSHA will  
4 address this in a separate rulemaking.

5           Regarding revising the effective date of  
6 the final DPM limit, the proposed rule would gradually  
7 phase in the 2001 DPM final concentration limit of 160  
8 micrograms of total carbon over a period of five years  
9 until a final limit of 160 micrograms is reached in  
10 January 2011. The current interim limit of 308  
11 micrograms of elemental carbon will remain in effect  
12 until May 20, 2006. Thereafter, the first phase-in  
13 final limit which would be the same as the current  
14 limit of 308 micrograms EC would be effective until  
15 January 20, 2007.

16           The final limits would be reduced each  
17 year through January 20, 2011 as follows: on January  
18 2007, it would be reduced to 350 TC; January 2008, 300  
19 TC; January 2009, 250 TC; January 2010, 200 TC; and  
20 January 2011, it would reach the final limit of 160  
21 TC.

22           The preamble to the proposed rule includes  
23 extensive discussion on MSHA's 2001 assumptions  
24 regarding technological feasibility; our current  
25 concerns and tentative beliefs which question these

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1 assumptions; implementation issues with available  
2 control technology; and our proposed assessment of the  
3 availability of alternative control technologies.

4 MSHA requested that commenters address  
5 these and issues related to the scope of the proposed  
6 rule.

7 Regarding limitations on extensions of  
8 time for meeting the final limit, the proposal would  
9 delete 5060(c)(3)(i). The 2001 rule restricted MSHA  
10 from granting extensions to a mine operator, if diesel  
11 powered equipment was not used in the mine prior to  
12 October 29, 1998. This was because diesel-powered  
13 equipment prior to the date of the notice of the  
14 proposed rulemaking could experience compliance  
15 difficulties relating to such factors as the basic  
16 mine design, use of older equipment with high DPM  
17 emissions and other factors.

18 Also, we believe that mines opening after  
19 October 29, 1998 would be using equipment with cleaner  
20 engines that would have less difficulty meeting the  
21 final concentration limit.

22 Presently, MSHA believes that this  
23 restriction is unnecessary since applications for  
24 extensions are voluntary and the test for granting an  
25 extension is similar to that of enforcing existing

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1 57.5060(d) for hierarchy of controls.

2 The preamble discussion clarifies that we  
3 will begin to consider granting extensions due to  
4 technological or economic constraints for the initial  
5 final PEL of 308 micrograms of elemental carbon in the  
6 January 2006 date. That has been extended now to May  
7 20, 2006.

8 MSHA requested comments on the effects of  
9 the deleting the requirement, the number of miners  
10 affected if the provisions were eliminated and whether  
11 the elimination would result in a reduction of health  
12 protection for miners.

13 Regarding requests for comments on medical  
14 evaluation and transfer, specific comments are  
15 requested on whether the final rule should provide for  
16 medical evaluation of miners who must wear respirators  
17 and transfer of those miners who are deemed medically  
18 unable to wear them. In the preamble to the proposed  
19 rule, MSHA included a specific example of regulatory  
20 language that could be included in a final rule and  
21 requested extensive comments regarding the following  
22 issues: whether the final rule should contain  
23 provisions for medical evaluation and transfer of  
24 miners; whether the mine operators should be required  
25 to notify the District Manager of the health

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1 professional's evaluation and that the miner will be  
2 transferred; whether MSHA should include in the rule a  
3 specific time frame for transferring the miner;  
4 whether the mine operator should have to maintain a  
5 record of the medical evaluation and if so, for how  
6 long should the record be maintained; whether the  
7 provision include protection of medical  
8 confidentiality, cost to the mine operators for  
9 implementing such a requirement and other relevant  
10 information and data.

11           Regarding our request for comments on  
12 developing an appropriate conversion factor, MSHA will  
13 initiate separate rulemaking to determine what the  
14 correct total carbon to elemental carbon conversion  
15 factor will be for the phased-in final limits. In the  
16 interim, MSHA wants your comments on data for  
17 establishing an appropriate conversion factor and time  
18 period for the phase in of the final limit,  
19 technological implementation issues and the cost and  
20 benefits of the rule.

21           Also, we are interested in your views on  
22 any other scientific approaches for converting the  
23 existing total carbon limit to an appropriate  
24 elemental carbon limit.

25           If MSHA does not complete the rulemaking

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1 to convert the final limits before January 20, 2007,  
2 the Agency is considering using the current 1.3  
3 conversion factor that we used to establish the  
4 interim diesel particulate PEL of 308 elemental carbon  
5 to convert the phased-in final DPM total carbon limits  
6 to elemental carbon equivalents.

7           Regarding economic feasibility, MSHA  
8 stated in a preamble to the proposed rule that the  
9 Agency intended to use the entire rulemaking record  
10 supporting the 2001 final rule and new information  
11 gathered during the recent rulemaking to promulgate  
12 the new interim PEL. This data suggests that few  
13 mines would experience economic feasibility problems  
14 in meeting the interim limit, however, MSHA is  
15 interested in gathering more information on economic  
16 feasibility implications, especially in light of  
17 recent technological developments, leaving the Agency  
18 to propose a phased-in approach to meeting the  
19 ultimate final limit of 160 micrograms.

20           Thank you.

21           MR. SEXAUER: Thank you, Jim. Before I  
22 call the first speaker, let me just note for purposes  
23 of your planning, we have 10 speakers signed up to  
24 speak with an average time of maybe 15 minutes and a  
25 few questions following that. That tells me that

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1 we'll probably be going until lunch time and of  
2 course, we'll stay here as long as there are people  
3 who have testimony they care to offer.

4 I am planning on taking two breaks this  
5 morning, one at approximately 10:15 to 10:30, a short  
6 break, maybe 10 minutes or so; and then probably  
7 another break, more or less, around 11:30. And then  
8 we'll probably continue based on the number speaks --  
9 until we complete at that point. It probably won't be  
10 necessary, based on the number of speakers signed up  
11 to take a break for lunch and then come back, although  
12 that certainly that can change, depending on how the  
13 morning progresses.

14 The first speaker is Bill Ferdinand. And  
15 I would ask all the speakers, when they come up to the  
16 speaker's table to identify yourself and your  
17 affiliation for the record. And if you do have a  
18 prepared statement, if you would have an extra copy,  
19 if you would leave a copy with me afterwards, I'd  
20 appreciate that.

21 MR. FERDINAND: Good morning. My name is  
22 Bill Ferdinand. I am the Director of Environmental,  
23 Health and Safety for the North American Region for  
24 Barrick Gold Corporation. I appreciate the  
25 opportunity to present information relative to this

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1 important issue today.

2           Barrick conducts underground gold mining  
3 operations at its Goldstrike operations in northern  
4 Nevada that are subject to the MSHA regulations,  
5 including the diesel particulate rules. Goldstrike  
6 Operations include two underground mines, Meikle and  
7 Rodeo. Currently, Barrick's Goldstrike Operations  
8 employ 686 underground miners and support personnel.  
9 Our underground Goldstrike Operations produced more  
10 than half a million ounces of gold in 2005.

11           Barrick has closed followed the  
12 development of the diesel particulate regulations.  
13 This is an important issue for our company and for our  
14 employees. Our corporate policy is that sound safety  
15 and occupational health management practices are in  
16 the best interests of our company, our employees, our  
17 shareholders and the communities in which we live. As  
18 I will explain, we have taken significant steps toward  
19 reducing diesel particulate concentrations in our  
20 Goldstrike Operations. However, we do not believe  
21 that further reductions are warranted by health  
22 evidence or achievable with technology that is  
23 currently available or expected to become available  
24 within the next few years.

25           Barrick will be providing detailed

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1 comments in response to the issues raised in the  
2 September 7, 2005 Federal Register notice. My  
3 statement today will address those concerns which we  
4 feel are most significant and will provide a summary  
5 of Barrick's experiences with efforts to achieve the  
6 proposed final standards.

7 First, and most importantly, we urge that  
8 Barrick adopt the current interim personal exposure  
9 limit of 308 micrograms per cubic meter EC as the  
10 final standard and defer any further reductions in the  
11 regulatory PEL pending further research to develop an  
12 adequate scientific basis for further reductions and  
13 to determine whether further reductions are  
14 technologically and economically feasible. Our view  
15 of the record to date is that it does not include  
16 sufficient evidence to support reductions below the  
17 current limit.

18 We are also convinced that based on the  
19 data in the record and our own experience at  
20 Goldstrike, that the proposed final limit of 160  
21 micrograms per cubic meter EC is not technologically  
22 or economically feasible within the foreseeable  
23 future.

24 While we will comment on many of the  
25 issues raised in September 7, 2005 rulemaking, these

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1 comments should be considered in this context: MSHA  
2 should not adopt any rule which reduces the PEL below  
3 the current level.

4 MSHA has requested that commenters address  
5 whether certain assumptions underlying the 2001 rule  
6 were correct. Our experience over the past five years  
7 has shown that the initial assumptions were incorrect  
8 in at least three areas. First, the 2001 rulemaking  
9 overestimated the technological advances in diesel  
10 engines and particulate filters. Compliance with  
11 standards below the current interim level limit will  
12 require significant breakthroughs in technology to  
13 provide either lower emission engines or more  
14 effective filters, yet the technology has changed  
15 little since 2001, and there is no reason to believe  
16 that dramatic changes will occur in the next five  
17 years. In fact, we believe that because the majority  
18 of the underground mining market is shifting to other  
19 areas such as South America, Asia and other non-U.S.  
20 markets, and there is little incentive for  
21 manufacturers to develop new and costly control  
22 technologies for application only in the United  
23 States.

24 Second, the 2001 rulemaking assumed a more  
25 rapid replacement of diesel equipment than has

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1 occurred. The cost estimates supporting the 2001  
2 rulemaking assume that by the effective date of the  
3 final limit, 50 percent of the diesel equipment in  
4 underground mines would have new EPA Tier I or Tier II  
5 engines. Based on our experience, this assumption was  
6 too optimistic. While most of our mine equipment,  
7 LHD, loaders and haulers, have Tier I or Tier II  
8 engines, more than two-thirds of our utility equipment  
9 such as forklifts, tractors, bobcats and so on, do  
10 not. At the Goldstrike operations, since 2001,  
11 approximately 28 engine change-outs have occurred and  
12 another 20 pieces of equipment have been purchased  
13 with the new Tier I, Tier II rated engines. While we  
14 believe that replacement of the older engines holds  
15 promise for reducing diesel particulate emissions, it  
16 will not occur quickly enough to achieve the  
17 reductions on the schedule contained in the proposed  
18 rule.

19 Finally, MSHA's 2001 cost estimates did  
20 not account for the rapid and unexpected rise in  
21 diesel fuel costs, which will dramatically affect the  
22 cost of compliance with the 160 micrograms per cubic  
23 meter EC proposed final standard. In 2001, diesel  
24 costs were approximately \$1.40 per gallon. Current  
25 diesel prices are in the range of \$2.39 per gallon, an

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1 increase of over 70 percent. Available control  
2 technologies, particularly filters, reduce horsepower  
3 and increase fuel consumption to accomplish the same  
4 work. The Agency's cost estimates should be reworked  
5 to acknowledge current diesel fuel prices. Under  
6 current price conditions, control technologies that  
7 increase fuel consumption are likely to render ore  
8 reserves uneconomic and may, in fact, shorten mine  
9 life.

10 MSHA has requested comments on whether it  
11 is technologically or economically feasible for  
12 operators to meet the 160 micrograms per cubic meter  
13 proposed final standard. Our experience at Goldstrike  
14 since 2001 demonstrates to us that it is not.

15 Our efforts to significantly reduce the  
16 diesel particulates in the underground work  
17 environment have met with limited success using new  
18 technology coupled with enhancing present control  
19 technologies. Barrick has tested regenerative  
20 filters, increased the number of engines meeting Tier  
21 I, Tier II requirements, significantly increased  
22 ventilation and implemented new high maintenance  
23 standards. Taken together, these efforts have allowed  
24 us to meet the interim standard. We have reduced  
25 diesel particulates that were commonly in the range of

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1 600 to 800 micrograms per cubic meter TC in 2001 to  
2 levels today that typically range from 250 to 450  
3 micrograms per cubic meter TC.

4 To meet the interim standards, we have  
5 increased our ventilation from 800,000 CFM in 2002 to  
6 over one million CFM by the year 2004. And we have  
7 increased nearly 1.5 million CFM this year to  
8 effectively double our air volume moving through the  
9 mine to meet this interim limit.

10 During the same period, we have  
11 significantly increased maintenance programs and  
12 replaced engines with EPA Tier I, Tier II engines. We  
13 have also modified mine designs to minimize DPM  
14 concentrations and we have installed a number of  
15 environmental caps. Our estimates of the total cost  
16 of measures taken to achieve compliance with the  
17 current interim standard is approximately \$1.68  
18 million annually, in total, \$8.4 since the Year 2001.  
19 Our experience indicates that MSHA's 2001 cost  
20 estimates underestimate the cost of compliance.

21 At this time, we are unable to prepare a  
22 cost estimate for compliance with the 160 micrograms  
23 per cubic meter EC proposed final standards, because  
24 we cannot reasonably describe control technologies or  
25 methodologies that would be effective for the

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1 Goldstrike operations. Our ventilation is near its  
2 capacity. Further increases are likely to create  
3 fugitive dust issues for hauling equipment.  
4 Replacement of the remaining mining utility equipment  
5 with Tier I, Tier II engines would not achieve the 160  
6 micrograms per cubic meter EC proposed final  
7 standards.

8 Further, we have not identified filters  
9 that would be effective for our sites. We have tested  
10 an active regeneration DPF system, specifically DCL  
11 Minex Black Suitout Filter on our Tamrack (Phonetic)  
12 1400 which is an 8-yard scoop over an 8-month period.

13 Because of filter limitations, the scoop was only  
14 operated for seven to eight hours per shift before  
15 back pressures increased the cause for filter  
16 regeneration. This rendered the equipment unusable  
17 for the remainder of our normal 11-hour production  
18 shift.

19 The active regeneration system was  
20 determined to be impractical because it was not  
21 effective for the entire shift and could not be  
22 regenerated between shifts. Regeneration took  
23 anywhere from 2 to 5 hours.

24 As I mentioned, we have installed six  
25 loaders with environmental cabs to decrease exposure

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1 to diesel particulate matters and achieve other work  
2 environment considerations such as dust and noise  
3 reduction. We anticipate by the end of 2011 that 65  
4 percent of our mine and support equipment will have  
5 been fitted with environmental cabs. So in other  
6 words, out of the 100 units, 65 units will have added  
7 these cabs.

8 We expect that the environmental cabs will  
9 be effective, but only for those who work within the  
10 cabs. Thus, we do not believe this is an effective  
11 strategy for meeting the 160 micrograms per cubic  
12 meter EC proposed final standards throughout the  
13 workplace.

14 In addition, environmental cabs are  
15 tremendously expensive. It is estimated that the  
16 replacement of this equipment, along with the cabs,  
17 will ultimately cost \$49 million. We are investing in  
18 environmental cabs because they provide us with  
19 additional benefits beyond the protection from diesel  
20 particulate matters. They are not a cost-effective  
21 means of meeting the proposed final standards.

22 Ultimately, if the reductions are  
23 implemented, as proposed, we view respirators as the  
24 only effective means of ensuring compliance. We  
25 estimate that in the early years of the phased

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1 reduction of the proposed rule, approximately 56  
2 percent of underground miners would require  
3 respirators and that meeting 160 micrograms per cubic  
4 meter EC proposed final standard will require 70  
5 percent of our underground miners to wear respirators.

6 We appreciate that the Agency acknowledges  
7 that it will take substantial time to achieve any  
8 further reductions in diesel particulate  
9 concentrations. However, it is our view that the  
10 five-year phase in with arbitrary annual 50 microgram  
11 reductions is not practical because there's no  
12 technology available that would allow us to meet the  
13 final limit. Barick and other operators will be  
14 forced to design and implement a new plan every year  
15 to meet the lower and interim levels and maintain  
16 compliance with the regulatory standards. Focusing on  
17 annual short-term reductions is not effective or  
18 efficient.

19 The annual reductions will also increase  
20 the time and effort devoted to preparing, submitting,  
21 reviewing and approving extensions. If the Agency  
22 ultimately determines to go forward with lower  
23 standards, we believe that MSHA should reevaluate  
24 information regarding technology and economic  
25 feasibility to reduce the number of phases and to

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1 extend the time frame for compliance with the final  
2 standards. For example, the Agency might consider two  
3 phases over an eight-year period, establishing a lower  
4 interim standard after the first four years and  
5 requiring compliance with the final standard at the  
6 end of the eight years.

7 That concludes my comments. We do  
8 appreciate the opportunity to present our views on  
9 this and I'd be more than happy to take any comments  
10 or questions.

11 MS. GREEN: Before the others ask  
12 questions, could you just repeat what you just said  
13 about the appropriate phase-in period of the final --  
14 because we're looking for information on alternative  
15 phase-in periods. That's one of the issues we want  
16 more information on. What was your recommendation?

17 MR. FERDINAND: We would like to -- if  
18 MSHA is going to proceed along those lines, we would  
19 rather have two phase-in periods. The reasons for  
20 that, rather than annual ones, is because the  
21 technology limit is not out there such that you're  
22 going to reduce those incremental levels. And even if  
23 it was, talk about the cost to do so would be  
24 prohibitive. So what we would propose, if MSHA  
25 proceeds, is to have a phase-in period after four

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1 years and then a final limit after the eighth year.

2 MS. GREEN: And did you have a  
3 recommendation for what the first phase-in limit would  
4 be, or the next phase-in limit would be after four  
5 years?

6 MR. FERDINAND: No, we don't. We would  
7 prefer to keep the current interim standard, but if  
8 MSHA would proceed, we would have to take a further  
9 evaluation and come up with those.

10 MS. GREEN: Okay.

11 MR. SEXAUER: Doris?

12 MS. CASH: I had a question about the -- I  
13 believe you said you had replaced 28 engines during  
14 that time?

15 MR. FERDINAND: Yes ma'am.

16 MS. CASH: What -- is that what your  
17 normal rate of replacement would be for your fleet?  
18 Or what would be? I mean can you tell me what you  
19 would normally be doing for turnover rates?

20 MR. FERDINAND: Normally, what we would  
21 normally do, we took the tact that this standard was  
22 going to come up and thus, since those engines were  
23 scheduled for replacement, we went ahead and scheduled  
24 those with the new Tier I, Tier II compliance engines.

25 They could have been reworked, but it was

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1 our position that we went ahead and spent the money at  
2 this point to see if we could meet the 400 micrograms  
3 per cubic meter TC limit.

4 MS. CASH: Okay, so let me see if I'm  
5 hearing you right. You would normally, that would be  
6 on the same schedule as you normally would have either  
7 rebuilt or replaced the engines and you went with the  
8 replacement to meet the higher --

9 MR. FERDINAND: That's correct.

10 MS. CASH: All right. And that's out of  
11 your fleet of 100 units?

12 MR. FERDINAND: We have 114 currently. At  
13 the end of our mine life because of retirement, we  
14 scheduled to have 100.

15 MS. CASH: Okay. And what I would ask is  
16 we are interested in any cost information you can give  
17 us, any information on any of the testing that you've  
18 done and I would ask if you can submit that to us, we  
19 have until January 27th to get your written comments  
20 in and it would be beneficial to us if you can share  
21 that information with us.

22 MR. FERDINAND: Yes. The available  
23 information that we have will be included in the final  
24 comments.

25 MS. CASH: Thank you.

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1 MR. SEXAUER: Any other questions on this  
2 side?

3 Jim?

4 MR. PETRIE: You had mentioned that we  
5 didn't account for rapid increases in diesel fuel  
6 costs and that filters may be a factor in increasing  
7 fuel consumption. Have you seen a decrease in fuel  
8 consumption with newer engines, newer equipment and  
9 have you tried any types of alternate fuels?

10 MR. FERDINAND: We have not tried any  
11 alternate fuels and I really can't tell you if we  
12 actually have lessened our unit consumption. I would  
13 not think that we have and the fact that during that  
14 same period of time we have actually increased the  
15 number of units operating, so that's -- it would be a  
16 guess on my part if we had reduced our consumption,  
17 but I don't know that for a fact.

18 MR. PETRIE: Thank you.

19 MR. SEXAUER: George?

20 MR. SASEEN: You mentioned you started out  
21 with levels around 600 to 800 and then could you maybe  
22 in your written comments maybe clarify or like with  
23 each type of technology, did you see more significant  
24 reductions? Because I think you said you ended up  
25 down around the 200 to 400 range that you're currently

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1 operating at right now.

2 MR. FERDINAND: Yes, when we first started  
3 into this program, we looked at very much like other  
4 operators is to test technology. After we tested for  
5 eight months in the Year 2001, we didn't think, based  
6 on our experience and the experience of other  
7 operators that it was going to occur. So we took the  
8 tact at that point let's look at existing control  
9 technologies that we can implement, improving our  
10 maintenance program, including -- improving our  
11 ventilation systems, that those might be the best  
12 means to really enhance and lower the levels within  
13 the mine. So the bulk of those reductions were, in  
14 fact, due to those primary considerations of  
15 ventilation and improved maintenance programs.

16 MR. SASEEN: Also, you mentioned on that  
17 you put a DCL active system, filter system on a scoop.  
18 What size scoop was that?

19 MR. FERDINAND: It was an eight-yard  
20 scoop.

21 MR. SASEEN: Production or clean up?

22 MR. FERDINAND: It was production.

23 MR. SASEEN: Production?

24 MR. FERDINAND: It was production, yes.

25 MR. SASEEN: And do you know what engine

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1 is in that scoop?

2 MR. FERDINAND: If you can bear with me I  
3 can take a look see. It was a 300 horsepower Detroit  
4 engine.

5 MR. SASEEN: I assume -- is that  
6 electronic?

7 MR. FERDINAND: I believe so, but I'm not  
8 positive.

9 MR. SASEEN: Maybe if you can clarify that  
10 because I guess you're saying you got 7 and 8 hours  
11 per shift versus you need almost 11 hours.

12 MR. FERDINAND: We need 11 hours, yes.

13 MR. SASEEN: Okay. Did you look into  
14 change in the size of the filter?

15 MR. FERDINAND: No, we didn't.

16 MR. SASEEN: Or doublings?

17 MR. FERDINAND: We looked at different  
18 methodologies, as far as swapping equipment out, shift  
19 changes, schedule changes in its operation, but in the  
20 scheme of things it didn't work out.

21 MR. SASEEN: Okay, and it was just on one  
22 scoop you tried it?

23 MR. FERDINAND: Yes.

24 MR. SASEEN: Yes, if you could clarify in  
25 your written comments if that was an electronic engine

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1 and maybe the age of it.

2 MR. FERDINAND: I will.

3 MR. SASEEN: Thank you.

4 MR. FERDINAND: You bet.

5 MR. : A couple of questions.  
6 You mentioned your annual compliance costs, \$1.68  
7 millions annually. I wonder in your written comments  
8 if you could itemize that cost so we know what amount  
9 of money is going to what control technologies. Also  
10 that the total cost over the total period of  
11 compliance back to 2001, itemize that. I think it was  
12 --

13 MR. FERDINAND: \$8.4.

14 MR. : Something, yeah. If that  
15 could be itemized that would be helpful.

16 MR. FERDINAND: We can.

17 MR. : Also, do you have any  
18 miners now that are required to wear respirators, say  
19 for dust or some other --

20 MR. FERDINAND: We do. Anybody who is  
21 underground at our operations we do provide them with  
22 a pulmonary function check to make sure that they are  
23 capable of wearing those and there are areas in the  
24 mines that have elevated readings, so we do have  
25 certain entities who do wear respirators.

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1                   MR.                   : So you're now doing some  
2 form of medical evaluation for those miners?

3                   MR. FERDINAND: All miners who go  
4 underground, we do that as a matter of fact,  
5 regardless. If you're underground, we do that.

6                   MR.                   : Do you know right offhand  
7 if any of those miners have been found unable to wear  
8 respirators?

9                   MR. FERDINAND: To my knowledge, no.

10                  MR.                   : Okay, no you don't know or  
11 no --

12                  MR. FERDINAND: No. To my knowledge, none  
13 have been found unable to wear the respirators.

14                  MR.                   : Thank you.

15                  MR.                   : Just a quick follow-up  
16 question.

17                  On that DCL unit, could you provide us  
18 some specific costs, what it costs you to purchase it,  
19 install it, being an active system, what the costs  
20 were to maintain it?

21                  MR. FERDINAND: Yes, we will.

22                  MR.                   : And for how long you  
23 actually operated it.

24                  MR. FERDINAND: Yes.

25                  MR.                   : Okay, thank you.

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1 MR. SEXAUER: Deborah?

2 MS. GREEN: As a follow-up question to  
3 Bill Pomroy's question about medical evaluation, would  
4 it be feasible for you to give us some cost  
5 information on how much that program -- how much  
6 expenditures you have to put forth for a medical  
7 evaluation program?

8 MR. FERDINAND: Yes. We can provide that  
9 information.

10 MS. GREEN: Thank you.

11 MR. : Just another question  
12 concerning one of the three comments that you made  
13 about some assumptions that were wrong in the original  
14 2001 rule. And it has to do with the rapid  
15 replacement of engines, that the engines are not being  
16 replaced rapidly enough and you mentioned that you  
17 have done quite a bit of engine replacement in the  
18 larger production equipment, but not so much in the  
19 smaller utility equipment, the bobcats and tractors  
20 and so on.

21 I'm just wondering if you'd know or could  
22 you estimate or maybe could you include in the written  
23 comments what percentage of the total utilized  
24 horsepower underground is the larger production  
25 equipment, the loaders and trucks versus the smaller

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1 utility equipment and also approximate hours per shift  
2 of usage of the larger equipment, production  
3 equipment, loaders and trucks, versus the utility  
4 equipment.

5 MR. FERDINAND: Yes, we can. That's  
6 important to note in the fact that the utility  
7 equipment may be only used for one, maybe two hours a  
8 day and that's why those efforts have not been at  
9 replacing those types of engines because they're not  
10 being utilized as often as the production mine  
11 equipment.

12 MR. : You had also mentioned  
13 that your ventilation has almost doubled since 2001  
14 and I wonder if you could indicate in your written  
15 comments the specific nature of those ventilation  
16 upgrades, you know additional shafts or did you just  
17 repower existing fans, specifically what was the  
18 nature of the ventilation upgrades, both major  
19 ventilation upgrades, system-wide, as well as  
20 auxiliary ventilation systems.

21 MR. FERDINAND: Absolutely.

22 MR. : Thanks.

23 MR. : Regarding your pulmonary  
24 evaluations, with what frequency are they conducted or  
25 are they just during the pre-employment exams, or do

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1 you do them annually?

2 MR. FERDINAND: I think that they're done  
3 annually.

4 MR. : Annually. Thank you.

5 MR. SEXAUER: I believe that's all the  
6 questions we have, Bill. I want to thank you for your  
7 presentation.

8 MR. FERDINAND: I'll get you a copy.

9 MR. SEXAUER: Thank you. Our next speaker  
10 is Richard Tucker.

11 MR. TUCKER: Good morning. My name is  
12 Richard Tucker. I'm the Regional Health and Safety  
13 Manager for Newmont Mining Corporation in Northern  
14 Nevada.

15 We welcome and appreciate the opportunity  
16 to express our comments at this time. We feel that  
17 the proposed diesel particulate matter exposure  
18 underground with metal and nonmetal mines is a very  
19 important subject that we should discuss.

20 Newmont is a major mining company and  
21 utilizes diesel equipment in its underground mines.  
22 We have four operating underground mines in Northern  
23 Nevada.

24 We have a few basic statements to make in  
25 this cover letter, then we'll proceed to respond to

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1 specific questions asked in the notice. And those  
2 specific answers will be addressed in our written  
3 comments.

4 For the reasons set out, our answers to a  
5 number of specific questions will refer back to this  
6 information that I provided in public comment.

7 First off, we feel there should be no  
8 further reduction in the DPM standard. There's no  
9 legal, scientifically sound basis for lowering the  
10 existing standard. The September 7, 2005 proposed  
11 rule is proceeding on assumptions that are invalid.  
12 Because of these invalid assumptions, many of the  
13 specific questions that MSHA poses are impossible to  
14 answer in logical manner at this time, without  
15 accepting erroneous assumptions upon which they are  
16 based.

17 To the extent that these comments address  
18 those questions, it is always with the caveat that  
19 there should be no further reduction in the DPM  
20 standard.

21 Some of the assumptions that we feel are  
22 incorrect are as follows and again, these are  
23 incorrect assumptions. There is a valid scientific  
24 health-related basis for PDL lower than the settlement  
25 level of 400 micrograms per cubic meter total carbon

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1 as modified to 308 micrograms per cubic meter  
2 elemental carbon.

3 Another one we feel is incorrect is -- an  
4 incorrect assumption is that achieving the 308  
5 micrograms per cubic meter standard is technologically  
6 feasible in all or most mines. Additionally,  
7 achieving the 308 micrograms per cubic meter standard  
8 is economically feasible in all or most mines. We  
9 feel that that is inaccurate.

10 Achieving the 160 micrograms per cubic  
11 meter total carbon standard will become  
12 technologically feasible within a relatively short  
13 period of time. We feel that that's not going to be  
14 possible also.

15 Achieving the 160 micrograms per cubic  
16 meter total carbon standard will become economically  
17 feasible within the time frame allotted by the  
18 standard. Each of these assumptions is incorrect, we  
19 feel, and there taints the entire rulemaking process.

20 We feel like those items need to be reviewed and  
21 additional work and study done on those before final  
22 rule is established.

23 The Federal Mine Safety and Health Act  
24 Section 101(A)(6)(a) provides that the Secretary, in  
25 promulgating mandatory standards dealing with toxic

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1 materials or harmful physical agents under this  
2 subsection, will set standards which most adequately  
3 ensure that on the basis of the best available  
4 evidence that no miner will suffer material impairment  
5 of health or functional capacity, even if such miner  
6 has regular exposure to hazards dealt with by such  
7 standard and for the period of his working life.

8 The best available scientifically sound  
9 evidence does not indicate that miners will suffer  
10 material impairment of health or functional capacity  
11 if regularly exposed to elemental carbon or total  
12 carbon fraction of diesel particulate matter at the  
13 current level of 308.

14 As MSHA acknowledged in the preamble to  
15 the rule, the scientific community has not yet widely  
16 accepted any exposure response relationship between  
17 the amount of DPM exposure and the likelihood of  
18 adverse health outcomes.

19 MSHA reviewed and updated its risk-  
20 assessment on June 6, 2005 rule amendments and  
21 concluded that no change was warranted. The NIOSH  
22 study currently underway is designed to help address  
23 that question and any effort to reduce the current  
24 standard prior to the completion and evaluation of  
25 that study is premature and is not in compliance with

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1 the law.

2 The latest available scientific data in  
3 the field shows that it is neither technologically or  
4 economically possible for all mines affected by the  
5 current regulation to meet that standard. This is  
6 discussed further in our comments on feasibility and  
7 will be addressed in our written comments.

8 Given that the current standard cannot  
9 meet feasibility for further reduction of this  
10 standard would violate provisions as we are not able  
11 to attain that standard at this time.

12 And again, we will provide written  
13 comments on the questions that MSHA has solicited to  
14 us and provide those written comments to you.

15 I thank you for the opportunity to submit  
16 these comments and will take any questions at this  
17 time.

18 MR. SEXAUER: Does anyone on the panel  
19 have a question?

20 Jim?

21 MR. PETRIE: Is Newmont current complying  
22 with the 308 microgram elemental carbon limit and if  
23 so, by what technology are you using to do that?

24 MR. TUCKER: To answer that question, I'll  
25 say that we are doing everything that we can to meet

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1 the standard and our current estimate is that we're  
2 meeting the standard 30 percent of the time. We have  
3 replaced a number of cabs in our pieces of diesel  
4 equipment, also increased ventilation. We've done  
5 testing on different filters and have changed some of  
6 our mining sequences in order to help provide less  
7 exposure to diesel.

8 MR. SEXAUER: George?

9 MR. SASEEN: You just mentioned you have  
10 tried some filter technology. Could you provide in  
11 your written comment, maybe some specific examples of  
12 the type of engines that you put them on, what type of  
13 issues you had with them, positive, negative and any  
14 costs associated with implementation of those filters?

15 MR. TUCKER: Yes, I'd be happy to provide  
16 that to you. Just in brief, we've had difficulties  
17 with filters because of the size of the filters and  
18 the length of time that they actually go without  
19 regeneration and it's quite a maintenance problem we  
20 found in dealing with the filters, but I will provide  
21 that information to you.

22 MR. SEXAUER: Any other questions?

23 Jim.

24 MR. PETRIE: Does Newmont have any type of  
25 medical evaluation they do for workers that are

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1 required to wear respirators, either for diesel or  
2 dust or other contaminants?

3 MR. TUCKER: Yes. We currently have a  
4 medical evaluation program in place that was  
5 established for dust.

6 MR. PETRIE: And are those evaluations  
7 done annually or during pre-employment physicals?

8 MR. TUCKER: Both. They are done during  
9 pre-employment physicals and then annually thereafter.

10 MR. PETRIE: Okay, thank you.

11 MR. SEXAUER: Thank you, Richard.

12 MR. TUCKER: Thank you.

13 MR. SEXAUER: Our next speaker is Steve  
14 Wood.

15 MR. WOOD: Good morning. Thank you for  
16 the opportunity to speak with you this morning. I've  
17 also brought Buck Chamberlain with me, for those of  
18 you who haven't met Buck. I'm the corporate safety  
19 director with Stillwater Mining Company. We operate  
20 two underground plating and platinum mines in South  
21 Central Montana. Buck is the industrial hygienist at  
22 our Stillwater Mine.

23 We welcome the opportunity to speak with  
24 you this morning, appreciate MSHA's willingness to  
25 acknowledge that there is some need to converse and

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1 discuss the issues that pertain to the diesel rule and  
2 as most of you have known, Stillwater has been very  
3 participated in this issue.

4 We urge MSHA at this time to act in this  
5 rulemaking to delete or revoke the permissible  
6 exposure limit of 160 micrograms per cubic meter of  
7 air and adopt the 308 interim limit as a final  
8 regulated standard. Stillwater appreciates the  
9 Agency's proposed phase-in of the final rule because  
10 it allows for technological advancements and time for  
11 us to comply. However, the phase-in approach to the  
12 final rule, DPM concentration, does not rectify the  
13 error in the rule which includes the lack of  
14 scientific justification, economic and technological  
15 feasibility and an appropriate TC/EC conversion  
16 factor.

17 The rule is simply not feasible for the  
18 majority of the mines' operators to meet and the  
19 appropriateness of the phase-in approach still does  
20 not diminish the inability of most mine operators to  
21 comply with the final exposure limit.

22 As MSHA is aware, Stillwater has been a  
23 leader in the cooperative effort and good faith  
24 efforts of industry, labor and the Agency to conduct  
25 research aimed to help develop and test DPM reduction

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1 technologies. We are committed to further protection  
2 of our health and safety of our miners and we welcome  
3 further opportunities to continue our cooperative  
4 research efforts.

5 Consistent with our commitment, we have  
6 just recently completed another joint research project  
7 with NIOSH in support of the metal/nonmetal diesel  
8 partnership. The purpose of this study was to  
9 evaluate the applicability of DPM control technologies  
10 for the Stillwater fleet.

11 As many of you know, the isolated zone  
12 studies that were conducted at Stillwater previously  
13 provided -- and we previously provided comment on  
14 those studies and they were basically conducted at the  
15 Stillwater mine and we made our facilities and our  
16 personnel and our resources available to the  
17 partnership, in an effort to identify potential  
18 solutions that would benefit not only our company, but  
19 also with our industry partners, to help us all gain a  
20 better understanding of the difficulties in complying  
21 with this rule.

22 These studies provided significant insight  
23 into the viability of diesel particulate filter  
24 systems, diesel oxidation catalyst converters and fuel  
25 form relations in reducing the concentration of DPM in

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1 an underground mining environment.

2 While the Phase I study was well suited  
3 for its initial objective, it provided no reliable  
4 data to indicate that the selected filter technologies  
5 would, in fact, provide the necessary reduction of DPM  
6 in an actual mining environment.

7 Thus, the Phase II case study was agreed  
8 upon in an effort to provide this relevant  
9 information. The Phase II case study report explains  
10 and applies the lessons of the Phase I study and  
11 provides critical safety and feasibility information  
12 regarding the use of DPS systems in actual mining  
13 conditions.

14 The Phase II study demonstrated the  
15 technological limitations that mines will encounter  
16 during attempted DPM reductions efforts in the actual  
17 mining cycle. Equipment failures and performance  
18 below that obtained during the isolated zone testing  
19 and as advertised by manufacturers were commonplace  
20 and will be repeated as the technologies are deployed  
21 elsewhere.

22 Moreover, the Phase II case study could  
23 only indicate or include those pieces of equipment for  
24 which a DPS system could be retrofitted. This  
25 category of diesel equipment represents only a small

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1 fraction of the total Stillwater fleet.

2           The Phase III study, selected control  
3 technologies including seven alternative fuel  
4 formulations and four filtration systems. These were  
5 tested to evaluate the effectiveness of the  
6 technologies for controlling DPM and gaseous emissions  
7 for underground diesel-powered equipment. Again, the  
8 study was well suited for its initial objective in an  
9 in situ environment, but provided no insight as to how  
10 effectively the selective filter technologies and  
11 alternative fuels would control DPM in the actual  
12 mining application.

13           The isolated zone proved the dangers  
14 inherent to promulgating a rule and mandating  
15 technology changes before feasibility and safety is  
16 proven.

17           As reported in the Phase II case study,  
18 the very technology that justified MSHA's feasibility  
19 determinations for the rule and appear promising in  
20 the isolated zone Phase I, produced such high levels  
21 of NO<sub>2</sub> in actual mining conditions that the miners  
22 were withdrawn and the test was stopped prematurely.

23           The condition was also present during  
24 specific DPM control tests and portions of all the  
25 isolated zone studies which led to the premature

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1 ending of some testing.

2           The experience gained in the isolated  
3 zones is extremely relevant to this rulemaking. It  
4 determined that after-market exhaust treatments would  
5 not ensure compliance to the final rule. It  
6 identified that two identical pieces of equipment may  
7 not be able to utilize DPS because of different duty  
8 cycles. It identified that only a small portion of  
9 the Stillwater diesel fleet was capable of  
10 successfully using the passive regeneration type  
11 systems. It identified the DPM controls have the  
12 potential to produce the hazardous conditions such as  
13 high NO2 levels.

14           It also identified the selection and the  
15 implementation of the proper DPM control systems as  
16 more complex and extensive than previously considered.

17           Finally, it concluded that additional research and  
18 testing was needed to evaluate the applicability of  
19 DPM controls for the entire fleet.

20           NIOSH and the metal/nonmetal diesel  
21 partnership conducted a study in November of this year  
22 of 2005 at the Stillwater mine to review gas related  
23 to the applicability of after-market DPM controls  
24 applied to our existing fleet. The study was  
25 conducted to gain better understanding of potential

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1 barriers to the application of after-market DPM  
2 control technologies. Equipment was classified into  
3 basic categories on the applicability of the equipment  
4 being suited for the installation of either a passive  
5 or an active regeneration system.

6 The appropriateness of these controls was  
7 determined by reviewing the work-area geometry where  
8 the equipment would be operated, the duty cycle, the  
9 thermal profile and the back pressure limitations,  
10 along with the physical visibility obstructions that  
11 could occur for the operator and if the controls would  
12 be likely to produce other hazardous gaseous  
13 emissions.

14 The study classified our equipment into  
15 three categories, whether or not they were likely  
16 applications, potential applications or unlikely  
17 applications. The final report of this study has not  
18 been completed, but will be presented at our DPM  
19 partnership meeting on January 19th of this year. The  
20 study identifies the complexity that mine operators  
21 are going to experience when evaluating effective DPM  
22 controls and applying after-market controls to the  
23 existing fleet.

24 DPM control solutions need to be evaluated  
25 on a practical case-by-case basis for each mine

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1 operator, mining method, duty cycle, and for the  
2 specific type of equipment. It's simply not a matter  
3 of fixing or selecting a DPF and installing it on a  
4 piece of equipment.

5 Research and testing of DPF regeneration  
6 systems has concluded that passive regeneration  
7 systems are preferred over active regeneration  
8 systems. A fit and forget method of the passive  
9 regeneration system has proven more reliable and  
10 functional for the Stillwater fleet with high duty  
11 cycles. Thermal profiling is conducted on equipment  
12 to determine the duty cycle and ensure the  
13 compatibility of the passive regeneration system to  
14 the equipment. However, currently, 25 passive  
15 regeneration systems have been installed on  
16 underground mining equipment and additional profiling  
17 is being conducted.

18 Our practical experiences with equipment  
19 that have the capability to operate the passive  
20 regeneration systems indicate this type of control can  
21 reduce these DPM exhaust emissions. Average operating  
22 life for the passive regeneration systems utilized at  
23 Stillwater is 3,000 to 4,000 hours at a cost ranging  
24 from \$7,000 to \$8500 per unit. At these costs, annual  
25 expenditure to install and maintain regeneration

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1 systems for the 82 identified units would be \$656,000.

2 The number of units suited for passive regeneration  
3 systems continues to be the minority when compared to  
4 the total equipment fleet.

5 The majority of the Stillwater fleet is  
6 not compatible with the passive regeneration due to  
7 low duty cycle or low exhaust temperatures that do not  
8 support passive regeneration.

9 For equipment not compatible with passive  
10 regeneration systems, active regeneration systems have  
11 been researched and tested at Stillwater. The costs  
12 of these systems have ranged from \$8,000 to \$11,000  
13 per unit. The systems tested have been primarily off-  
14 board regeneration systems due to the lack of  
15 feasibility and practicality for an on-board system.  
16 Practical experience with active regeneration system  
17 has not indicated these control's options are  
18 economically feasible for Stillwater diesel fleet.

19 Initial operating time before the unit is  
20 required to be removed and placed on regeneration is  
21 at best 10 to 15 hours, however, experience has shown  
22 that this can be as little as four hours before off-  
23 board regeneration is required.

24 The equipment identified for use with  
25 active regeneration systems has been limited to

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1 equipment that is parked on the surface at the end of  
2 the shift. Unfortunately, not all equipment can  
3 logistically be brought to the surface for  
4 regeneration. For those units that must be  
5 regenerated underground, additional excavations to  
6 house the regeneration equipment and to provide  
7 parking during regeneration would be required. These  
8 additional excavations are neither practical or  
9 economically feasible.

10 Additionally, moving equipment to the  
11 regeneration station is time consuming, unproductive  
12 and cost prohibitive.

13 Stillwater's DPM reduction plan placed  
14 high expectations on the use of disposable filter  
15 elements to reduce DPM exposures. These filter  
16 elements were installed on 89 pieces of equipment,  
17 primarily located in the lower off shaft at the mine.

18 The equipment identified for the  
19 installation of the filters was primarily of low DD  
20 cycle, low thermal profile and equipment that is not  
21 suited for either passive or active regeneration  
22 systems.

23 The effectiveness of these disposable  
24 filters was estimated to reduce DPM by approximately  
25 60 to 65 percent. Unfortunately, practical experience

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1 with these filters prove to be discouraging when the  
2 operating life of the filter became the primary  
3 concern. The average operating life ranged from 4 to  
4 10 hours, requiring filters to be discarded and  
5 replaced every two shifts.

6 Filter installation had to be positioned  
7 within the confines of the engine department to  
8 improve operator visibility and to reduce accidental  
9 damage. The physical dimensions of the canister and  
10 filter were evaluated and a size was selected that met  
11 the requirements for installing the unit within the  
12 operating compartment. Unfortunately, only one  
13 supplier was identified who was willing to develop a  
14 filter size for the Stillwater application. Other  
15 suppliers recommended larger filters used in tandem  
16 that would need to be installed outside of the engine  
17 compartment and on top of the equipment frame. This  
18 installation already subjected the canister to  
19 accidental damage and obstructed the visibility of the  
20 operator.

21 Additional challenges encountered were a  
22 higher number of filters that burned out, causing the  
23 seals and media to be ineffective at capturing the  
24 particulate matter. It was concluded that the exhaust  
25 temperatures, even though not high enough to be

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1 compatible for passive or active regeneration systems,  
2 did exceed the maximum temperature limits of the  
3 disposable filter.

4 The disposable filters are rated for 650  
5 degrees Fahrenheit and technically have the potential  
6 to work with many pieces of equipment. However, these  
7 controls are also limited by the amount of DPM they  
8 can store. Information provided by the supplier and  
9 research done by the Pittsburgh Research Laboratory  
10 indicated the 10-inch diameter filter has the capacity  
11 of 8 grams of DPM per inch of filter length. Beyond  
12 this loading rate, the back pressure will rise quickly  
13 and the potential for hot spots or burn outs will  
14 increase. The number and size of filters required was  
15 calculated based on 10 hours of run time between  
16 replacements. Few units have the space available for  
17 the filter or have the potential to exceed the 650  
18 degree Fahrenheit limit during normal operations.

19 The use of disposable filters in parallel,  
20 due to its particulate load and the cost of -- let me  
21 back up just one second, excuse me.

22 The use of disposable filters has proven  
23 to be cost prohibitive and as an example, I would  
24 share with you a Toyota pickup which we run several in  
25 the mine, would require two filters to be used in

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1 parallel due to the particulate load of these trucks  
2 at a cost of \$200 per filter, the annual cost to  
3 maintain filters on the truck is estimated to be  
4 between -- right at \$40,000 per unit.

5 The intent of the metal/nonmetal diesel  
6 partnership study was to identify the appropriate DPM  
7 control for the Stillwater fleet as it exists  
8 currently. The table which I'll provide to you in  
9 written comment represents the results of this study.

10 Results are divided into three categories of control  
11 applicability. As the results indicated, 29 percent  
12 of the Stillwater underground fleet is applicable for  
13 either passive -- for either a passive regeneration or  
14 an active regeneration system. Forty-nine percent of  
15 the Stillwater fleet was categorized as having  
16 potential where additional information was needed to  
17 determine the applicability of installing a passive or  
18 active regeneration system. And 23 percent of the  
19 Stillwater fleet is not suited to have either a  
20 passive or active regeneration system installed.

21 Stillwater is committed to continue its  
22 research on the equipment identified as potential to  
23 determine if effective controls can, in fact, be  
24 identified.

25 You asked about alternative fuels.

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1 Stillwater is presently using number one diesel and  
2 has started receiving shipments of ultra-low sulfur  
3 fuel. While ultra-low sulphur fuels have shown  
4 negligible reduction in DPM, the proven benefits  
5 indicate that ultra-low sulfur has the potential to  
6 improve DPF efficiency and reduce the potential for  
7 runaway regeneration.

8 The utilization of ultra-low sulfur fuel  
9 at Stillwater will continue. Stillwater continues to  
10 research and negotiate with its regional suppliers on  
11 the availability of other alternative fuels, primarily  
12 biodiesel.

13 We ran limited tests of biodiesel at the  
14 Stillwater mine and it has shown potential in reducing  
15 DPM concentrations. However, the availability of  
16 receiving biodiesel has proven difficult. No  
17 manufacturers of biodiesel have been located in the  
18 proximity of the mine, making availability for  
19 delivery a significant concern. In addition to  
20 availability, cold weather concerns were evaluated to  
21 determine the necessary storage requirements to reduce  
22 the potential for the fuel to gel. Because regional  
23 suppliers do not have the capability to manage, store,  
24 blend and transport in heated containers, on-site  
25 storage was evaluated. A cost analysis concerning

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1 on-site storage was conducted with the regional  
2 supplier and proved cost prohibitive.

3 Currently, this option is not economically  
4 feasible and time is needed for manufacturers to  
5 construct distribution centers closer to mines or  
6 alternatives must be identified to make alternative  
7 fuels more economic.

8 Water emulsion fuels were also tested in  
9 the Isozone studies. We saw significant effect of  
10 engine performance during these tests. Engine  
11 equipment operators indicated during the testing that  
12 these fuels had a significant reduction of horsepower.

13 Stillwater has not conducted any future or any  
14 additional tests of water emulsion fuels.

15 With regard to environmental cabs,  
16 feasibility of cabs within the Stillwater operations  
17 has been a huge issue, not only for DPM, but also for  
18 noise. The ability to install cabs on all equipment  
19 is neither feasible nor practical within our mine, due  
20 to the geometric constraints. Some cabs have been  
21 installed, however, on equipment that can be  
22 constrained and restricted to a specific mining  
23 location. These constraints minimize equipment  
24 utilization and operational flexibility, but is used  
25 when possible.

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1           Since 2001, Stillwater has performed a  
2 proactive engine campaign to replace the higher DPM  
3 emitting engines with the newer EPA Tier I and Tier II  
4 rated engines. To date, 68 percent of the underground  
5 equipment meets the U.S. EPA Tier I or Tier II rating.

6       In addition to replacing older engines, Stillwater  
7 has been upgrading newer existing engines by  
8 installing electronic EMR II governors. This  
9 proactive approach of replacing and upgrading engines  
10 has indicated an impact on reducing DPM  
11 concentrations. Stillwater has also tested the newly  
12 available Tier III engines. Currently, one Tier III  
13 engine is being operated at the mine and three  
14 additional engines are expected to arrive in late  
15 January.

16       In conjunction with the engine replacement  
17 programs, Stillwater has been involved in an extensive  
18 emission monitoring and engine-tuning program. This  
19 program provides knowledge of how the equipment is  
20 running and ensures that the engine is performing  
21 within optimal emissions parameters. The longer the  
22 engine stays in its optimal parameters, the more  
23 efficient the engines run, which potentially has an  
24 impact on the amount of particulate that the engine  
25 emits.

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1           As far as ventilation is concerned, both  
2 the Stillwater and East Boulder Mine have completed  
3 major ventilation upgrades. Both currently have  
4 additional ventilation raises being developed to  
5 surface that will further support the reduction of  
6 DPM. However, even with these significant  
7 enhancements, compliance to the DPM regulation cannot  
8 be guaranteed.

9           Since 2002 to present, the Stillwater mine  
10 has increased ventilation, CFM, from 766,000 to 1.212  
11 million CFM. The East Boulder mine has increased  
12 ventilation from 135,000 CFM to 215,000 CFM. The East  
13 Boulder mine has just recently completed another  
14 ventilation raise to surface, has one in progress  
15 that's scheduled to be completed by mid-year.

16           With regard to the conversion factor, it  
17 is apparent that MSHA also has a concern about the  
18 complexity of developing an appropriate conversion  
19 factor in order to determine the correct TC to EC  
20 relationship. Stillwater believes that additional  
21 research is needed in order to determine an  
22 appropriate conversion factor. Recent evidence  
23 indicates that the EC to TC relationship may change  
24 depending on various dynamics such as fuel type, DPM  
25 control technologies being utilized and engine duty

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1 cycle. The relationship between elemental carbon and  
2 total carbon as DPM concentrations are reduced remains  
3 unclear. Additional research is needed to determine  
4 the appropriate variability and to what extent the  
5 error factor for EC compliance determination must be  
6 increased as the DPM limits decrease.

7 As mentioned by an earlier speaker,  
8 Section 101(a)(9) of the Mine Act, due to the  
9 premature promulgation of this rule, no available  
10 scientific evidence exists that determines any health  
11 related effects with DPM exposures at any level. The  
12 current limits lack the scientific certainty that DPM  
13 poses any health related diseases. It is because of  
14 this uncertainty that MSHA needs to delete the 160  
15 final PEL and permanently adopt the 308 interim limit  
16 as the final regulated number. The NIOSH/NCI study of  
17 possible DPM related health effects is coming to  
18 conclusion, and should give evidence if DPM is  
19 correlated with any adverse health effect.

20 MSHA has chosen not to wait for the  
21 outcome of this study and intends to promulgate the  
22 DPM rule without the justified scientific evidence of  
23 adverse health effects. By doing so, MSHA has not met  
24 the requirements of Section 101(a)(6)(A) which states  
25 the Secretary, in promulgating mandatory standards

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1 dealing with toxic materials or harmful physical  
2 agents under this subsection, shall set standards  
3 which most adequately assure on the basis of the best  
4 available evidence that no miner will suffer material  
5 impairment of health or functional capacity even if  
6 such miner has regular exposure to the hazards dealt  
7 with by such standard for the period of his working  
8 life. Development of mandatory standards under this  
9 subsection shall be based upon research,  
10 demonstrations, equipment and other such information  
11 as much be appropriate.

12 In addition to the attainment of the  
13 highest degree of health and safety protection for the  
14 miner, some considerations shall be the latest  
15 available scientific data in the field, the  
16 feasibility of the standards, and experience gained  
17 under this and other health and safety laws. Whenever  
18 practicable, the mandatory health or safety standard  
19 promulgated shall be expressed in terms of objective  
20 criteria and of the performance desired.

21 MSHA is encouraged to postpone this DPM  
22 regulation until this valuable study is completed and  
23 the results of the study can be evaluated. This study  
24 is critical to help identify the appropriate exposure  
25 limit.

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1           With regard to respiratory protection,  
2 Stillwater is committed to providing a safe and  
3 healthy environment for its employees. Unfortunately,  
4 this DPM rule has posed a significant burden on the  
5 workforce with the requirements of respiratory  
6 protection. Even with its extensive effort to reduce  
7 DPM exposures miners are currently being required to  
8 wear respirators. Based on internal DPM personal  
9 sampling 60 percent of the samples exceeds the 308  
10 exposure limit and 99 percent of internal samples  
11 exceed the 160 final PEL. Although exposures have  
12 decreased, over 50 percent since the 2001 rule was  
13 promulgated, Stillwater continues to have significant  
14 challenges to comply with the 308 interim rule.

15           Currently, miners are required to wear  
16 respirators during certain tasks, such as operating  
17 LHDs and haul trucks that have proven to be a  
18 significant course of DPM exposure. Based on these  
19 internal samples, the use of respiratory protection  
20 would increase and ultimately be required by nearly  
21 all miners through the entire work force as the rule  
22 continues through the proposed multi-year phase-in,  
23 ultimately to the 160 final PEL. This requires usage  
24 of respirators is not practical and would  
25 significantly burden the miner.

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1            Stillwater is concerned that if respirator  
2 usage were to be mandatory throughout the entire mine,  
3 miners' acceptance of the rule and the ability to  
4 safely remain productive would be severely  
5 compromised.

6            With regard to transfer rights and  
7 transfer of miners, the transfer of miners unable to  
8 be medically cleared to wear a respirator needs to  
9 continue to be managed by the mine operator and  
10 through its collective bargaining agreement when in  
11 unionized operations. In the event that an employee  
12 cannot meet the requirements of wearing a respirator  
13 while performing their duties and there is no  
14 available work that the restricted employee is  
15 qualified to perform, the employee should be  
16 considered medically unfit for duty. The employment  
17 of such employees may be terminated subject to the  
18 provisions of the applicable company policy collective  
19 bargaining agreement and/or state and federal law. In  
20 the event that an employee cannot meet the  
21 requirements of wearing a respirator while performing  
22 their duties and there is available position in which  
23 the person is qualified, the employee should be  
24 transferred to the existing position and that's  
25 available to him. This employee should then receive

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1 pay at the rate of pay for the new job classification.

2 As the proposed rule stands currently, a  
3 single sample collected is adequate basis for  
4 determining compliance. In the event that the sample  
5 exceeds the PEL, the affected miner is required to be  
6 properly fitted and trained for a respirator.  
7 Stillwater believes that anytime the average of three  
8 samples taken by MSHA indicates the PEL has been  
9 exceeded for more than one month in any year, and MSHA  
10 determines that exposures are likely to remain above  
11 the applicable level, overexposed miners should be  
12 entitled to exercise their right to wear a respirator.

13 With regard to extensions, the Isozone  
14 study results indicate that each mine had unique  
15 challenges to comply with the DPM rule and current  
16 technology may not be available to reduce DPM  
17 concentrations to the final limit. Stillwater  
18 believes that when a mine demonstrates a "good faith"  
19 attempt to reduce DPM exposure levels, but needs  
20 additional time to comply, the mine should be granted  
21 a one-year renewal extension, special extension of  
22 time to work towards compliance.

23 Stillwater also recommends that until  
24 feasible control devices are demonstrated to be  
25 effective and commercially available for current in-

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1 mine equipment, the operator should be granted a  
2 special extension. Stillwater agrees with MSHA that  
3 extensions need to be granted and managed by the  
4 District Manager, but would also request a final  
5 written determination of both the District Manager and  
6 the Administrator for metal and nonmetal should the  
7 operator be denied an extension. Special extensions  
8 should also be granted for the entire mine or a  
9 portion of the mine.

10 Pending the outcome of MSHA considerations  
11 of an application for special extension, the PEL  
12 previously in effect or the previously granted special  
13 extension should remain in effect. This would ensure  
14 that regular communications continue throughout the  
15 DPM reduction efforts with the mine operator. These  
16 special extensions should be granted until such time  
17 when feasible, effective controls are readily  
18 available to industry.

19 MSHA would be allowed, within the  
20 provision, to review evidence of good faith efforts  
21 toward compliance during the extension period. MSHA  
22 should also be part of these efforts in the form of  
23 compliance assistance and information sharing. MSHA  
24 should also grant repeated special extensions as long  
25 as the operator demonstrates good faith efforts to

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1 reduce DPM levels. Stillwater also urges MSHA to  
2 provide clarity in the rule for how the special  
3 extensions will be granted and how feasibility  
4 determinations will be made.

5 Technological and economic feasibility.  
6 Technology and economic feasibility determinations are  
7 perhaps the greatest barriers to the promulgation of a  
8 supportable and effective DPM rule. The availability  
9 of DPM control technology that MSHA was certain would  
10 be available by January 2006 has not been adequate to  
11 reduce DPM concentrations to meet the 308 microgram  
12 interim rule or the 160 final rule. The potential  
13 availability of additional controls during the multi-  
14 year phased-in period is not guaranteed as well.

15 Industry cannot rely on what might be  
16 available to them in the future. This statement is  
17 probably best supported by the actual procurement,  
18 installation and replacement costs of DPM controls  
19 being significantly greater than MSHA estimated in  
20 their feasibility work.

21 Even with the incurred costs and efforts  
22 associated with reducing DPM exposures, Stillwater has  
23 not yet been able to find any feasible means for  
24 compliance to the 308 microgram interim rule or the  
25 160 final PEL.

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1           In conclusion, Stillwater Mining Company  
2 maintains its commitment to provide a safe and  
3 healthful work environment for its employees.  
4 However, following extensive research, analysis and  
5 the implementation of available feasible control  
6 technologies, the company still cannot guarantee full  
7 compliance with the 308 microgram interim limit in all  
8 circumstances.

9           As a positive result, Stillwater has, in  
10 fact, reduced its exposures by nearly 50 percent. SMC  
11 has worked diligently to identify and implement  
12 economic and technologically feasible controls to  
13 comply with the 160 final PEL, but unfortunately is  
14 still unable to attain ultimately control.

15           Again, the staggered phased-in approach  
16 for effective dates to the final DPM concentration  
17 does not rectify the error in the rule, which includes  
18 lack of scientific justification, economical and  
19 technological feasibility and the appropriate TC to EC  
20 conversion factor.

21           In conclusion, we urge expedited action by  
22 MSHA to complete the rulemaking consistent with the  
23 interim settlement agreement including first, the  
24 deletion of the 160 microgram final PEL; second, the  
25 permanent adoption of the 308 microgram interim rule;

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1 third, the adoption of the compliance extension  
2 provisions for the 308 limit to permit yearly  
3 applications and extensions based on feasibility  
4 issues; and four, adoption of personal protective  
5 equipment and administrative control options, to  
6 supplement engineering controls, pursuant to existing  
7 standards and policy; and then lastly, provide a clear  
8 explanation of the process for granting special  
9 extensions and incorporate this into the final rule.

10 We thank you for your time and I'd like to  
11 welcome any questions you may have.

12 MR. SEXAUER: Jim, do you have a question?

13 MR. PETRIE: As with the other speakers,  
14 what medical evaluation procedures does Stillwater  
15 have and with what frequency are they conducted? And  
16 would you be able to provide some cost information on  
17 the cost of any medical evaluations that you do?

18 MR. WOOD: Sure will. Medical evaluations  
19 are conducted annually, prior to being placed on  
20 respiratory protection program and annually  
21 thereafter.

22 MR. PETRIE: I would appreciate if you  
23 could provide some cost information on that.

24 MR. WOOD: We will in our final written.

25 MR. SEXAUER: Doris?

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1 MS. CASH: Yes. You said you had looked  
2 at a biodiesel and had some problems with the costs on  
3 it being prohibitive. Could you provide me written  
4 comments, and explanation of that so that we'll have  
5 that cost information for our own economic analysis?

6 MR. WOOD: We will.

7 MS. CASH: We'll look at them and that  
8 will be helpful.

9 MR. WOOD: Will do.

10 MS. CASH: Thank you.

11 MR. SEXAUER: George?

12 MR. SASEEN: Yes. You said you had 25  
13 passive systems that were installed on vehicles. Can  
14 you elaborate on what type of vehicles they are? Are  
15 they currently still on there, running today?

16 MR. WOOD: The passive sit traps  
17 (Phonetic) are placed on our haulage fleet, our haul  
18 trucks. They have an engine that's a 1013. They do  
19 have a high duty cycle, high thermal T30 rating, so we  
20 are seeing success as far as those pieces of  
21 equipment.

22 MR. SASEEN: And they're still running  
23 today?

24 MR. WOOD: Correct.

25 MR. SASEEN: And you said 3,000 to 4,000

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1 hours. Was that combined or is that each?

2 MR. WOOD: That's each.

3 MR. SASEEN: Each unit is --

4 MR. WOOD: Three to four thousand hours  
5 each unit.

6 MR. SASEEN: Today, still today.

7 MR. WOOD: George, it's interesting. It's  
8 application related. It has to do with thermal cycle  
9 and the ability to regenerate as you well know. This  
10 particular fleet runs fairly steadily throughout the  
11 entire work shift and does generate thermal cycles  
12 that are supportive of running a passive regeneration  
13 system. Small amount of our fleet when you look at  
14 our fleet in its entirety, we're running well over 300  
15 pieces in the mine and we're looking at 25 that are  
16 suited for --

17 MR. SASEEN: What size haul trucks are  
18 they?

19 MR. WOOD: MTI60.

20 MR. SASEEN: And have you seen a change  
21 with the install of these 25, have you seen a specific  
22 drop in DPM levels associated with the installation of  
23 those?

24 MR. WOOD: You folks are aware of the size  
25 and complexity of the Stillwater mine and it's a

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1 dynamic mine. Things are changing and moving all the  
2 time, equipment is being utilized in various  
3 locations. We've seen accumulative reduction by  
4 nearly 50 percent when you take the ventilation  
5 upgrades, the active and passive filters that are  
6 being utilized, the somewhat ineffective but whatever  
7 result we got from the diesel, the disposable filter  
8 elements.

9 Cumulatively, we've seen a reduction.  
10 It's very hard for me to say that we've seen a  
11 noticeable reduction with the active filters based on  
12 the way that they're utilized and the dynamics of not  
13 only the ventilation system, but the travel that these  
14 trucks take up and down our ramp systems and along  
15 grades, all which ways.

16 MR. SASEEN: How about the miners? Have  
17 they given you any feedback on what the ones working  
18 around to be operators driving those vehicles? Can  
19 they tell a difference?

20 MR. WOOD: There's been a noticeable  
21 reduction in the atmosphere of our mine. You can see  
22 that the air is clean. And what that means and  
23 specifically what that tells us, I'm not sure, but  
24 exchanging engines for cleaning burner engines, tuning  
25 these engines, operator awareness and participation

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1 and operating equipment in a fashion that reduces DPM  
2 overloading as well, all these things and working in  
3 concert with one another has had an effect of making  
4 the circumstances much better and much improved and  
5 noticeable improvement.

6 I couldn't tell you with one particular  
7 control solution had an effect by in and of itself  
8 would have been noticeable, just don't know.  
9 Everything working in conjunction with one another has  
10 had a positive effective. That, in fact, is part of  
11 the role. That is probably the most difficult part of  
12 the problem, identifying exactly what's working,  
13 what's not working, the various duty cycles and  
14 thermal cycles that are generated in the way that our  
15 equipment is operated, makes this a very complex issue  
16 for us.

17 MR. SASEEN: Okay, on the active systems,  
18 what type of machines -- again, what type of machines?  
19 Are they currently still operating with success?

20 MR. WOOD: Yes, the active systems were  
21 placed on -- currently, about five utility vehicles.  
22 They did not have a duty cycle that would support a  
23 passive system. We did place DCL Titans on them. We  
24 do -- we initially had limited success. Like we said,  
25 it was about 10 hours before regeneration, but right

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1 now we're down to about four hours before these pieces  
2 of equipment need to get regenerated.

3 MR. SASEEN: And what type of engines are  
4 in those?

5 MR. WOOD: They'll be Deutsche 1013s. You  
6 mentioned in a statement that any time that you can  
7 fit and forget, so to speak, a filter or a control on  
8 a piece of equipment, you're much better off, if  
9 you're able to do so. Anything that requires  
10 individual interaction with regard to taking an off-  
11 board regeneration reactor unit and regenerating it or  
12 changing a disposal filter or any of those kinds of  
13 things, it seems like we have less success managing  
14 those than we do with an active type system. It's  
15 just unfortunate that it's just such a small fraction  
16 of our total fleet that's able to be suited or fitted  
17 for an active system.

18 MR. SASEEN: Active or passive?

19 MR. WOOD: Passive, I'm sorry.

20 MR. SASEEN: Passive, thank you. You said  
21 on the active systems you're seeing less hours between  
22 regeneration?

23 MR. WOOD: Yes.

24 MR. SASEEN: Have you identified engine  
25 condition or maintenance or filter?

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1 MR. WOOD: That's right now currently  
2 being researched and looked at is why we're seeing  
3 this degradation as far as these systems is what's  
4 currently being looked at right now.

5 MR. SASEEN: If you do have some  
6 information by the close of the comment period, we'd  
7 appreciate if you could provide us with that, to give  
8 us a history there.

9 MR. WOOD: I think a lot of it is subject  
10 to operators, how an operator actually runs the  
11 equipment. I mean not intentionally or  
12 unintentionally, just how the person happens to  
13 operate. Those that seem to be operating at a higher  
14 RPM and generating a higher exhaust temperature, seem  
15 to cause those active systems to last a little bit  
16 longer before they're needing to be regenerated.

17 MR. SASEEN: And just one, it goes to the  
18 disposables again, the 89 pieces, are they still  
19 currently installed?

20 MR. WOOD: For the most part. We will be  
21 making a decision to get rid of -- get those off  
22 relatively soon. We're trying to find another  
23 solution for the small equipment load cycle type  
24 equipment. At the time, first of the year actually,  
25 first of 2005, we thought that those may offer some

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1 real potential to that fleet and have since determined  
2 that they've been not nearly as effective as we would  
3 hope.

4 MR. SASEEN: And they are mostly on the  
5 Toyota pickup trucks?

6 MR. WOOD: They're on a lot more than  
7 trucks. We've put them on just about any kind of  
8 utility vehicle or employee transport vehicle that we  
9 have.

10 MR. SASEEN: And the main reason, I mean  
11 you said there were 4 to 10 hours. You just don't  
12 feel that's significant enough?

13 MR. WOOD: No, they burn out. You get a  
14 spike in exhaust temperature that will exceed the 650  
15 degrees Fahrenheit that will cause them to burn  
16 through, the loading or unexpected loading of  
17 particulate on the filter will cause the filter to  
18 burn through. The operator, who's dependent upon a  
19 back pressure indicator to tell them when it's time to  
20 change, will not see a rise in back pressure, due to  
21 the fact that the filter is burned through and so  
22 therefore they're not doing anything effectively, but  
23 yet, there's no indication to the operator that  
24 there's a problem or something needs to be changed.  
25 And this could happen very, very quickly or it can

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1 actually take a few hours before it happens, but --

2 MR. SASEEN: Just a final question, have  
3 you looked into exhaust gas cooling prior to those  
4 filters?

5 MR. WOOD: Not that I'm aware of.

6 MR. SASEEN: Thank you.

7 MR. WOOD: You bet.

8 MR. SEXAUER: Bill?

9 MR. POMROY: Just a question. You  
10 mentioned that the passive filters have a life of  
11 their own, 3,000 to 4,000 hours. What is the typical  
12 failure mode at that point? What causes them to fail?

13 MR. WOOD: Many things from a crack -- and  
14 I don't know what would cause that and so --

15 MR. POMROY: Do you know what your  
16 schedule is for cleaning the filters, for removing the  
17 ash?

18 MR. WOOD: As far as maintenance on the  
19 filters themselves, that's just barely starting to get  
20 effective, as far as what type of time frame we want  
21 to go in there. I think the initial time frame right  
22 now is going to be about every 500 hours before we go  
23 in there and do clean those.

24 MR. POMROY: So you are cleaning them now,  
25 probably around that --

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1 MR. WOOD: That is what's been decided at  
2 this point.

3 MR. POMROY: How about on the active  
4 filters, how often are those cleaned of the ash?

5 MR. WOOD: Active filters right now are  
6 just pretty much being an evaluation test phase and we  
7 haven't done anything to the schedule.

8 MR. POMROY: How much fuel do you buy  
9 every year for the two mines, for East Boulder and  
10 Stillwater together? A guess or maybe you could  
11 include that in the written comments.

12 MR. WOOD: I can get that to you. I  
13 believe it's just over 200,000 gallons is what I'm  
14 thinking.

15 MR. POMROY: Okay, for the two mines  
16 together. Where do you store your fuel now?

17 MR. WOOD: On site.

18 MR. POMROY: I mean underground or  
19 surface?

20 MR. WOOD: On surface.

21 MR. POMROY: No underground storage at  
22 all?

23 MR. WOOD: There are satellite storage  
24 facilities that are set up throughout the mine, but  
25 the bulk of storage is on surface.

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1 MR. POMROY: And that's outdoor tanks,  
2 buried tanks, above-ground tanks?

3 MR. WOOD: Above-ground tanks.

4 MR. POMROY: How much is stored  
5 underground? Is it just batch tanks?

6 MR. WOOD: Don't know -- yeah, I don't  
7 know.

8 MR. POMROY: Do you drop that down bore  
9 holes or do you haul it in?

10 MR. WOOD: We take it in in totes, drive  
11 it in.

12 MR. POMROY: Okay. A couple questions  
13 about that Spokane NIOSH study. You had indicated 29  
14 percent of the fleet was suitable for passive filters,  
15 49 percent had potential and 23 percent was not  
16 suitable for either passive or active. Do you know  
17 what the breakdown is by horsepower, rather than just  
18 by unit?

19 MR. WOOD: Yes, we will provide that to  
20 you.

21 MR. POMROY: Also, I'm not sure how to say  
22 this, but could you also include in that response an  
23 indication of hours of usage per shift as well as  
24 horsepower so that you get some idea of how many grams  
25 per shift of DPM production would be suitable for

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1 filters, would have potential for filtration and would  
2 be not suitable.

3 MR. WOOD: I think you'll see a table in  
4 that in the final report that will be presented on  
5 January 19th to the partnership as well.

6 MR. POMROY: To take into account both the  
7 horsepower and the hours of usage per shift.

8 MR. WOOD: Yes.

9 MR. POMROY: Okay. A couple questions  
10 about the ventilation.

11 MR. SEXAUER: Let me just interrupt here  
12 for a second. We're running considerable over the  
13 time period where I said we would take a break. What  
14 I propose is that we take a 10-minute break right now  
15 and come back and finish up our questions, if that's  
16 acceptable to you?

17 MR. WOOD: You bet.

18 MR. SEXAUER: Let's take a break for -- I  
19 have 10:43 until maybe 10:53 and we'll come back  
20 promptly at 10:53. Off the record.

21 (Off the record.)

22 MR. SEXAUER: Okay, we're back on the  
23 record. I think Jim, you have a question?

24 MR. PETRIE: Yes, just a few more on your  
25 respiratory protection program. Do you have an

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1 estimate on the number of miners under your current  
2 program that you found unable to wear respirators and  
3 if you could, provide us with that information as well  
4 as an estimate of how many might there be under the  
5 final rule?

6 MR. WOOD: I'll include it the final --

7 MR. PETRIE: Okay, so you'll be submitting  
8 that information?

9 MR. WOOD: We'll submit that.

10 MR. PETRIE: Okay. Just a few more  
11 questions then. Do you have any miners that currently  
12 are wearing powered air purifying respirators or non-  
13 negative type pressure respirators?

14 MR. WOOD: Not for DPM.

15 MR. PETRIE: Not for DPM. Okay. And if  
16 you have had miners that could not wear a respirator,  
17 what does your company currently do with them? Do  
18 they offer transfer or are they terminated?

19 MR. WOOD: We haven't had as yet. We had  
20 one individual who may have been close and chose to  
21 retire. It was time for him to retire anyway.  
22 Currently, if a person is qualified and there's an  
23 available position for which is he is, can fulfill the  
24 requirements of the job, and unable to wear a  
25 respirator that's required in his regular position, he

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1 would be transferred into that position and paid at  
2 the rate of the new classification that he's  
3 transferred to.

4 If there was no available position or  
5 position for which he's qualified for, he would be  
6 then placed into a situation where it would be with  
7 our human resources group as -- using our collective  
8 bargaining agreement as a tool to determine what would  
9 be done with it.

10 MR. PETRIE: Thank you.

11 MR. SEXAUER: Doris?

12 MS. CASH: Yes. You said that there was a  
13 certain percentage of your miners that currently are  
14 required to wear respirators when they're in the  
15 positions where your own testing has shown that they  
16 might be over-exposed. Could you please include that  
17 information also as to what you think your current  
18 information is as to the number of miners that are now  
19 wearing respirators?

20 MR. WOOD: Okay. The other thing along  
21 with that too, Doris, I think it's very important that  
22 we capture as well is this conversation around the  
23 single sampling determination, to put a person into a  
24 respirator. We've had persons who are working in job  
25 classifications where multiple internal samples have

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1 indicated that person would not be over-exposed.  
2 However, on a given day, dependent upon activity and  
3 other things going on in the area, a sample may come  
4 up or could come up over-exposed, a single sample.

5 Our practice has been when that sample  
6 indicates a person is over-exposed, we fit them and  
7 put them into a respirator. Probably, not the best  
8 practice. Probably, should have multiple samples that  
9 need to be taken to make that determination.

10 Let me back up and clarify that just a  
11 little bit. That's the practice that we use  
12 internally. We take multiple samples to determine  
13 those jobs or those job tasks where a person's  
14 exposures are significant enough to put them in a  
15 respirator. They exceed the interim rule.

16 When MSHA comes in and does a sample, the  
17 single sample that they take if indicative of an over-  
18 exposure that person then is put into a respirator, if  
19 there's an over-exposure. That's my concern. I think  
20 that it's very important that we recognize and realize  
21 that mine conditions and things are going to change.  
22 The mines are dynamic and on any given day a single  
23 sample could indicate a potential over-exposure. Is  
24 that person then at any significant health risk? I  
25 don't think so because there aren't any studies that

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1 indicate that he would be. So it doesn't make a lot  
2 of sense to put the person into a respirator based on  
3 that one over-exposure.

4 I would much prefer to see what we  
5 recommended, three samples taken, prior to making the  
6 determination, three of MSHA's samples taken that show  
7 an over-exposure, prior to putting a person into a  
8 respirator. Seems to make more sense to me. There's  
9 more scientific basis for that at that point.

10 MR. SEXAUER: Deborah, do you have a  
11 follow up question?

12 MS. CASH: In reference to the multiple  
13 samples being taken for purposes of placing a miner in  
14 the respiratory protection program, I just need you to  
15 clarify that you're not speaking in terms of multiple  
16 samples for making the determination that the miner is  
17 over-exposed, but the purpose of the multiple samples  
18 would be for whether or not you need to have that  
19 miner wear a respirator?

20 MR. WOOD: That's correct.

21 MS. CASH: Okay.

22 MR. WOOD: That is correct. Can I give  
23 you an example of that?

24 MS. CASH: Yes. I was going to ask you  
25 that in your written comments that you submit, could

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1 you provide the Agency with a scheme for how we could  
2 implement that or how we could put that in a  
3 regulation? I would appreciate it, and some specifics  
4 about what we should be doing for purposes of if we  
5 were adopt that type of scheme?

6 MR. WOOD: We will.

7 MS. CASH: Okay, so I want to clarify one  
8 other thing for purposes of your comments, so we would  
9 have the single sample for purposes of determining  
10 whether the miner is over-exposed, and then if the  
11 miner is over-exposed and the miner has not been  
12 placed in a respirator beforehand, the citation would  
13 be issued or if the miner is in a respirator, and  
14 other feasible controls could be provided, you would  
15 still get a citation, but the bottom line is the  
16 citation is issued for that, but you would like some  
17 intervention or some other type of additional sampling  
18 from the Agency before you are required to place that  
19 miner in a respirator?

20 MR. WOOD: That is correct.

21 MS. CASH: Okay.

22 MR. SEXAUER: William?

23 MR. BAUGHMAN: Hi. If you have any  
24 information that you could provide about what prompted  
25 you to make thees recommendations, that would be

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1 helpful as well about -- if you have any special  
2 studies with respect to what you might recommend, as  
3 well as any recent or historical information about  
4 with respect to occupations and miners and how many  
5 replicates or how many times they were over-exposed or  
6 may indicate over-exposure.

7 MR. SEXAUER: Any other questions? A  
8 couple more questions here. What is your company's  
9 procedure for monitoring NO2 exposures of equipment  
10 operators?

11 MR. WOOD: We place gas testing equipment  
12 on them. It would be either be an ITX or TMX, full-  
13 shift samples.

14 MR. SEXAUER: And then what? If you look  
15 at that monitor and when the monitor goes to what  
16 level, then what do you do?

17 MR. WOOD: We haven't seen anything as far  
18 as initial time weighted average exposures. With the  
19 initial testing on some of these highly catalyzed suit  
20 traps and that stuff, during the research, it was  
21 during that time where we saw the spikes of NO2 and at  
22 that point we disconcluded all of the testing and  
23 stopped from there.

24 MR. SEXAUER: Your procedure just for  
25 normal, routine production operations though is that

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1 you do have an ITX or a TMX on each piece of  
2 equipment?

3 MR. WOOD: No.

4 MR. SEXAUER: No. Just for the research?

5 MR. WOOD: Yes.

6 MR. SEXAUER: Okay. Let's see, do all of  
7 the engines that have filters attached, are they  
8 provided with back pressure gauges?

9 MR. WOOD: Yes, they are.

10 MR. SEXAUER: The Toyota pickups that you  
11 mentioned had fabric filters, the synthetic media  
12 filters, are those really like a Miller technology  
13 modified Land Cruiser or is it more of a production  
14 Toyota pickup?

15 MR. WOOD: It's a Miller technology.

16 MR. SEXAUER: It's a Miller technology.  
17 You buy those from Miller.

18 MR. WOOD: We do.

19 MR. SEXAUER: Do you know what engine is  
20 installed in those?

21 (Pause.)

22 MR. WOOD: It just says 1DZ11.

23 MR. SEXAUER: Okay.

24 MR. WOOD: And 1HC.

25 MR. SEXAUER: 1HC. Could you get a

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1 breakdown of how many you have of the 1HC versus the  
2 other engine?

3 MR. WOOD: Yes.

4 MR. SEXAUER: Just a couple questions  
5 about the biodiesel, too. Where is the closest  
6 biodiesel production facility to Stillwater, do you  
7 know?

8 MR. WOOD: There are more than one  
9 available to us, none of them seem to -- nothing that  
10 we can depend upon. We've been working with Senex  
11 (Phonetic), a local distributor and refiner in  
12 Billings. They're highly interested in developing  
13 some sort of market, commercial market for biodiesel  
14 in the area, where they would choose to pick this fuel  
15 up, I just don't know.

16 The difficulty, as I mentioned, has been  
17 finding a way to transport and store enough biodiesel  
18 that can remain on site during the cold winter months.

19 There's no way to transport biodiesel from any  
20 facility, even Billings or Columbus that can get it on  
21 site without having the effects of this gelling  
22 causing some difficulty and float difficulties because  
23 there aren't transport vehicles that are heated. So  
24 what we were looking at was to try and find a way to  
25 develop the infrastructure at Stillwater, the storage

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1 facilities at the mine where during the warm months it  
2 could be transported to site and remain on site,  
3 either put into the underground environment or remain  
4 on surface and heated, so that during the winter  
5 months, we wouldn't have to worry about availability.

6 That's the storage method that was preferred and the  
7 one that proved to be -- not cost effective at  
8 present.

9 MR. SEXAUER: Your current fuel deliveries  
10 are in just in 8,000-gallon semi-trucks?

11 MR. WOOD: Yes.

12 MR. SEXAUER: And they come out of  
13 Billings?

14 MR. WOOD: Out of Columbus.

15 MR. SEXAUER: Columbus.

16 MR. WOOD: Yes.

17 MR. SEXAUER: Let's see, what steps has  
18 Stillwater taken since the MSHA tech support  
19 evaluation of your ventilation system to improve  
20 installation of auxiliary ventilation systems to  
21 ensure proper operation over time, but those auxiliary  
22 systems?

23 MR. WOOD: We've gone to -- we changed our  
24 blast bag, what we call it, the bag that's carried up  
25 toward the working phase. We have improved upon the

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1 connections of the auxiliary fans. We have an  
2 auditing process in place that audits the connections  
3 themselves to make sure that they're being maintained  
4 adequately.

5 There have been a number of upgrades that  
6 have occurred, probably since your last visit as well.

7 In fact, I can't remember the exact timing. I  
8 believe that the initial bore hole to surface was  
9 already in when you folks were there in our upper  
10 west. We have a second one scheduled for this year as  
11 well and multiple number of internal bore hole systems  
12 that have been established in our lower off-shaft  
13 areas of the mine as well.

14 But mainly, I think, probably the most  
15 effective has been oversight and attention paid to  
16 audits and inspections to improve that capability.

17 MR. POMROY: If you could detail those  
18 procedures in the written comments that would be real  
19 helpful.

20 You've mentioned about 68 percent of your  
21 engines are either Tier I or Tier II compliant. I'm  
22 just wondering do you know offhand or maybe you could  
23 include in the written comments what percentage are  
24 Tier II as opposed to a combination of Tier I and Tier  
25 II?

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1 MR. WOOD: We'll get that for you.

2 MR. POMROY: I think that's all I have.

3 MR. SEXAUER: Just to -- I forgot to ask,  
4 on the passes ceramic systems, can you say which  
5 manufacturer you're using or what model?

6 MR. WOOD: The majority of them is  
7 Englehart (Phonetic), as far as models, I don't know.

8 MR. SEXAUER : But they're Englehart,  
9 okay. I think that's it.

10 To follow up with Bill's, on those  
11 different Tier I and Tier II, if you could identify  
12 the type of machines that they're installed in and  
13 then you said you're having several Tier III engines  
14 delivered?

15 MR. WOOD: We have one currently on site.  
16 We should have three more here at the end of this  
17 month.

18 MR. SEXAUER: Are you continuing your  
19 engine emissions check, routine engine loads?

20 MR. WOOD: Yes.

21 MR. SEXAUER: Can you supply us with any  
22 information, current information on how that's been  
23 going? Okay?

24 MR. WOOD: What was the question?

25 MR. SEXAUER: On the repeat engine load

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1 test, the emissions check that you do, I think you  
2 were doing it at your 250 hour checks, if you can  
3 provide us some update information on how that process  
4 has been going?

5 MR. WOOD: Yes.

6 MR. SEXAUER: Thank you. We have one more  
7 question over here.

8 MR. : Your diesel fuel that you  
9 currently receive, is it stored on the surface,  
10 underground, both?

11 MR. WOOD: Both storage is on the surface  
12 and individual totes are taken underground.

13 MR. : Do you know what the  
14 storage capacity is in each area roughly?

15 MR. WOOD: No, I don't. I can provide  
16 that.

17 MR. : If you can provide that,  
18 I'd appreciate it. Thank you.

19 MR. SEXAUER: Steve, Buck, thank you very  
20 much.

21 MR. WOOD: Thank you.

22 MR. SEXAUER: Our next speaker is Mike  
23 Crum.

24 MR. CRUM: My name is Mike Crum. I'm with  
25 FMC Corporation out of Green River, Wyoming. I'm an

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1 industrial hygienist there with FMC. FMC will compile  
2 written comments and submit them for the record.

3 FMC also supports MARG's position  
4 regarding the proposed rule. We are current MARG  
5 members. It is difficult to comprehend that this rule  
6 has maintained its complexion even though MSHA  
7 admitted mistakes and errors of the rulemaking process  
8 within the Federal Register. These Agency errors are  
9 significant and substantial enough for the Agency to  
10 do the right thing and delete the 160 microgram final  
11 limit from rulemaking.

12 Even with the deletion, MSHA will have a  
13 non-science based health standard to which many mines  
14 will struggle to maintain compliance with the 400  
15 microgram limit.

16 MSHA's sampling data tells a very  
17 erroneous story to those looking at compliance with  
18 the interim final limit and the proposed final limit.

19 The sampling data underestimates current exposures.

20 Sampling data currently reflects the true  
21 problems with any enforcement relying on a single  
22 shift sample. Control technology that was supposed to  
23 be the silver bullet, has yet to be effective for mine  
24 operators to effectively meet standards.

25 These DPFs have not been completely

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1 effective for large equipment and work to assist  
2 operators with low horsepower engines has yet to begin  
3 within the partnership. Even though this is a  
4 technology-driving standard, in the last five years  
5 technology has not even caught up with the 400  
6 microgram standard, let alone the 160 microgram  
7 standard.

8 So why would anyone believe that  
9 technology will respond favorably within the next five  
10 years? This technology has been worked on steadily by  
11 government agency, being NIOSH, costing the taxpayers  
12 millions of dollars without yielding a favorable  
13 result. NIOSH, with all their experts, scientists,  
14 research budget and labs, has not been able to  
15 determine an effective control technology.

16 Mine operators participating in these  
17 partnerships, have been willing to open their mines  
18 for research in good faith and again have not produced  
19 favorable results, speaking specifically of the NIOSH  
20 case study, the Isozone study, etcetera.

21 Respiratory protection in our operation  
22 will be very expensive and challenging. Statistics  
23 show that roughly 4 percent of any given population  
24 will not be cleared for negative pressure respirator  
25 use. In our mind, this percentage is low, primarily

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1 due to age.

2 This brings a case, our respirator costs  
3 will increase from roughly \$28 to over \$700, which  
4 would include medical monitoring and different  
5 respiratory protection. We will submit comments for  
6 the rulemaking process to the record. We have  
7 actively participated with the MARG Group and the  
8 NIOSH partnership, or DPM partnership and we'll  
9 continue to do so.

10 We look forward to any opportunities that  
11 we may have to participate in number one, permissible  
12 equipment controls, as well as low duty cycle  
13 controls.

14 And that's all I have. Thank you. Any  
15 questions?

16 MR. SEXAUER: Doris?

17 MS. GREEN: Yes. You said that you  
18 anticipate your respiratory protection costs and I  
19 assume that's per miner would increase from \$28 to  
20 over \$700. Could you give us some information on what  
21 those costs would be and why the -- what the increase  
22 would be? And what the different type of respirators  
23 would be that you would be going to?

24 MR. CRUM: I will include that in the  
25 comments, but just for the record, should we start to

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1 see miners who cannot be medically cleared with  
2 foreign negative pressure, half face mask, we would  
3 indeed due to our leanness of our operation, we would  
4 be required to go to probably a powered-air purifying  
5 respirator. We would have to install battery charging  
6 stations. Those items aren't cheap.

7 MS. GREEN: Okay.

8 MR. CRUM: And we're looking at roughly 60  
9 percent of our population as -- our sampling data  
10 shows that we are roughly 60 percent in compliance  
11 with the 400 and we are roughly 85 percent out of  
12 compliance with the 160 microgram standard.

13 MS. GREEN: All right, thank you. And  
14 could you also include that information if you haven't  
15 already in your written comments?

16 MR. CRUM: We will submit that to MSHA  
17 again, yes.

18 MS. GREEN: Thank you.

19 MR. SEXAUER: George?

20 MR. SASEEN: Yes, Mike, you made a  
21 statement, I'll give you a chance if you want to  
22 clarify it, you said DPF filters were not effective  
23 and I believe you said the high horsepower engines,  
24 you made that in your statement.

25 MR. CRUM: I did. And I based --

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1 MR. SASEEN: Can you clarify that as to  
2 what --

3 MR. CRUM: I will. I've been involved  
4 with the NIOSH studies for a number of years, up until  
5 moving to Green River. The concern I have is we do  
6 have the potential for runaway regeneration for our  
7 operation being gassy mine. That's probably not a  
8 real good fit for our operation.

9 The other potential that is there, that  
10 has been proven is the elevated NO2 exposures which  
11 are a known health hazard. The primary concern there  
12 obviously is the miners' health. Secondary concern  
13 there is once the ceiling limit is reached, those  
14 miners can have no further exposure. Any time you  
15 burn a diesel engine, you get some NO2 exposure. What  
16 do you do with those guys? You bring them to the  
17 surface.

18 So miner health, number one. Lost  
19 production, number two. It's a cost to both parties.

20 MR. SASEEN: So you're pretty much to the  
21 ceramic --

22 MR. CRUM: To the ceramic catalyzed  
23 filters, yes, that's correct.

24 MR. SASEEN: At your own mine, have you  
25 looked at any other alternative filtering systems?

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1 MR. CRUM: We have evaluated both passive  
2 and active filters on our duty cycles and thermal  
3 logging, we just can't do it. Our equipment doesn't  
4 run in the right ranges. Again, we have permissible  
5 equipment, so that poses its own challenges to us.  
6 The disposal filters, again, we concern ourselves with  
7 the burn through and the flammability issues that they  
8 do pose that have been seen in the past.

9 So right now, our primary focus is on  
10 alternative fuels and maintenance practices. We have  
11 in the last two years begun doing our emissions  
12 controls testing and during our major long-haul moves,  
13 we have instituted bio fuels. Even with the bio  
14 fuels, we have not seen compliance to the 160 standard  
15 where every piece of equipment within that section is  
16 operated using bio fuel.

17 MR. SASEEN: On your disposables, have you  
18 tried any heat exchange or technology up front?

19 MR. CRUM: We have not yet.

20 MR. SASEEN: Do you have any plans to? Or  
21 could you share any schemes with us?

22 MR. CRUM: I can within comments.

23 MR. SASEEN: That's fine.

24 MR. CRUM: I don't have that.

25 MR. SASEEN: Right, I appreciate that. If

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1 you could do that within comments, that's fine. Thank  
2 you.

3 MR. SEXAUER: Bill?

4 MR. POMROY: A question about your use of  
5 the bio fuels. You're only using the bio fuels during  
6 long mobiles (Phonetic)?

7 MR. CRUM: That is our major, once every  
8 12 to 18 month major exposure where we could feasibly  
9 see the 600 microgram exposure. That is a choice we  
10 made a couple years back to implement the bio fuel  
11 during those moves where very large horsepower engines  
12 for hauling shields and that is primarily our usage  
13 right now, although we intend to expand that as we  
14 work through some details on fuel storage, fuel  
15 segregation, testing protocols, etcetera.

16 MR. POMROY: In your written comments,  
17 could you maybe include some details about where that  
18 fuel comes from and what the costs are compared to  
19 ordinary number two or number one? What do you  
20 normally run, number one or number two?

21 MR. CRUM: I believe we run on number one.

22 MR. POMROY: Also, the bio fuel that you  
23 use, do you know what the blend is?

24 MR. CRUM: I don't off the top of my head.  
25 I don't have that data.

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1 MR. POMROY: Can you get us that  
2 information, too, what is the blend of the bio fuel  
3 with the standard.

4 MR. CRUM: I will.

5 MR. POMROY: Do you have any cold weather  
6 issues with the use of the bio fuels, if your long  
7 mobiles (Phonetic) happen to happen in January --

8 MR. CRUM: Just icy highways because  
9 everything we have is stored underground.

10 MR. POMROY: You store it all underground  
11 anyway. Okay.

12 MR. SEXAUER: Jim?

13 MR. PETRIE: Yes. Do you currently have a  
14 medical evaluation program for risk evaluation?

15 MR. CRUM: Yes, we do.

16 MR. PETRIE: With what frequency are they  
17 conducted?

18 MR. CRUM: Annually for those that require  
19 respiratory protection.

20 MR. PETRIE: Would you be able to provide  
21 us with some cost information on that in the record?

22 MR. CRUM: Absolutely.

23 MR. PETRIE: Comments. And do any of your  
24 miners currently wear powered air purifying  
25 respirators?

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1 MR. CRUM: Yes, our miners that operate  
2 the long wall.

3 MR. PETRIE: And if you could provide some  
4 cost information on that, we'd appreciate it as well.

5 Have you had miners that have been unable to wear any  
6 type of respiratory protection and if so, what have  
7 you done with those miners?

8 MR. CRUM: Negative pressure respirators,  
9 yes, we have. Fortunately, for us, with medical  
10 treatment, they were able to get that clearance to  
11 wear negative pressure masks, although one thing you  
12 have to understand with our operation, we have very  
13 little exposure underground that would require  
14 respirator use with the exception of what's pending  
15 with the diesel rule.

16 MR. PETRIE: Okay, thank you.

17 MR. SEXAUER: Mike, thank you very much.

18 MR. CRUM: Thank you.

19 MR. SEXAUER: If I may, Steve, Steve Wood,  
20 we have one more question we wanted to ask you, if you  
21 don't mind.

22 George?

23 MR. SASEEN: In your written comments, you  
24 talked about exploring the bio diesel. What  
25 percentage of blend were you planning on starting to

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1 use at Stillwater? What's your strategy?

2 MR. WOOD: We ran a test for a little over  
3 a quarter. We brought in what we were able to obtain.

4 It started out with a five, B-5 blend. We started  
5 out extremely low just because we wanted to try to  
6 reduce or minimize as much of the solvent effect as we  
7 possibly could and not have an influx of plugged  
8 filters all of a sudden.

9 MR. SASEEN: Right.

10 MR. WOOD: And work our way up to a B-20  
11 blend and actually determined that the test was  
12 successful and it became an availability issue at that  
13 point, were we going to be able to continue with  
14 utilization of biodiesel based on our inability to  
15 receive the product.

16 So we got to B-20. If it were available  
17 and if it were cost effective, we would probably want  
18 to continue to increase that as well.

19 MR. SASEEN: But there's no plans right  
20 now or are you just looking at the --

21 MR. WOOD: A lot of discussion going on.  
22 We're working with a number of folks which I can  
23 detail for you in our comment as well, trying to make  
24 it more available to us and working with some folks in  
25 Idaho and Department of Energy and others as well,

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1 trying to make it available to us.

2 MR. SASEEN: All right, thanks. Sorry to  
3 have to bring you back up.

4 MR. WOOD: No problem.

5 MR. SEXAUER: Fred Fox and Mark Good.

6 MR. FOX: Good morning, my name is Fred  
7 Fox. I'm the Director of Health Safety Environment  
8 for Kennecott Minerals which is located here in Salt  
9 Lake City. With me I have Mark Good who is the Senior  
10 Mine Engineer up at the Greens Creek Mine, located  
11 near Juneau, Alaska.

12 And may I be the first to welcome everyone  
13 here to Salt Lake City. And I hope during your short  
14 time you have an enjoyable stay.

15 I've provided our comments, written  
16 comments to each panel member and in doing so maybe  
17 I'll go over what we've provided and I hope then just  
18 to paraphrase so we don't spend a lot of time in the  
19 testimony.

20 I plan just to go over more of the general  
21 administrative issues, some history involving  
22 Kennecott and basically a background of our  
23 involvement in the rulemaking and then I'll ask Mark  
24 to stand up and correct me when I'm wrong, of course,  
25 but also to talk about the programs up at the Greens

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1 Creek Mine on the engineering and administrative work  
2 that's being done on feasibility.

3 MR. SEXAUER: Let me just say for the  
4 record that the document that you've given us we'll  
5 put into the record and it's clearly identified on the  
6 first page of it, it has your name, Fred D. Fox,  
7 Director, HSE, Kennecott Minerals Company and further  
8 down it has the name Mark Good, Senior Mine Engineer,  
9 Kennecott Greens Creek Mine.

10 MR. FOX: Thank you, Mr. Moderator. If  
11 you want to go back to the first chart that we've  
12 included, we will present in this, in the written  
13 testimony here attachment 1 which covers all the  
14 samples we've taken to date, starting back in 2000 up  
15 to the more recent samples. Looks like it was  
16 December 31, 2000.

17 On attachment 2, we include a summary of  
18 the feasible engineering controls used at the Greens  
19 Creek Mine. You'll see a table there along with a  
20 number of footnotes and hopefully we can refer to  
21 those during Mark's testimony, as well as attachment  
22 3, indicating the ventilation system at the Greens  
23 Creek mine, mainly focusing on the cascading  
24 ventilation system that we have in place today.

25 Attachment 4 includes a table, as well as

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1 a graph, and the table goes through all the samples  
2 taken, along with the area and most importantly the  
3 elemental carbon and the total carbon concentrations  
4 and these are not, and I have to repeat this, not all  
5 personal samples. So you'll see some numbers that  
6 vary considerably, based on where the location and the  
7 type of sample taken.

8 And finally, Attachment 5, we've included  
9 what we intend to do this year in moving forward with  
10 our diesel control plan.

11 So with that, on behalf of Kennecott, we  
12 want to thank MSHA and really everyone in this room  
13 and outside that's been involved, in continuing to  
14 address this complex and challenging regulatory  
15 burden. I think we all recognize it as a burden on  
16 both sides, to comply with the standards that really  
17 were rushed in, we believe over five years ago, and I  
18 think we've heard earlier, well ahead of the science  
19 and technology, able to adequately define and address  
20 them.

21 Now we also plan to submit written  
22 comments by the January 27th deadline. Well, maybe  
23 not ironically, but Mark and I both were sitting just  
24 up the street a little bit over two years ago at the  
25 University Park Hotel and as we put together our

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1 comments for today, we obviously went back and looked  
2 -- what did we saw two years, four months ago? And  
3 unfortunately, our testimony hasn't changed a great  
4 deal from what we presented then.

5 The regulations required and continue to  
6 require corrections and amendments that were discussed  
7 during Mr. Moderator's description of the preamble.  
8 And I'll just maybe highlight some of the things that  
9 happened over the last five years. And of course,  
10 there's been temporary postponements of the rules,  
11 industry petitions for review, delays, settlement  
12 discussions, joint studies, additional rulemaking.  
13 There's been two partial settlement discussions. New  
14 information, a lot of new information on the technical  
15 and economic feasibility of meeting the rules.

16 So I just emphasize, we are moving  
17 forward, but it's been a struggle over the last five  
18 years, obviously. Yet, as mentioned earlier, there's  
19 much more information to come, very important  
20 information. And I'm speaking of the NIOSH NCI study  
21 on health effects and probably other studies as well  
22 that we need to really get completed, including the  
23 Stillwater study and evaluated.

24 Within this five-year period, Kennecott  
25 has actively participated in the rulemaking process,

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1 primarily focusing on implementing DPM rules to reduce  
2 exposures to our miners. That's the most important  
3 thing, I guess why we're all here.

4 And Mark will describe what has been done  
5 at Greens Creek, addressing the engineering and  
6 administrative controls, tried there and deemed  
7 feasible. And that's, I think, real important as  
8 we've heard earlier and we'll probably hear later on  
9 today. There's a lot going on, but we really want to  
10 focus on what is deemed feasible.

11 However, despite our best efforts,  
12 compliance with the interim limit which was 400 and  
13 now 308 EC, is considered feasible at best and I'm  
14 speaking specifically at the Greens Creek Mine, and  
15 that's our only underground mine that Kennecott Mines  
16 owns.

17 We are unable to reach this final limit  
18 and that's why we provided the graph of Attachment 1.

19 You can see there has been progress, quite a bit of  
20 progress made, but we're still unable to reach the  
21 final limit, the 308 at all times in all places of the  
22 mine and at best that's where we're at, but we feel  
23 we're unable to reach the final limit and do not  
24 believe compliance with the proposed phase-in limits  
25 can achieve at all times and at all locations in the

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1 Greens Creek Mine -- can be achieved at all times, at  
2 all locations.

3 We can go out and we can sample and we can  
4 hit and get below the limits on one day, in one area  
5 of the mine and on the same day in another area of the  
6 mine we just won't be as lucky. And it has to do with  
7 the site-specific conditions up at the mine which Mark  
8 will talk about.

9 This was our position way back when we  
10 started in January 2001. And I was telling Mark, we  
11 didn't really know a lot about this. We kind of just  
12 grabbed at certain things and back in January 2001 in  
13 another hearing in Salt Lake City, we testified it was  
14 kind of -- sort of a grab, or an unknown if we could  
15 even meet the proposed 400 limit and that was our  
16 position then and this is our position now. We feel a  
17 lot has been done and progress has been made, but  
18 again, just meeting what we'll call the interim limit  
19 at best is feasible, but not at all locations and at  
20 all times in the mine. And when we get down to the  
21 160 proposed limit, it just gets even more concerting  
22 to us.

23 We have worked hard to implement the rules  
24 and we'll continue to work with MSHA, NIOSH and the  
25 diesel partnership. We do look forward to new

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1 technology and to implement controls that are feasible  
2 for site-specific conditions at the mine. And as you  
3 are aware and heard this morning, Greens Creek is not  
4 alone in its efforts to deal with this regulatory  
5 challenge. The staggered effective dates over the  
6 five-year period for the final limit may help some  
7 mines to comply, but we still remain very concerned  
8 that we will not be able to comply with the staggered  
9 proposed limits.

10 MSHA's position on feasibility does not  
11 reflect consideration of current complications with  
12 respect to implementation of controls. MSHA has  
13 acknowledged, we believe, that it has limited in-mine  
14 documentation on effective DPM control technology.  
15 And this is, we think, the reasons for extending and  
16 staggering the effective dates for the final limit.

17 We're encouraged by this, but because the  
18 current state of DPM control technology and site-  
19 specific conditions at the Greens Creek Mine and  
20 specifically the narrow openings, the cascading  
21 ventilation system and the mining equipment and  
22 methods used, we believe will not be able to comply  
23 with the final limit. Because of this and because of  
24 the overwhelming weight of evidence submitted into  
25 rulemaking record that supports the deletion of the

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1 final limit as infeasible, as applied to the Greens  
2 Creek mine, we once again respectfully request that  
3 MSHA delete the final limit.

4 Absent the deletion of this limit, the  
5 process of obtaining special extensions for additional  
6 time to meet the final limit is critical to continue  
7 compliance up at the Greens Creek Mine, very critical.

8 Special extensions will be necessary to enable  
9 continued compliance for the proposed rules.

10 Because of this, there's a need, we  
11 believe, for a formalized procedure to grant special  
12 extensions. Compliance for the DPM rules will be  
13 dependent upon Greens Creek receiving additional time  
14 to take actions to minimize exposures to DPM, such as  
15 maintaining controls and implementing a respiratory  
16 protection program. The need for special extensions  
17 is evident and we agreed that the decision to grant  
18 them shall be made by the District Manager, but under  
19 a more formal procedure addressing specific time  
20 frames, documented reasons for approval or denial and  
21 as mentioned earlier, means for appealing a decision  
22 of the District Manager to the Administrator.

23 Clarifications of a special extension can  
24 be approved for each applicable staggered limit and  
25 that a one-year extension, that the one-year extension

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1 tolls the subsequent yearly limit because we do  
2 believe because the annual extensions doesn't give  
3 much time to bring forth more technology, so as we're  
4 moving forward and we will continue to move forward,  
5 but we believe that that should toll that particular  
6 limit until it's met by implementing controls during  
7 the special extension.

8 And without more formal procedures in  
9 place for granting the special extensions, we see  
10 potential problems addressing applicability. Is it  
11 for a specific area in the mine or is it for an entire  
12 mine? That was brought up a little bit earlier.

13 We see the burden of proof is  
14 overwhelmingly placed on the operator without the  
15 benefit of appeal or recourse. And I'm speaking of  
16 the proposed rules as they sit now.

17 With that, I'll ask Mark to now discuss  
18 the site-specific issues on feasibility in  
19 implementing controls at the Greens Creek Mine. We  
20 can take questions --

21 MR. SEXAUER: Fred, before we do that, I  
22 just want to state for the benefit of those in the  
23 audience the document that you've submitted to us at  
24 the beginning of your testimony, we will be scanning  
25 it and posting it on our web page and everyone will

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1 have access to those charts that are included in there  
2 and that will appear on our web page, just following  
3 the transcript.

4 MR. FOX: Okay, great.

5 MR. GOOD: To pick up where Fred left off  
6 there, we want to talk a little bit about the feasible  
7 engineering controls that we've applied to this point  
8 and maybe speak to some of the infeasibilities as  
9 well.

10 At the Greens Creek Mine, we've taken kind  
11 of like a multi-pronged approach in terms of trying to  
12 come into compliance with the DPM regulations. Our  
13 first kick at the cat, as it were, was to try to put  
14 filters on the equipment as best we could and  
15 determine which piece of equipment was going to be  
16 applicable for it, so our first stabs at it were met  
17 with some levels of success and a lot of levels with  
18 failures. But we've kind of refined things to the  
19 point now where we're a little bit more comfortable on  
20 applying acid filters on some of the equipment that  
21 we've got.

22 The mining equipment that we have in the  
23 fleet, effectively totals 83 pieces of equipment at  
24 this point of which 17 of them are haul trucks, mainly  
25 the big loaders or the heavy haulers, rather. We've

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1 got 13 loaders of different sizes, the predominant  
2 production fleet is a total of 450 or 1250. It's a  
3 300 horsepower piece of equipment. We've got a number  
4 of those.

5 And then we've got some smaller ancillary  
6 loaders as well for the Bobcats and the like. We also  
7 have 13 utility vehicles, powder trucks, scissor  
8 trucks, boom trucks and that type of thing. They  
9 typically run around 150 horse. We've got six graders  
10 and other kind of smaller utility things like  
11 forklifts and the like.

12 A whole fleet of tractors, 50 horsepower,  
13 Kabota (Phonetic) tractors and then we've got a number  
14 of drills, both production jumbos and bolters. Those  
15 ones typically are running about 85 to 100 horse  
16 diesel engines. The filter technology we started  
17 playing around with in 2000 and that was basically  
18 before much was known about filters at that point, so  
19 we kicked off our trials with those and ended up with  
20 some failures on it. The filters were loading up back  
21 pressuring and that type of thing.

22 We worked with the manufacturer to try to  
23 determine solutions to that, came up with some  
24 solutions in terms of insulating exhaust lines and  
25 wrapping the canisters with insulation, as well as the

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1 mounting of the tail pipes and that type of thing.  
2 And we finally came up with a combination that worked  
3 for us and to this point we've installed virtually all  
4 of our heavy hauler fleet with passive filters.  
5 They're working okay at this point and we have one  
6 active filtration system on a Caterpillar engine 3306,  
7 elephant stone loader that's working as well.

8 We're still working towards the  
9 applications of filters on the low-duty cycle or the  
10 small equipment fleet. We haven't come up with  
11 anything as yet that's going to be feasible for us at  
12 this point. We're still trialing this. We're going  
13 to be testing some active filtration systems on a  
14 couple of our powder trucks. That will be happening  
15 this upcoming year and we'll probably talk to that at  
16 the end of the session here. But as yet, the active  
17 filtration system is still an open question to us as  
18 to how effective and how applicable it's going to be  
19 fleet wide.

20 I don't want to go through this verbatim  
21 because you've got it in front of you, so I'm just  
22 going to scan through quickly and -- the feasibility  
23 of equipment, medium to low duty cycle engines with  
24 the pass of an active filtration system we're looking  
25 at.

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1                   Logistical problems with that, I think, as  
2 a former speaker alluded to was parking lots or  
3 regeneration stations spread out throughout the mine.

4                   That's obviously going to provide a lot of logistical  
5 problems for people trying to relocate the equipment  
6 up to a place where you can plug it in or regenerate  
7 it or basically haul the filters off board and  
8 regenerate them that way. Those are not going to be  
9 particularly effective or efficient, I guess, in terms  
10 of utilization of that kind of technology.

11                   Some of the areas where we've got a  
12 staging area, for example, a tractor barn, where all  
13 of the tractors happen to be in a particular location  
14 at the beginning of the shift and we'll probably be  
15 able to make implementations that way, but in terms of  
16 having a scissor truck which is going to be used  
17 throughout the whole course of the mine from the top  
18 to the bottom, it may be parked at any point in the  
19 mine at the end of the shift and logistically, being  
20 able to provide areas for those regeneration stations  
21 is going to be really difficult from a logistical  
22 standpoint.

23                   On another note, talking to the  
24 environmental cabs, we've taken the stance where any  
25 piece of equipment that we can buy as a new capital

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1 purchase where it's applicable, where we're purchasing  
2 with environmental cabs and they've proven pretty  
3 effective in terms of reducing DPM exposures to the  
4 operator, but as you can see in some of the sampling  
5 that we've done, any place outside that cab to anybody  
6 who happens to be on foot is going to be subject to  
7 high DPM levels and there's nothing that an  
8 environmental cab is going to be able to provide for  
9 those people.

10 As alluded to earlier by other comments,  
11 the environmental cabs are pretty expensive options  
12 for you. They're going to be ranging anywhere from  
13 \$50,000 to \$60,000, \$65,000 to retrofit a cab or even  
14 to buy it as an option. It's typically fairly  
15 expensive.

16 Nonetheless, we have purchased a number of  
17 pieces of equipment with those cabs where we can find  
18 it's applicable, the jumbos and the bolters, for  
19 example, we've gone down that road, bearing in mind  
20 that we're not going to be able to get the equipment  
21 into all of our headings so it puts a burden on us  
22 from an administrative standpoint, to allocate those  
23 pieces of equipment to areas where we can actually fit  
24 them in the mine.

25 So it's not a wholesale applicable control

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1 that you're going to be able to apply everywhere  
2 throughout the mine.

3 Engine replacements. We've embarked on a  
4 program beginning in 2003 to replace a number of the  
5 old two-cycle engines that we had in the property.  
6 They were typically a Detroit 471 two-cycle engine  
7 which the filter manufacturers and others basically  
8 would not allow or they wouldn't allow so much that,  
9 it was the application of filter technology, ceramic  
10 model of filters wasn't applicable to it. They  
11 produced far too much oil and other contaminants in  
12 the exhaust that would plug and occlude the ceramic  
13 filters and therefore, they wouldn't warrant the  
14 engines and the filter manufacturers wouldn't warrant  
15 their equipment either. So we've gone on a program to  
16 replace all of those. We've done quite a number of  
17 them. I think we replaced about 8 or 10 of those  
18 underground. We still have or three to go and that  
19 will be happening through the course of this upcoming  
20 year. But when those ones are done, we'll only have  
21 say about five pieces of equipment that are still  
22 going to be dirty engines, but they're not going to be  
23 the kind of engine with a high enough duty cycle that  
24 we're going to be replacing any time soon.

25 But apart from that virtually every other

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1 piece of equipment is going to be either an MSHA-  
2 approved Deutsche, Mercedes or Detroit or Kabota  
3 (Phonetic) engine. So we're going to be in pretty  
4 good shape that way.

5 As far as ventilation is concerned, this  
6 year we're embarking on a program to upgrade  
7 ventilation where we can in the mine. We have some  
8 severe restrictions at the Greens Creek property in  
9 terms of our location, physical location. We're  
10 operating within a national monument. We've got, I  
11 think, about 25 or 27 regulatory agencies that look  
12 over our shoulder and try to make sure that we're  
13 complying with water limits or EPA, you know, the  
14 whole nine yards.

15 And so our ability to disturb surface  
16 footprints is pretty restrictive. We just can't go  
17 and put a bore hole anywhere we choose. But  
18 nonetheless, we are going to be trying to upgrade the  
19 mine by putting a couple of bore holes to an area  
20 that's already disturbed. It will impact a portion of  
21 the mine, but it's not going to improve the conditions  
22 in the deeper parts of the mine at all.

23 We've also upgraded our auxiliary  
24 ventilation circuitry, down underground. We're trying  
25 to move more air to the headings where we can, move

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1 from 75 horsepower fans up to 100 horsepower fans, to  
2 try to get additional air moved to the faces which is  
3 where typically our higher DPM levels are. So over the  
4 course of the last four years, I think we've bought  
5 almost 20 fans to achieve that end.

6 So to summarize, the ventilation, we're  
7 currently moving at 250,000 to 300,000 CFM through the  
8 mine. By the time the upgrades are done, we should be  
9 approaching about 450,000 CFM, but again, most of that  
10 air is only going to be surfacing the upper reaches of  
11 the mine and because of our cascading ventilation  
12 system, we won't be impacting materially the amount of  
13 air that gets down to the base of the mine.

14 Administrative controls, we basically just  
15 educated the labor force there. If they're queued for  
16 loading, the engines are off. So we try to minimize  
17 the amount of idle time of the equipment operating  
18 within the mine.

19 Some of the other things that we've done,  
20 Bill and George, you guys were part of the two-week  
21 collaborative effort that we put in on the filter  
22 efficiency study that we conducted up there. A lot of  
23 the results are actually in here as well as far as the  
24 sampling was concerned.

25 Conversion factor for the final limits.

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1 I'll speak to that a little bit here. Within the  
2 table at Attachment 4 and Attachment 5, basically  
3 compiled most of the sampling that we've done over the  
4 course of the years, dating back to 2000 and  
5 Attachment 4 has got a graph on there that speaks to  
6 the EC-TC ratio and I think this is probably been  
7 mirrored or reflected in a number of studies. NIOSH  
8 has been doing work on this as well as our own and you  
9 can see as the EC level drops down or the total carbon  
10 level drops, the spread of the EC-TC ratio goes from  
11 1.1 up to -- well, we've got one point there at 4.5 so  
12 when it comes to determining the EC-TC level as you  
13 guys already alluded to in terms of the final  
14 rulemaking, that's going to be a real important part.

15 MR. FOX: It was kind of interesting to  
16 note though, around the 400, we're at the 1.3. There  
17 you go. We're right on for some of it.

18 MR. GOOD: Our plan moving forward again,  
19 we're going to take a multi-faceted approach to this  
20 thing. The engine replacement program will continue.  
21 We're almost finished that. We've been two and a  
22 half years into the makings on that effort. And we're  
23 virtually done in that area.

24 The passive exhaust filter retrofit  
25 program, the last six confirmed passive filter

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1 candidates, we've done, so we've done temperature  
2 profiles on the exhaust gas temperatures. The last  
3 six that we feel are going to be applicable and we've  
4 just received those filters actually in December, so  
5 they will be retrofitted into the equipment this first  
6 quarter coming up. And then there's two other  
7 potential candidates. We tested these things back in  
8 2001 and they ran too cold, but duty that those two  
9 loaders have seen has changed which speaks to the  
10 dynamics of the game, you know, what might be  
11 applicable in one year, if you shift your equipment  
12 around or into a different location of the mine, it  
13 may change the rules somewhat.

14 So there's two more additional passive  
15 filter candidates that we're going to evaluate this  
16 upcoming quarter. As far as active regeneration  
17 filters are concerned, we're going to be doing  
18 temperature profiles on a number of the newer engines.

19 So I should speak to that a little bit. We've  
20 replaced a number of the 471s with the Mercedes 904s.

21 At the time, we hadn't done temperature  
22 profiles on the 471s because the filter technology  
23 wasn't going to be applicable anyway. Now with the  
24 904s in place, we can go ahead and test those out for  
25 temperature profiles. Not only is the equipment

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1 running cleaner, just with the engine change out, but  
2 we might be able to filter those. And in a couple of  
3 cases, I've already done temperature profiles on those  
4 things and they have met the threshold of the T30 on  
5 that. So a number of the candidates are already a  
6 done deal. But there's still, I think, about 10 of  
7 them outstanding that we don't know yet.

8 Diesel engine maintenance training. We've  
9 been in contact with the contractor out there in  
10 industry to do some education testing, education and  
11 program development for us. He's been involved with  
12 BHP in the past and we're going to be looking at  
13 establishing a training program for our diesel  
14 mechanics to be able to test the emissions on our  
15 equipment.

16 Most of our stuff is electronically  
17 controlled, so the maintenance on it is going to be  
18 limited basically to intake filters and basically  
19 monitoring temperatures to some degree, but the actual  
20 middling around with torque-converter matching and  
21 injector maintenance and that kind of thing is going  
22 to be fairly limited for us.

23 We brought to bear some of the resources  
24 of Rio Tinto. We're a wholly-owned subsidiary of Rio  
25 Tinto and their purchasing people are on the path now

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1 to source out biodiesel fuel suppliers in the West.  
2 We just initiated that conversation back in December  
3 with our purchasing people and they're beating the  
4 bushes now to try to determine what we've got for  
5 biodiesel availability as well as fuel  
6 characteristics.

7 The cold temperature issues and storage is  
8 a problem for us. Also, wet climates, biodiesel fuels  
9 may have a preponderance to soak up a lot of water and  
10 in our environment up there in the rainforest, that's  
11 a big issue for us.

12 We also have issues with separate fuel  
13 streams. We bring in fuel into a common tank farm at  
14 the Hawk Inlet and that services not only the  
15 underground fleet, but it services the diesel  
16 generation power for the mine, as well as the surface  
17 vehicle fleet and so what we may want to try out for  
18 biodiesel, specific to the underground environment  
19 where the DPMs are an issue, is going to be  
20 complicated by the fact that we might not be able to  
21 run them in diesel turbine. Solar, the Caterpillar  
22 dealers, I have asked the question of them last month  
23 and they said that the only people that are currently  
24 running biodiesel fuels or planning to in their  
25 turbine generators for power is in Korea, I think it

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1 is. So again, even the manufacturers don't know what  
2 effects the biodiesels are going to have on their  
3 specific piece of equipment.

4 Separate fuel streams may entail  
5 additional tankage, additional freight or barge  
6 traffic up and down the coast. It's not just as easy  
7 as phoning up somebody and asking for an 8,000 gallon  
8 tanker to roll into the site and run it underground.  
9 We've also got a bunch of undetermined questions there  
10 regarding biodiesel fuels in terms of lubricity, you  
11 know, with the reduced sulphur content in the fuel or  
12 no sulphur content in the fuel. How does that affect  
13 the actual chemical properties of the fuel? What does  
14 it do to the injectors? What does it do for that type  
15 of thing and can you put additives into the fuel, into  
16 biodiesel fuels that will compensate for some of the  
17 items that are going to be taken out in terms of going  
18 to ultra-low sulphur fuels or biodiesels.

19 So our purchasing people have indicated  
20 that biodiesel is available in Seattle at a B2 blend  
21 which in speaking with most people, unless you're  
22 going to a B20 or a B50, you're not going to be doing  
23 much in terms of anything. And the B2 blend in and of  
24 itself at a 2 percent biodiesel is I think they were  
25 saying is going to add between 20 and 25 cents a

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1 gallon cost to the fuel. So again, we'll be getting  
2 more information on that as the months progress, but  
3 our purchasing people are on that one.

4 Increased mine ventilation flows, we've --  
5 we're in the process, I think we've had about a \$6  
6 million contract out there for mine infrastructure  
7 which includes about a thousand feet of development  
8 drifting for ventilation drifts, as well as four -- I  
9 think they're close to 400 foot ventilation bore  
10 holes. That should be completed by about August of  
11 this year.

12 We'll be putting an 84-inch diameter fan,  
13 400 horse fan in place as well as a bunch of  
14 ventilation door controls to help increase the mine  
15 air flows in the upper reaches of the mine, but again  
16 because of the configuration of the mine, it's not  
17 going to affect the lower reaches very much at all.

18 And the last thing on our list of control  
19 plans is the respirator program. We do have a  
20 respirator program in effect, but actually committing  
21 a guy to wearing a respirator, based on DPM sampling  
22 is going to be one that we're going to need to come to  
23 grips with. Do we need to go with a single sample or  
24 probably in all likelihood we're going to want to do  
25 an average over a number of shifts and a number of

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1 different operating environments to basically commit a  
2 guy to wearing a respirator for any length of time.

3 I guess that summarizes our testimony.

4 MR. FOX: We appreciate you listening to  
5 us again.

6 MR. SEXAUER: We probably have some  
7 questions up here.

8 Jim?

9 MR. PETRIE: Yes, I have a few. The  
10 points that are plotted in Attachment 1 are the values  
11 that are listed in Attachment 4, is that correct?

12 MR. GOOD: Yes.

13 MR. PETRIE: It's a combination of MSHA  
14 samples?

15 MR. GOOD: Yes, and those are EC. So  
16 where the MSHA sample has been totalled up as a total  
17 carbon, we backed that out to the 1.3 because that's  
18 the way it was put to us.

19 MR. PETRIE: It does seem to indicate  
20 quite an improvement over the years, particularly the  
21 samples taken in December of 2005.

22 MR. FOX: The story shows that improvement  
23 has been made, but we've still got the outliers out  
24 there which on a compliance sampling standpoint, it  
25 would still put us at risk and there's -- even at the

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1 308, we're still over in a couple of instances there.

2 MR. PETRIE: On those outliers,  
3 particularly since there seem to be so few in the  
4 recent sampling, would you be able to provide us with  
5 a little more detail on the occupation or equipment or  
6 exactly what those particular ones were?

7 MR. FOX: They may even be on the table  
8 there, Jim, as far as the occupations are concerned.

9 MR. PETRIE: Okay. Thank you. In regards  
10 to respiratory protection, do you conduct medical  
11 evaluation currently of respirator wearers?

12 MR. FOX: We do PFTs before we put anybody  
13 in a respirator. They have to pass PFT.

14 MR. PETRIE: Are those done just during  
15 pre-employment or annually?

16 MR. FOX: No, our respirator program  
17 encompasses not just DPM, but dust, particularly for  
18 lead -- we're a lead mine and if we get biological  
19 monitoring samples, blood leads that come high or  
20 spike high, then we put them into a respirator program  
21 until their levels come down to a point, but once  
22 they've been identified as a candidate for a  
23 respirator program, they go through the PFT  
24 evaluation.

25 MR. PETRIE: Is that on an annual basis?

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1 MR. FOX: Not on an annual basis, just as  
2 they go into the program and then as their biological  
3 monitoring falls into compliance, then they can come  
4 voluntarily out of the program.

5 MR. PETRIE: Have you found many miners  
6 that are unable to wear a respirator?

7 MR. FOX: We haven't had anybody to date,  
8 but the number of miners that we've put into a program  
9 to respirators, rather, probably numbers under 10.

10 MR. PETRIE: Any information you could  
11 provide us with cost of the medical monitoring that  
12 you do, number of miners that you test, we would  
13 appreciate that.

14 MR. FOX: Okay.

15 MR. SEXAUER: Doris?

16 MS. CASH: Just in looking at -- I'll ask  
17 you the same as we've asked our other speakers, as you  
18 looked at diesel costs or alternative fuel costs, if  
19 you can include in your comments what type of costs  
20 you've had and what your experience has been with the  
21 supply and looking at things like delivery storage,  
22 what's going to affect your ability to use or continue  
23 to try such things.

24 MR. FOX: We can definitely get -- as Mark  
25 said, through the preparation group, costs on

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1 different suppliers, once it gets to the -- even  
2 getting it to the island and once it's on the island,  
3 there's going to be basically a list of things you've  
4 heard today. I don't think we'll get into the  
5 engineering of facility and separating the systems,  
6 but we can at least point out some of the obstacles  
7 that we'll be looking at in implementing biodiesel.

8 MR. GOOD: This is still in its infancy.  
9 WE're just getting going on the biodiesel stuff. We  
10 know it was a hot button with MSHA, so we figured we  
11 better --

12 MR. FOX: Better put it down.

13 (Laughter.)

14 MS. CASH: Okay, and also on the  
15 respiratory protection, if you could give us an  
16 indication on the number of miners that you require in  
17 your company policy, you know, as a result of your  
18 testing the miners that you've put into respiratory  
19 protection and typically how long they have to stay in  
20 such a program or if there's -- is this something that  
21 once they're in that, is it for a particular position  
22 and until other testing shows that they're not at high  
23 exposure. I'm kind of interested in as you say,  
24 you've done your monitoring and there are  
25 circumstances where you would require them to be in a

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1 program, but it's also a question of how long and how  
2 long a shift is typically they would be required to  
3 wear a respirator.

4 MR. GOOD: That's going to be kind of a  
5 difficult comparison because most of the people that  
6 have gone into the respiratory program have been put  
7 into the program under other auspices, as opposed to  
8 DPMs specifically.

9 MS. CASH: Okay.

10 MR. GOOD: And I guess the difficult part  
11 for us to try to come to grips with is we've got a  
12 mine that's fairly spread out. The miners, it's a  
13 nonunion operation so all of the miners or at least  
14 the Tech 5 miners are multi-tasking. I guess they  
15 could be running a scoop for two hours. They could be  
16 running a jumbo for an hour and a half. They might be  
17 on a bolter after that.

18 And so their occupations vary through the  
19 course of a shift as well as they may be allocated to  
20 the lower parts of the 200 South for two and a half  
21 hours to muck out a round and then jump back up into  
22 one of the fresh air areas for two or three areas to  
23 bolt around and that type of thing. So actually  
24 trying to pin down a specific occupation to a DPM  
25 exposure, one, by occupation is difficult; and two, by

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1 where he happens to be in the mine is another  
2 difficult one.

3           Going back to speaking to how long a miner  
4 would be in a respirator, a respirator program, for  
5 example, is a real hard one to try to put your finger  
6 on. I mean biologically, if we do it for lead dust,  
7 once your blood lead has dropped down below 20  
8 micrograms or 15 micrograms or whatever it is, then  
9 you can come out of the program, but if we've got high  
10 DPM levels in one certain area of the mine and that  
11 guy may be in there for three hours and out and then  
12 back in, how do you quantify that?

13           MS. CASH: Okay, so you would be requiring  
14 them say if you knew that they were going to be in an  
15 area where they'd have high DPM, then he'd be required  
16 to wear the respirator while he's in that area and  
17 then if he went to say an upper level of the mine  
18 where you have better ventilation, where you feel that  
19 he might not be over-exposed, then he wouldn't be  
20 wearing the respirator then. He would only be wearing  
21 it in the areas where he's below --

22           MR. GOOD: Yes, this kind of goes around  
23 to how we do the sampling because then we're into area  
24 sampling as opposed to personal sampling which goes  
25 against what the MSHA compliance sampling does.

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1 MS. CASH: I understand.

2 MR. FOX: We're going to struggle with  
3 this, Doris, and it's very important. We need to come  
4 up with an internal procedure to identify areas and  
5 occupations and that's what we're going to have to  
6 work on, but what we can do in the comment period is  
7 provide some of the maybe unique and maybe not so  
8 unique hurdles that we would have to overcome to put a  
9 program in place.

10 MS. CASH: All right, thank you. That  
11 would be helpful.

12 MR. FOX: Yes.

13 MR. SEXAUER: Bill?

14 MR. POMROY: Yes. Hi. You have indicated  
15 on Attachment 4 --

16 MR. SEXAUER: Excuse me, Bill. Could you  
17 speak into the microphone, please?

18 MR. POMROY: You've indicated on  
19 Attachment 4 some sampling done by Greens Creek. Can  
20 you comment a little bit on the methodology used or,  
21 if possible --

22 MR. FOX: All of the sampling that we have  
23 done to date has been using the NIOSH 5040 method. I  
24 think the lab that we used was Golsom (Phonetic) Labs  
25 in New York.

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1           The sampling during the 31 mine study was  
2 side by side sampling, so whenever I think it was  
3 Larry Mackin put a filter on. We put one on the same  
4 place as he did, so the ones that are highlighted in  
5 yellow are side by side samplings and that goes to  
6 show the variability of the TC/EC relationship as well  
7 as the variability within the actual sample. You  
8 know, the MSHA samples were all analyzed at the PRL  
9 and ours went out to an independent lab.

10           But in answer to your question, all of the  
11 Greens Creek filters, the samples that we took were  
12 all analyzed with the NIOSH 5040.

13           MR. POMROY: Do you know if you had  
14 occasion to take some extra information about possible  
15 interferences upstream or close by or what not?

16           MR. GOOD: The only notes on that were  
17 kind of sketchy.

18           MR. POMROY: Can you elaborate a little  
19 bit on the frequency of miners that are close to  
20 equipment fitted with the environmental cabs, working  
21 the same area or downstream? I guess I'm trying to  
22 get a handle on how many miners might be affected when  
23 equipment is running.

24           MR. GOOD: As far as environmental cabs  
25 are concerned, I think we've got a total of 14 pieces

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1 of equipment that have got environmental cabs on it  
2 out of the 83 pieces of equipment, so it's not a real  
3 high percentage.

4 The guys that would be in environmental  
5 cabs on any given shift would probably number about  
6 eight or nine, perhaps and then out of a work force of  
7 -- oh gosh, I'm just -- out of a labor force of  
8 perhaps 30 guys underground at any point in time, only  
9 nine of those guys will be in a cab. Everybody else  
10 will be either open cab or pedestrian or mechanics or  
11 whatever.

12 So you're probably looking at 60 percent,  
13 70 percent of labor force not in a cab.

14 MR. POMROY: Thanks.

15 MR. SEXAUER: George?

16 MR. SASEEN: Mark, let's see, I've got you  
17 at 30 haul trucks and loader from your inventory here,  
18 30.

19 MR. GOOD: Yes.

20 MR. SASEEN: Seventeen haul trucks, 13  
21 loaders and so you're saying that all 30 of those are  
22 now with -- equipped with ceramic filters?

23 MR. GOOD: No. Out of the 17 haul trucks,  
24 the heavy haulers are all outfitted with them. So I  
25 believe we've got six of those and the back fill fleet

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1 has got filters on board as well. But there are a  
2 number of trucks, we've got fuel trucks -- let me rack  
3 this up --

4 MR. SASEEN: Would that be utility?

5 MR. GOOD: Yes.

6 (Pause.)

7 MR. SASEEN: Would it be easier if you  
8 broke this down in your written comments?

9 MR. GOOD: Yes. I think so, George. I  
10 could do it for you, but it would take up everybody's  
11 time.

12 MR. SASEEN: That's okay. No, if you  
13 could break down what -- where you got your filters on  
14 your haul trucks and your loaders and I guess what I  
15 was getting to, looking at what is filtered versus  
16 what is not filtered, do you feel that or have any  
17 idea that by filtering those other machines, that  
18 would help bring you into compliance with the lower  
19 limit?

20 MR. GOOD: It's going to help a bit, but  
21 it's not going to be the answer because most of those  
22 other utility vehicles, the utilization of those  
23 things are going to be somewhere 10 to 20 percent  
24 utilization, so their contribution to DPM into the  
25 atmosphere is fairly limited.

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1           Going back to your previous question, our  
2 haul trucks, 17 haul trucks, 13 of those have got  
3 filters. Of the loaders, we've only got 2 of them on  
4 with another 2 slated for -- 4 actually, 4 slated for  
5 refitment here this quarter. So we'll have roughly  
6 half the loader fleet outfitted with filters by the  
7 summer and all of the haul trucks should be outfitted  
8 with filters by this summer. The other loaders that  
9 we've got are little bobcats and that type of thing,  
10 so they're really not applicable.

11           MR. SASEEN: You're not including those  
12 bobcats under the 13 loaders, are you?

13           MR. GOOD: Yes.

14           MR. SASEEN: Oh, okay. That was a little  
15 confusing.

16           Yeah, if you could maybe break that down,  
17 that would -- have you considered in your plan you  
18 talk about looking at active systems, but have you  
19 decided to look at any disposable filter technology  
20 with heat exchangers?

21           MR. GOOD: Not really. Most of our  
22 equipment, well, it's not permissible gear, so we're  
23 running turbos on virtually everything. So no, we  
24 haven't even gone down that path to look at -- a water  
25 tank and heat exchangers and all that kind of stuff,

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1 to try to cool the temperatures down to the point  
2 where we could put disposable filters. We want to try  
3 to tackle other opportunities before we go down that  
4 road.

5 MR. SASEEN: And have you looked into any  
6 of the automotive type vehicles for some of your  
7 replace -- because they're further ahead on the  
8 reductions of emissions for some of your -- maybe some  
9 of your tractors. Have you looked into that?

10 MR. GOOD: It has been brought up by our  
11 parent company, mainly from a seating capacity and  
12 seat belts -- they like to see everybody with seat  
13 belts and seating and that type of thing, but we  
14 haven't been able to come up with a vehicle out there  
15 that is as maneuverable as a Kabota (Phonetic) tractor  
16 that can turn around in 10 or 12 feet, that type of  
17 thing.

18 I think the tractors, we may be able to  
19 tackle those things with a swap on/swap out type of  
20 filter, but we haven't tested them yet.

21 MR. SASEEN: Thanks.

22 MR. SEXAUER: Bill?

23 MR. POMROY: Kennecott is a wholly-owned  
24 subsidiary of Rio Tinto?

25 MR. FOX: Yes.

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1 MR. POMROY: Are they -- is Rio Tinto  
2 looking at DPM controls in other underground mines  
3 outside the U.S.?

4 MR. FOX: They're looking at us.

5 MR. GOOD: Yes, we're kind of --  
6 definitely yes, the answer is. There's not that many  
7 Rio Tinto underground mines. In fact, there's two on  
8 the horizon that are looking at us as leading the way  
9 for what's feasible or not.

10 MR. FOX: We did have a sister company in  
11 Sweden, Zincgruven (Phonetic) because they're in the  
12 European group there, were looking at -- they were  
13 applying filters there and they were also into the  
14 European USLF fuel which I think was 10 or 15 PBM or  
15 something like that.

16 But they were handcuffed because they had  
17 their regulations were 1 PBM NO2 in the air where ours  
18 is about triple that.

19 MR. POMROY: What type of filters were  
20 they looking at?

21 Did they actually use some?

22 MR. FOX: They couldn't use a catalyzed  
23 filter at all. They had to go with active filters and  
24 they were using silicon carbides and they had some  
25 problems with the robustness of the silicon carbide in

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1 the mining environment. They'd break up and that type  
2 of thing. So they were having some issues with that,  
3 primarily related to the NO2 production.

4 MR. POMROY: Have you guys looked at the  
5 Riposte (Phonetic) filter system, the centered metal  
6 filter?

7 MR. FOX: We were introduced to it in  
8 October of this up at a conference up in Toronto. At  
9 that point, they were trialing it. My information was  
10 that they were trialing it on fixed point generators.

11 They hadn't put them into a mobile fleet at that  
12 point. We're still keeping our finger on the pulse of  
13 that to see how effective that's going to be. But to  
14 my knowledge yet, I haven't gotten any information  
15 that tells me that they put it into a mining  
16 environment yet.

17 MR. POMROY: You had mentioned that you're  
18 going to be trialing some active systems on a couple  
19 of powder trucks this year? Do you know, have you  
20 narrowed down what system you might be trying?

21 MR. GOOD: Well, there's a couple of  
22 candidates out there. We're looking at DCLs, blue sky  
23 system, and then there's also an emission control  
24 system, ECS, I think it is. They've got an active  
25 system on there that -- that would have to be a plug

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1 --

2 MR. POMROY: I guess that was my next  
3 question. Are you strictly looking at on-board  
4 regeneration for these active systems?

5 MR. GOOD: No, we're an open book right  
6 now. The ones that are going to be in the 150 horse  
7 range are going to have to be on-board because they  
8 just can't see us swapping on a 60 or 70-bound filter  
9 on a shift by shift basis. That's not going to work  
10 for us, both from a logistics standpoint and from an  
11 ergonomics and health standpoint. Somebody is going  
12 to twink a back for sure doing that.

13 So the swappable filters, we're looking  
14 for the Kabota (Phonetic) tractor fleet, the little  
15 ones that are six or eight-inch diameter, something  
16 like that, but the bigger ones, 150 horse utility  
17 fleet is going to have to be a plug-in style and it  
18 may not be applicable. I'm just a little nervous  
19 about having an electrically regenerated filter  
20 cooking off around the powder truck and expecting  
21 things to work perfectly all the time.

22 MR. POMROY: Do you know if an engine is  
23 installed in those powder trucks?

24 MR. GOOD: Actually, the two powder trucks  
25 are up for a 904 retrofit this quarter.

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1 MR. POMROY: Okay. Maybe you answered  
2 this already. I apologize if you already did, but the  
3 data points that are listed on the chart in Attachment  
4 4, those are the same ones that are included in the  
5 tables?

6 MR. GOOD: Yes.

7 MR. POMROY: In Attachment 4 and also on  
8 Attachment 1, it's all just a compilation of all that.

9 Would it be possible maybe in your written  
10 submittal to regraph the data in the chart on  
11 Attachment 4 so it would show which data points were  
12 developed during which time period, the early data  
13 from 2001 versus the 2002, 2003 and so on?

14 MR. GOOD: Yes, I could do that.

15 MR. POMROY: That would be helpful.  
16 That's all I have.

17 MR. SEXAUER: George?

18 MR. SASEEN: Mark, in your written  
19 submission, could you give us some information on the  
20 number of hours you're getting on your ceramic filters  
21 for your passive systems?

22 MR. GOOD: Yes.

23 MR. SASEEN: And what manufacturer you're  
24 going with and maybe what -- also any costs associated  
25 with filters. And then the last thing would be what

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1 type of cleaning cycle you have for the ash removal?

2 MR. GOOD: That's on a 250-hour basis.  
3 We're bringing equipment in. It's just part of the  
4 PM. The equipment rolls in on a 250-hour basis, so we  
5 pull a filter and blow it out.

6 MR. SASEEN: Okay.

7 MR. GOOD: And do that.

8 MR. SASEEN: Is that what's recommended by  
9 the filter manufacturer?

10 MR. GOOD: No, they recommend a 1,000-hour  
11 interval.

12 MR. SASEEN: But as far as blowing them  
13 out, is there any other procedure that they recommend  
14 for ash removal that you're aware of?

15 MR. GOOD: No, just removal of the ash.

16 MR. SASEEN: Just blowing it out.

17 MR. FOX: Shop air.

18 MR. GOOD: Just shop air. Oh, I mean  
19 there's different things out there. I think ECS has  
20 got a little shop vac thing that they've got -- what  
21 do they call it? Cone B (Phonetic) filter cleaner,  
22 whatever it is. So I mean there's compressed air.  
23 There's vacuums. There's different varieties of  
24 things that we can use.

25 MR. SASEEN: Okay. Thanks.

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1 MR. SEXAUER: Jim, any questions?

2 MR. PETRIE: Yes. Mark, I believe you  
3 mentioned that your miners multi-task, that they work  
4 on a number of different types of equipment during a  
5 given shift, performing different tasks, even working  
6 in different areas or levels of the mine.

7 Do you have any strategy that you could  
8 suggest on how MSHA would determine where and when  
9 those miners found over-exposed would be required to  
10 wear respirators?

11 MR. GOOD: That's a tricky one. In fact,  
12 there was a number of samples -- I think it was during  
13 the 31 Mine Study that a couple of the samples were  
14 voided because we were trying to get readings on the  
15 powder operator, for example, and the guy changed  
16 positions halfway through the shift and he handed off  
17 the sample pump to his on-coming partner that was hot  
18 changing with him, so that voided the sample. But  
19 that's the kind of thing you're up against.

20 In terms of coming up with a strategy for  
21 determining compliance on that, it would just have to  
22 be on a given basis. The inspector would come on to  
23 the site and you'd have to stipulate, okay, you're  
24 going to have to drive a truck for the whole day and  
25 that's all there is to it.

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1 MR. SASEEN: Any thoughts you might have  
2 on that in that regard, I would appreciate it.

3 MR. GOOD: Okay.

4 MR. SEXAUER: I think that's all the  
5 questions. I want to thank you, gentlemen.

6 What we're going to do now is we're going  
7 to break for lunch. Obviously, my projections have  
8 been off, as far as the time.

9 We've had five speakers. We have five  
10 more that are signed up and then maybe others who  
11 would like to speak following that.

12 So what we'll do is we'll break. I have  
13 23 after 12. Why don't we break until 1:30 and resume  
14 promptly at 1:30. And we'll just continue at that  
15 point.

16 Okay, we're off the record now.

17 (Whereupon, at 12:23 p.m., the public  
18 hearing was recessed, to reconvene at 1:30 p.m.)

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

1:30 P.M.

MR. SEXAUER: Let's go back on the record.

We'll now resume the hearing and the next speaker is David Graham.

MR. GRAHAM: Good afternoon. My name is David Graham. I'm the Manager of Safety and Health for General Chemicals Soda Ash Partners in Green River, Wyoming. We operate an underground trono mine in Green River and use diesel equipment which is impacted by this proposed rule.

I also serve as the chairman of the MARG Diesel Coalition, a group of companies supported by their trade associations and it leads the industry in scientific and engineering research efforts regarding the safe use of diesel equipment in underground mines.

Accompanying me today is Henry Shiette (Phonetic), senior partner of Patton Boggs, LLP and counsel to the MARG Group.

The diesel rulemaking record contains MARG comments and testimony at every stage of this rulemaking proceeding and it will be supplemented with our detailed written documents before the end of the comment period.

The concepts underlying the MARG

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1 participation in this rulemaking have never changed.  
2 MARG members are committed to aggressively protecting  
3 all personnel from hazards in the workplace, including  
4 any hazards that might be posed by diesel exhaust.  
5 MARG members support sound, scientific research to  
6 identify, evaluate and prevent hazards and engineering  
7 research to assist in the effort to protect personnel.

8 And MARG members support sound regulations and fair  
9 enforcement that further safety and health.

10 The MSHA proposed rule does not further  
11 safety and health. It's inconsistent with sound  
12 science, engineering and good government principles  
13 and violates almost every duty Congress imposed on  
14 MSHA regarding the issuance of new standards.

15 The written comments MARG and its members  
16 will file for the record will demonstrate this  
17 conclusion beyond any doubt. We testified to express  
18 our disappointment in the inability of the Secretary  
19 of Labor and her Agency, MSHA, to correct what MSHA  
20 itself has acknowledged to be a flawed rule. We hope  
21 that the Agency will recognize the errors of this  
22 rulemaking before the Courts are forced to act.

23 Rather than responding to each specific  
24 MSHA request for comments, as we will do in our  
25 written comments, I emphasize the following reasons

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1 that MSHA must delete the 160 microgram PEL which is  
2 neither supported by health risks, nor feasible  
3 regardless of whether it is expressed as TC or EC and  
4 regardless of whether it is phased in with yearly  
5 reductions until 2011.

6 The January 2001 DOL MSHA rule that stated  
7 this controversy was rushed and premature, published  
8 on the last day of President Clinton's Administration.

9 The publication violated specific bipartisan  
10 congressional directives mandating that any diesel  
11 exhaust rule be informed by the congressionally-  
12 funded, multi-million dollar NIOSH NCI Study to  
13 determine if diesel exhaust poses potential health  
14 effects and if so, safe levels of exposure. At great  
15 expensive and disruption, MARG members and their  
16 employees, including my company and my fellow miners,  
17 provided the mine sites, sampling access and extensive  
18 records access for the on-going study of 14,000 miners  
19 that use diesel equipment since it was originally  
20 introduced in mining 30 plus years ago.

21 The NIOSH NCI Study is expected to be  
22 completed some time in 2006 or 2007. Thankfully, as  
23 shown by the comments of Dr. Chase contained in the  
24 rulemaking record, the first NIOSH NCI preliminary  
25 data releases confirmed our experience that there was

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1 no excess cancer or disease found among our workforce  
2 as a whole. The 160 microgram MSHA diesel exhaust  
3 limit issued in January 2001 was the product of proven  
4 conflicts of interest, violating DOL ethical rules,  
5 demonstrated by the deposition testimony of MSHA  
6 official Thomas Tom, submitted to the rulemaking  
7 record by MARG.

8 The 2001 rule was flawed, not only because  
9 there was no proven health risk from diesel exhaust  
10 particulate, generally, that MSHA did not even know  
11 what constituent of the thousands of minuscule diesel  
12 exhaust particulates presents a health risk or should  
13 be measured or controlled.

14 Instead of relying on already regulated  
15 diesel exhaust gas limits to provide protection until  
16 the NIOSH NCI Study was complete, like OSHA, DOT, the  
17 Coast Guard, the FRA and other agencies that regulate  
18 diesel safety, the MSHA conflicted author selected the  
19 now withdrawn ACGIH total carbon limit for diesel  
20 exhaust as MSHA's regulated substance.

21 The 2001 premature MSHA rule adopted this  
22 flawed basis and regulated the total carbon content of  
23 diesel exhaust, even though MARG and NIOSH NCI  
24 research had demonstrated that total carbon could not  
25 be accurately measured and was not a feasible

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1 surrogate for diesel exhaust.

2 Millions of dollars and countless time was  
3 spent by MSHA and the industry to prove again what the  
4 industry and NIOSH had already proven, that regulation  
5 of total carbon was invalid, if for no other reason  
6 because it was not feasible to measure.

7 Finally, MSHA reluctantly admitted this  
8 error, acknowledging the need to amend the rule and  
9 stop its attempt at regulating total carbon, yet, MSHA  
10 repeatedly was informed by independent experts,  
11 including Dr. Jonathan Borack and his team from the  
12 Yale University School of Medicine, that elemental  
13 carbon, while perhaps easier to measure, did not pose  
14 a health risk and did not have any consistent  
15 relationship to total carbon, nor to levels of diesel  
16 exhaust.

17 MSHA has admitted that the relationship  
18 between elemental carbon and total carbon is not  
19 stable and varies from mine to mine, day to day, place  
20 to place within a mine in a statistically significant  
21 manner.

22 The scientific data on the conversion of  
23 total carbon to elemental carbon poses an independent  
24 and insurmountable legal obstacle to converting the  
25 160 final total carbon limit to an elemental carbon

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1 limit. Unless a settlement agreement is reached that  
2 waives the need for sound science to support a limit,  
3 and establishes an uncontested EC settlement limit.  
4 MARG compromised and settlement efforts have been  
5 rejected, yet MSHA actions to force a rulemaking  
6 result to preserve the invalid MSHA final limit is not  
7 a response MARG believes will survive review by the  
8 U.S. Circuit Court of Appeals.

9 The rulemaking record is replete with the  
10 modifications and changes that MSHA was forced to make  
11 to the diesel exhaust measurement method that it  
12 admitted for its premature 2001 rule.

13 Seemingly, every major element of MSHA's  
14 designed 2001 method to collect and analyze diesel  
15 exhaust, carbon samples failed and required repeated  
16 redesign, including the filter used to capture  
17 particulate, the cassette used to hold the filter, the  
18 laboratory device and method used to analyze the  
19 particulate collected for carbon and the methods of  
20 determining whether the collected material was  
21 actually diesel exhaust or other carbon-based  
22 material, like cigarette smoke, oil mist, explosives,  
23 blasting particulate and even carbon from the mineral  
24 being mined, all of which interfered with obtaining  
25 accurate results.

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1           To this day, there is little confidence in  
2 the MSHA diesel carbon measurement and analysis method  
3 adopted by the rule for enforcement. And no other  
4 federal agency is using it or has proposed it for the  
5 enforcement of diesel exhaust limits.

6           Drs. Borack, Cohen and Hall published  
7 peer-reviewed articles and provided comments to the  
8 MSHA rulemaking, informing MSHA that measuring diesel  
9 exhaust at low levels, measuring total carbon and  
10 measuring the 160 PEL were neither feasible nor  
11 accurate.

12           MSHA's Federal Register response to these  
13 scientific comments was to acknowledge its inability  
14 to measure total carbon with accuracy, but to cite its  
15 own nonpublished, nor peer-reviewed studies as  
16 statistical analysis of multiple punches taken from  
17 the same filters, they claimed to prove that  
18 measurements were accurate and feasible, including  
19 measurements at its 160 PEL for elemental carbon.

20           After repeatedly attempting to obtain the  
21 MSHA Federal Register cited punch to punch analysis  
22 data, data was delivered by MSHA to MARG experts last  
23 week. At best, the data appears to present a  
24 scientific slight of hand.

25           MSHA Federal Register statements claim

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1 that its data supported a conclusion of reliable,  
2 repeatable, carbon sampling results at low levels,  
3 including the 160 PEL. MSHA criticized an analysis by  
4 MARG experts as a limited database and claimed a far  
5 larger punch to punch database which results  
6 supporting its accuracy and precision conclusion.  
7 Yet, when the data finally was delivered last week, it  
8 included the analysis where a large percentage of  
9 filter blanks or controls and static backup filters  
10 that had never been used as the primary filter for the  
11 collection of diesel exhaust samples.

12 These nonexposed filters would produce  
13 very low, almost negligible carbon results, driving  
14 down the MSHA punch to punch analytic difference and  
15 acting as false proof of the accuracy of the MSHA  
16 carbon measuring system. It just wasn't right.

17 Moreover, the disingenuous MSHA Federal  
18 Register response to sound, scientific evidence  
19 proving the lack of accurate measurements used an  
20 MSHA-created, computer Monte Carlo analysis that  
21 generated 10,000 hypothetical results until the Monte  
22 Carlo predicted that actual, flawed MSHA fuel data was  
23 consistent with meeting the NIOSH accuracy criteria.

24 The MSHA analysis, like a Monte Carlo  
25 prediction of holding a winning lottery ticket, can

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1 prove almost any data accurate when run thousands of  
2 times around a fixed mean and a predetermined  
3 coefficient of variability.

4 Our written comments will document these  
5 specific abuses that the Data Quality Act was supposed  
6 to prevent and that they are contrary to statutory  
7 MSHA rulemaking duties to base rules on sound,  
8 scientific evidence.

9 We are disappointed in the DOL MSHA  
10 rejection of our petition for Data Quality Act  
11 correction and their decision to respond only as part  
12 of the rulemaking, essentially negating the Data  
13 Quality Act. We cannot imagine White House approval  
14 of such a tactic to render congressionally-mandated  
15 OMB review meaningless.

16 MSHA was forced to admit that its January  
17 2001 conclusion that its TC limits were feasible was  
18 wrong. Thankfully, the invalid limits were repeatedly  
19 postponed beyond the effective dates announced in  
20 January 2001. MARG endorses all extensions needed to  
21 achieve the deletion of the unsupported 160 final  
22 limit.

23 The 400 total carbon limit was implemented  
24 as an interim, partial settlement agreement level to  
25 be enforced as an agreed-to elemental carbon

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1 equivalent, regardless of data that there was no  
2 consistent correlation between elemental carbon and  
3 total carbon. And, regardless of MSHA sampling and  
4 NIOSH testing evidence that feasibility continued to  
5 be elusive for a significant percentage of the  
6 industry that would need extensions, even from the  
7 interim settlement agreement goal.

8 The interim partial settlement agreement  
9 mandated a single expedited rulemaking proceeding to  
10 address the flaws of the final limit and to convert  
11 the interim limit to a measurable limit. MSHA  
12 violated that agreement repeatedly by not acting  
13 expeditiously to address the final limit and in June  
14 2005, acted only on the interim limit conversion to  
15 elemental carbon.

16 Today, 30 plus percent of the industry  
17 continues not to be in compliance with the 308  
18 elemental carbon interim limit based on the MSHA  
19 single sample enforcement scheme and MSHA collected  
20 samples as demonstrated by the latest data compilation  
21 and analysis MARG submitted for the record.

22 MSHA sampling results and NIOSH testing  
23 demonstrate that the 160 final limit is not feasible  
24 for 90 to 95 percent of the industry which continues  
25 to be out of compliance with the final limit, five

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1 years, after MSHA concluded that it was feasible in  
2 its 2001 Federal Register adoption.

3 Out of compliance with the MSHA limit  
4 means that miners will be forced to wear respirators  
5 for unproven health hazards at carbon exposure levels  
6 that MSHA admits are not related to health effects,  
7 out of compliance with the MSHA limits as determined  
8 by MSHA based on one single sample. The respirators  
9 will not constitute compliance and miners will be  
10 forced to experiment with unproven, engineering  
11 controls to try and achieve compliance.

12 Out of compliance means that MSHA will  
13 issue citations and penalties and when the citations  
14 cannot be abated because engineering controls are not  
15 available, the mines will be at risk of closure  
16 orders, even while the miners are wearing respirators.

17 Since MSHA has no real world experience whatsoever  
18 with diesel particulate measurements, levels or  
19 controls for mining equipment when it issued its 2001  
20 rule, the rule was based on assumptions that have been  
21 proven to be invalid.

22 MSHA used an estimator to determine its  
23 rules were feasible, another computer model. This one  
24 assumed critical ventilation data incorrectly and  
25 assumed that not yet tested, often nonexistent

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1 retrofit engine particulate filters were feasible,  
2 available and would achieve compliance. It didn't  
3 happen.

4 NIOSH testing over the last five years has  
5 proven the invalidity of the MSHA feasibility  
6 conclusion and of the MSHA rule itself with the  
7 Stillwater Mine tests serving as an absolute proof of  
8 the invalidity of MSHA assumptions. The June 5, 2005  
9 Federal Register acknowledges that the current DPM  
10 rulemaking record lacks sufficient feasibility  
11 documentation to justify lowering DPM limits below 308  
12 elemental carbon micrograms per milligram cubed at  
13 this time, 70 Federal Register at 32916.

14 Real world conditions and testing and MSHA  
15 compliance sampling have forced repeated  
16 acknowledgements by MSHA of the original rule's  
17 invalidity and of the need to make massive corrections  
18 and issue extensions for the limits imposed by the  
19 rule. While extensions of invalid regulatory limits  
20 are better than letting the limits go into effect,  
21 they are neither the best result nor a reliable method  
22 of assuring the future for mines and miners that  
23 produce critical materials for our nation's economy.

24 The current MSHA proposed rule, phasing in  
25 the effective data of a 160 PEL over the next six

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1 years perpetuates the lack of validity of the rule  
2 itself. There is no evidence whatsoever that the 160,  
3 either total carbon or elemental carbon, is valid or  
4 feasible. Nothing has changed since the MSHA June  
5 2005 conclusion.

6 There is no evidence whatsoever to support  
7 a new MSHA assumption and the proposed rule that every  
8 year from 2006 to 2011 the industry can phase in  
9 artificially scheduled reductions in elemental carbon  
10 levels. Mines and miners have no basis to believe  
11 that MSHA would endlessly grant extensions from rules  
12 and limits that are neither justified nor valid until  
13 unknown technology is available to achieve the limits  
14 or science further proves and MSHA admits that the  
15 limit should be deleted or changed.

16 Existing petitions for extensions by mines  
17 that clearly cannot comply with current limits have  
18 not been granted and citations going unabated creating  
19 the possibility of closure orders. There is no  
20 evidence that MSHA will adopt this proposed rule and  
21 act to extend the new compliance deadlines repeatedly  
22 year after year in a timely fashion as its phased-in  
23 levels are triggered by the calendar, not by the  
24 development of feasible controls which simply do not  
25 exist today and are not expected in the foreseeable

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1 future for all mines.

2 The MSHA proposed rule requires  
3 unsupported presumptions that feasible engineering  
4 controls exist and that health hazards are tied to the  
5 reduced levels. Rather, MSHA, meeting a statutory  
6 mandate of basing new rules on the best available  
7 scientific evidence that supports its rules, MSHA  
8 again proposes rules that it already has admitted do  
9 not comply with the statutory mandates.

10 The rule proposes to grant mine operators  
11 the opportunity to prove to MSHA that its presumed  
12 feasibility conclusion is inapplicable to their mine,  
13 a near impossible goal given the feasibility  
14 presumption already made by MSHA.

15 Given underlying lack of any health risk  
16 evidence tied to MSHA's final limit or various  
17 proposed interim limits on elemental carbon and the  
18 lack of evidence to support the feasibility of the  
19 limits, the only valid course of action is for MSHA to  
20 delete the final limit and the phased-in scheduled  
21 limits or for the Courts to invalidate it.

22 Phased implementation is not a substitute  
23 for regulations that are mandated to be based on  
24 sound, scientific and engineering evidence.

25 I appreciate the opportunity to express my

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1 concerns and those of the MARG Group. I thank you for  
2 your consideration and attention.

3 Are there any questions?

4 MR. SEXAUER: Does anyone have any  
5 questions?

6 MR. PETRIE: Yes, I do.

7 MR. SEXAUER: Jim.

8 MR. PETRIE: I'm just wondering what is  
9 the experience at your mind of controlling DPM with  
10 controls, have you tried and what success or lack of  
11 success have you found and will you be submitting  
12 information on that?

13 MR. GRAHAM: We have from the beginning,  
14 actually, started with a maintenance program. Looking  
15 at the rule we had, coming out of the NIOSH study, our  
16 numbers were significant based on, actually, based on  
17 the way that they were testing them at the time and of  
18 course, that analysis has changed somewhat since then.

19 But our biggest push has come from the maintenance  
20 aspects. We have a gassy mine. We have three gassy  
21 mines. And we put a lot of air underground, 1.2 to  
22 1.5 million cubic feet per minute of air. So we're  
23 pushing a lot of air down there. We liberate anywhere  
24 from 1.5 to 2.5 million cubic feet a day of methane,  
25 so we have to have a lot of air which helps us.

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1           But what we did see is the fact that  
2 certain jobs that were done, similar to Mike Crum's  
3 testimony for FMC in the long wall moves, it takes  
4 four to six weeks. They obviously had situations that  
5 put them over the 400. Very similar to us, we do not  
6 have a long wall, but we have bore miners and  
7 continuous miners. In those instances where we move  
8 from one panel to another, when a panel finishes up  
9 and we move to another panel, we too, have a situation  
10 where the limits are exceed, the 400 is exceeded.

11           Inside the maintenance practices that we  
12 used, we got an emissions tester. So we established a  
13 baseline for all our engines. Now one of the  
14 assumptions that MSHA made at the time was there was  
15 going to be a turnover of equipment. Well, I wish  
16 that was true.

17           I have a Jeep. I started out there in  
18 1979. My Jeep was brand new in 1978. I'm driving the  
19 same Jeep. Different engine, but the same Jeep. We  
20 don't turnover equipment very quick. We rebuild  
21 engines. We're a commodity chemical business. We  
22 don't turn over a fleet in five years. We don't turn  
23 over a fleet in 10 years. To be honest with you, I  
24 don't think we turn over a fleet in 20 years.

25           We continue to use what we have. We have

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1 got to survive. So one of the things that we looked  
2 at was the maintenance practice, okay? And it helped.

3 You know? The one thing that it did, it forced us to  
4 take a look at that and do things that we probably  
5 should have been doing before. And it helped.

6 We tried the biodiesel too, we looked at  
7 that. But similar to what Steve Wood indicated, we're  
8 a little bit remote also. We're a little bit away  
9 from anywhere. We're three and a half hours, three  
10 hours from Salt Lake; four or five hours from Casper,  
11 Wyoming; four hours, five hours from Twin Falls,  
12 Idaho. And these are places that have the  
13 capabilities for us to get biodiesel.

14 Like I said, we used it before. One of  
15 the problems we had, we didn't have the expertise at  
16 the time to do the testing to see if it really helped  
17 any. Some of the guys liked it. For whatever reason,  
18 said it smelled better, if that's any indication of  
19 what we should use it for, then we'll use it. But we  
20 really didn't do the testing that we probably should  
21 have done to determine if it had an effect.

22 MR. PETRIE: Do you know what mixture you  
23 were using?

24 MR. GRAHAM: It was a 20 percent blend.

25 MR. : We're going to be

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1 submitting for the record a map of available biodiesel  
2 distribution centers and information about biodiesel  
3 costs and price supports which are due to expire next  
4 year, as I understand it, and information about the  
5 increase in cost of biodiesel that has substantially  
6 impacted its availability and usability in the mining  
7 business.

8 So we'll be submitting that information  
9 for the record.

10 MR. SEXAUER: George?

11 MR. SASEEN: Yes. How many permissible  
12 pieces of equipment do you have compared to your total  
13 fleet?

14 MR. GRAHAM: I think we have six pieces,  
15 six pieces of permissible equipment, 913s. And we may  
16 have two load tracks.

17 You know, the thing is with our engines,  
18 most of our -- most of the stuff going back to  
19 actually your question, Jim. We didn't try any of the  
20 filtering mechanism type stuff because our engines are  
21 all pretty much low horsepower. I mean they're like  
22 70, 80 horsepower. Eighty-five percent, I think of  
23 our fleet, is below 70 horsepower. So there's really  
24 -- I mean there's really nothing out there to try at  
25 this point as far as a filtering mechanism that we're

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1 aware of that's going to fit within our mine.

2 The permissible equipment, the 913s, the  
3 load tracks and things like that, we don't know how to  
4 approach that yet from a filtering standpoint. And  
5 these are old pieces. I mean these 913s aren't new.  
6 I mean they were the old Ineco (Phonetic) 913s.  
7 They're not new stuff.

8 The load tracks and stuff, the wagons,  
9 they're relatively new. And I say that relatively new  
10 to us is five years. That's new. So we do have some  
11 newer stuff that we can try, if there's something out  
12 there that's available to us.

13 MR. SASEEN: Do you conduct medical  
14 evaluation of respirator wearers?

15 MR. GRAHAM: We do.

16 MR. SASEEN: Is it annual or --

17 MR. GRAHAM: We do it as a pre-employment  
18 physical and then if they're required to wear  
19 respirators, we have them do it and do it on an annual  
20 basis. We've done that for years. And I've heard  
21 that question asked many times. I appreciate asking  
22 the question, but just because we do it, doesn't  
23 necessarily mean that it ought to be a standard there  
24 that makes us do it. There's a lot of people that's  
25 already admitted to doing that which is a good

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1 business practice, guys. You know that. We know  
2 that. But does that necessarily mean that we have to  
3 have it mandated under MSHA that we do this type of  
4 thing? I don't think so.

5 MR. : Particularly for diesel  
6 exhaust where MSHA's own statements admit that the  
7 dose response relationship is not agreed to in the  
8 scientific community and that there's no particular  
9 number for elemental carbon or total carbon that's  
10 tied to any particular health effect. So to engage  
11 the respirator issue for diesel exhaust, makes no  
12 sense to the MARG Group whatsoever.

13 Respirator issues are generic. They apply  
14 to every dust and every substance that MSHA regulates.  
15 MSHA has a respirator rule and that respirator rule  
16 is subject to rulemaking should the Agency so choose.

17 But to change the respirator rule only for  
18 diesel exhaust when there's an admission that the  
19 scientific evidence isn't there for specific health  
20 effects, for specific items like elemental or total  
21 carbon and at what level, makes no sense.

22 And by the way, when you're thinking of  
23 the MARG Coalition, we want you to think of the fact  
24 that the Coalition represents a broad spectrum of  
25 mining operations from limestone mines underground, to

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1 trona mines with differing ventilation to the salt  
2 mines to the gold mines to the Stillwater mine, from  
3 the large to the small or medium, the variety of  
4 horsepowers, all of these mining operations that have  
5 been the leaders and the research, both health effects  
6 on the NIOSH side and engineering on the NIOSH side,  
7 all of these MARG numbers have come to this conclusion  
8 for the variety of types of mines that are out there  
9 and the variety of the conditions. We're not speaking  
10 from just one perspective, but from a broad  
11 perspective.

12 MR. SEXAUER: Thank you, gentlemen. Our  
13 next speaker is David Ortlieb. I'm sorry if I  
14 mispronounce that. It's a little hard to read it  
15 here. Is David available?

16 MR. ORTLIEB: I have a worker panel with  
17 me today. My name is Dave Ortlieb. I am Assistant  
18 Director in the United Steelworkers Health and Safety  
19 and Environment Department. The USW represents  
20 850,000 workers in North America, including the  
21 majority of unionized metal and nonmetal miners, both  
22 in the United States and Canada.

23 Before I begin my formal remarks, I would  
24 like to share with the group that a long time safety  
25 and health staff person with the USW Health and Safety

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1 Department who specialized in MSHA issues for over a  
2 couple of decades, Harry Tuggle, died on Saturday from  
3 prostate cancer. I imagine a number of you in the  
4 room knew of him or knew him. His funeral is tomorrow  
5 in Pittsburgh. Memorial contributions may be made to  
6 the Beachview United Presbyterian Church, 1621  
7 Broadway Avenue, Pittsburgh 15216. Tributes or  
8 condolences can be made via  
9 [www.woodrufffamilyservices.com](http://www.woodrufffamilyservices.com). We'll miss him very  
10 much. Thank you.

11 With me today are Brad Shorey, President  
12 of our Local Union 11-0001 which represents the miners  
13 at the Stillwater Mine in Nime (Phonetic), Montana;  
14 along with Mike Simpson, the full-time Health and  
15 Safety Rep for the Local at the mine.

16 In our comments today, and in a much  
17 longer written material that we will be submitting  
18 later in January, the USW will be leveling strong  
19 criticism against MSHA's proposal that tries to weaken  
20 the standard that protects thousands of American  
21 miners from cancer-causing diesel exhaust.

22 As stated by the president of the USW, Leo  
23 W. Gerrard in September of 2005, the Administration's  
24 proposal puts the lives of our members at risk. This  
25 is the second time MSHA has tried to gut the standard.

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1 Miners, in fact, all Americans have the right to  
2 expect better from their government.

3 This is a very sad day indeed for MSHA for  
4 this is the first time that MSHA, as well as the  
5 entire Department of Labor or OSHA, has attempted to  
6 significantly weaken a major health standard that is  
7 already in place. Make no mistake about our position.

8 We honor the history of the Agency and its past  
9 values and are greatly appreciative for all the  
10 dedicated work of the MSHA staff, both in Arlington  
11 and in the field. However, our mission, the USW's  
12 mission, is to prevent the senseless and horrible  
13 diseases and deaths that miners will have to suffer  
14 and the pain and the undescrivable agony that the  
15 families and loved ones will have to endure.

16 If MSHA's mission is ultimately  
17 successful, many miners throughout the United States  
18 will continue to risk cancer and serious respiratory  
19 diseases. Some miners will pay the ultimate price and  
20 will become the next generation of workers to die from  
21 occupational diseases. This is unacceptable to the  
22 USW.

23 Underground miners experienced the highest  
24 level of exposure to diesel particulate matter of any  
25 population in the U.S., much higher than the limit of

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1 160 micrograms per cubic meter. They have experienced  
2 such exposures since diesel particulate matter was  
3 identified as a carcinogen over 20 years ago by NIOSH.  
4 The time period is the average latency for the  
5 development of lung cancer. Latency is the time from  
6 first exposure to development of a tumor, as you know.

7 In other words, a miner who entered the industry 20  
8 years ago, has already accumulated a significant risk  
9 of disease as a direct result of delay in this  
10 rulemaking. Furthermore, it is the USW's position  
11 that the 160 limit measured as total carbon is not  
12 adequate.

13 According to risk assessments by NIOSH and  
14 others, this limit would not reduce miners' lifetime  
15 risk associated with exposure to diesel particulate  
16 matter to less than one in one thousand.

17 The current diesel exhaust final limit of  
18 160 total carbon is scheduled to become effective  
19 later this spring. When the standard was made law in  
20 2001, mine operators were given five years to comply  
21 with the limit, as you know. MSHA and NIOSH gave the  
22 mining industry an extraordinary amount of help in the  
23 form of compliance assistance and research into  
24 feasible, practicable and relatively inexpensive  
25 controls. The USW agreed to a change in the standard

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1 that will give individual mine operators an unlimited  
2 number of special extensions where they can  
3 demonstrate the need.

4 None of that, unfortunately, was enough  
5 for some operators or their trade associations. While  
6 some operators have made a good-faith effort to lower  
7 exposures and come into compliance, history shows that  
8 all too many will wait until the day that government  
9 finally has the power to cite them and impose  
10 penalties.

11 MSHA now proposes to delay that day for  
12 five more years. Reopening the record gives others  
13 the opportunity to argue that the standard should be  
14 weakened further, perhaps to the point where the day  
15 of reckoning never comes at all.

16 This is different from most other  
17 rulemakings in that a standard is already in place and  
18 the Agency proposes to weaken it by a lengthy delay.  
19 MSHA previously found the standard to be both  
20 necessary and feasible. The burden of proof rests  
21 squarely with MSHA and anyone else who might propose a  
22 more drastic weakening.

23 Although we have no obligation to prove  
24 our case that the existing standard should be  
25 retained, the USW intends to show in this rulemaking

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1 that the existing standard is feasible in all its  
2 aspects. We will do so through written documentation  
3 later in the process.

4 Today, we want to touch briefly. Today,  
5 we want to touch briefly on a different issue in  
6 rulemaking, respirators and the need for medical  
7 evaluation. Every employer, regulated by OSHA is  
8 required to provide medical evaluations for workers  
9 required to wear respirators. Every professional  
10 association involved in safety and health recommends  
11 it: the American Industrial Hygiene Association, the  
12 American Conference of Governmental Industrial  
13 Hygienists and the American Occupational Medicine  
14 Association, to name the most prominent.

15 There is very substantial evidence in the  
16 record of the relevant OSHA hearings to support  
17 medical evaluation and we would ask that that evidence  
18 be incorporated into this record as well.

19 We believe that most miners unable to wear  
20 a negative pressure respirator will be able to wear a  
21 powered respirator. Very few miners will have to be  
22 reassigned, but unless miners are assured that they  
23 will keep their jobs even if they cannot wear a  
24 respirator, some may refuse the evaluation or may give  
25 inaccurate answers on a medical history. No one

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1 should have to choose between their health and their  
2 job.

3 Miners removed from high exposure areas  
4 must therefore have transfer rights and full earnings  
5 protection both as a matter of health and as a matter  
6 of simple justice. Job rotation should not be  
7 utilized by miners as a tool for circumventing, I  
8 should say job rotation should not be utilized by mine  
9 operators as a tool for circumventing these issues.  
10 And of course, as a matter of law, transfer rights and  
11 earnings' protection are explicitly required by the  
12 Mine Act. We will elaborate all these points in our  
13 written submissions and Brother Shorey and Simpson  
14 will also discuss them in a moment.

15 That concludes my statement. After all of  
16 us have finished, we will, of course, be happy to  
17 answer any questions to the best of our ability. I  
18 would ask that you direct all questions for our group  
19 to me initially since I am more familiar with the  
20 particular expertise of each panel member.

21 We're going to have, at this point, Brad  
22 Shorey make his opening remarks.

23 MR. SHOREY: Thank you, Dave. My name is  
24 Brad Shorey. I'm the President for United  
25 Steelworkers Local 11-0001 at Stillwater Mining

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1 Company. Dave said the nine sites earlier, that's  
2 actually three sites. That would be the Stillwater  
3 site, the East Boulder site and the Columbus facility  
4 which is under OSHA supervision.

5 So anyways, first off, I'd like to thank  
6 MSHA for taking a proactive approach to the DPM  
7 problem. I'd also like to thank the United  
8 Steelworkers for their effort, time and money for  
9 helping the workers, because that's the perspective  
10 you're going to get from me today. I'm not going to  
11 give you a lot of technical information that you've  
12 heard earlier in this hearing. You're going to hear  
13 from a person that was actually in the mine. I've  
14 worked in the mine and I've had a lot of different  
15 situations in the mine.

16 And I'd also like to thank Stillwater  
17 Mining Company, if you can believe it, for taking a  
18 proactive approach, because I believe they have been  
19 taking a proactive approach in dealing with the DPM  
20 issue. And I think credit needs to go where credit is  
21 due, but I think there's more that we can do. So I'm  
22 just going to leave it at that and I'll talk about  
23 some more stuff a little later.

24 MR. ORTLIEB: Mike?

25 MR. SIMPSON: Good afternoon. My name is

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1 Mike Simpson. I'm the Joint Safety and Health  
2 Committee Representative at the Stillwater Mine site.

3 I also, unlike Brad, I do have working dealings with  
4 Columbus site, which gets me involved in some of the  
5 OSHA aspects of things. And you know, just really I'd  
6 like to just mimic what Brad said as far as thanking  
7 all the groups that are involved today, specifically  
8 the ones that he mentioned.

9 And I'm going to leave it at that and  
10 we'll just go ahead and get started with this.

11 MR. ORTLIEB: Okay, thank you. We're  
12 going to cover a number of different issues. First  
13 off, Brad, would you give a description of the number  
14 of diesel powered vehicles at the various mines?

15 MR. SHOREY: A description of what types?

16 MR. ORTLIEB: Just the number.

17 MR. SHOREY: The number. I'd have to say  
18 on a -- of course, I don't have that information in  
19 front of me, but a rough guesstimation, I'd have to say  
20 that there's probably 400 pieces of underground  
21 equipment. Maybe some over that dealing with the  
22 transportation equipment, Toyotas and things like that  
23 that Steve Wood and Buck Chamberlain talked about  
24 earlier. But there's a lot.

25 MR. ORTLIEB: Okay, and how many miners at

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1 the site there?

2 MR. SHOREY: At the Stillwater site,  
3 there's give or take about 800. At the East Boulder  
4 site, give or take, there's 400.

5 MR. ORTLIEB: Next, we'd like you to make  
6 some comments about the diesel emission reduction  
7 program at the plant. Is there a written program?

8 MR. SHOREY: There is.

9 MR. ORTLIEB: Has the Local been provided  
10 with a copy?

11 MR. SHOREY: We have.

12 MR. ORTLIEB: Could you describe the  
13 program, as you know it?

14 MR. SHOREY: Well, and that's kind of the  
15 same thing I've been hearing a lot of today is that  
16 there's -- the program has got a bunch of different  
17 systems, SOPs, policies, working simultaneously to try  
18 to achieve certain numbers in certain areas through  
19 testing and for example, one of the SOPs would be  
20 idling equipment, you know, that it's a standard  
21 operating procedure at Stillwater Mining Company not  
22 to idle equipment and from that to like I said, doing  
23 testing, filters, that we haven't had a whole lot of  
24 luck with, but engine replacement maintenance, things  
25 like that.

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1 MR. ORTLIEB: Okay, we're going to talk  
2 about the engine emissions testing efforts at the  
3 plant. Does the company conduct regular engine  
4 emissions testing as well as personal and area and  
5 industrial hygiene monitoring?

6 MR. SHOREY: They do.

7 MR. ORTLIEB: Are you provided with copies  
8 of all the test results that they do?

9 MR. SHOREY: I'm provided upon request. A  
10 lot of the information is shared. We've just now  
11 started here recently joining the company in DPM  
12 meetings that they're having to specifically isolate  
13 this issue, outside of other safety issues and -- but  
14 that information is never denied. I mean if I request  
15 information from Buck or any of the IH people, then  
16 it's provided.

17 MR. SIMPSON: If I could just add to that  
18 too, a lot of that, because of my participation in  
19 what Brad spoke of which was the DPM meetings that  
20 they are having up there, I get a lot of that  
21 information because of my position and part of that  
22 reason is also because Brad's got other duties  
23 throughout the whole complex and that information is  
24 typically forwarded to him by me. But again, like he  
25 said none of it has been withheld. If we ask for it,

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1 we get it.

2 MR. ORTLIEB: We'll talk about ventilation  
3 in the mine next. What's the state of ventilation in  
4 the mine and is it well maintained?

5 MR. SHOREY: Keep in mind I've been in  
6 this position for five years, so from where it was to  
7 where it is, there is an extremely big difference.  
8 And I would have to say that there's been a lot of  
9 effort in upgrading ventilation in the mine,  
10 increasing air flow and bringing in engineers that are  
11 experienced in that line of work to help with air  
12 doors, shutting off certain areas, making sure that  
13 flow is the right way, you're not recirc'ing air. All  
14 of those different kinds of things has increased the  
15 ventilation in the mine greatly.

16 MR. ORTLIEB: Okay, there are six primary  
17 means being used throughout the mining industry to  
18 lower diesel particulate matter emissions and reduce  
19 worker exposures. These include clean engines,  
20 ventilation, environmental cabs, work practices, after  
21 filters and alternative fuels. Additionally, some  
22 mines were replacing diesel powered equipment with  
23 electric powered mining equipment.

24 What is your mine doing or not doing in  
25 these areas as far as the knowledge that you have?

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1 MR. SHOREY: They're doing several of  
2 these things. And they're also -- there's also things  
3 in the work for other things to come on line. Of  
4 course, you've got the engines that we've ordered and  
5 installed, Tier I, Tier II; emissions testing; of  
6 course, the respirator program; the ventilation  
7 upgrades. Our mine is a narrow vein mine, so space  
8 within the mine is extremely difficult. Cabs are  
9 tough. They're just tough to get engineered to where  
10 you can put them on the equipment and make it work  
11 without causing another hazard to the employee that's  
12 operating them because they're pretty bulky. They  
13 start to bulk up the equipment a lot.

14 There's some alternative mining styles  
15 that are starting to come up in the plan that are also  
16 going to have an impact on the DPMs, I believe. I  
17 didn't hear Steve talk about it earlier, but I believe  
18 that it probably is going to have an impact and that's  
19 dealing with the slusher stopes (Phonetic) that we're  
20 going to be bringing on line because a lot of that is  
21 going to be dealing with electrical engines versus  
22 conventional diesel engines in the stopes, mucking.  
23 So that's going to have an impact.

24 The Almac (Phonetic) mining is going to  
25 have an impact, I believe, because it's going to

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1 reduce some of the -- it's going to shift the  
2 workforce from more muck hauling to a different style.

3 So I think that's going to have an impact.

4 Some of those things are things that are  
5 still out there. They're not done yet. Maintenance.

6 There's some things there that are just, like I said,  
7 they're going to be in effect. They're putting in a  
8 brand new preventive maintenance program dealing with  
9 -- well, dealing with just that. Instead of putting  
10 out fires or letting things build up or whatever,  
11 scheduling this stuff out before it goes bad,  
12 replacing it, things like that.

13 Let's see. That's about it.

14 MR. ORTLIEB: Let's talk next about  
15 unnecessarily idling of diesel equipment and what's  
16 the situation in your mine?

17 MR. SHOREY: Like I said, we have  
18 practices in place right now where -- and it has  
19 caused a problem actually on the surface because in  
20 Montana, as you know, and in a lot of these places,  
21 you know you have winters, so if you're not idling the  
22 equipment it causes problems. It's a lot easier to  
23 leave it idling on the surface and keeping it warm.  
24 So it has created a little bit of a problem there, but  
25 the employees are being instructed in at least that

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1 capacity to not idle the equipment. Don't leave the  
2 equipment idling when you're going to go in to eat  
3 lunch, for example. Turn it off. Make sure you turn  
4 it off if you're going to go down to the drift and  
5 you're going to have a pass down with one of the other  
6 employees. Turn it off, versus letting it sit there.

7 MR. ORTLIEB: As far as the preventive  
8 maintenance program at the plant, what's the quality  
9 of that? Is diesel equipment well maintained?  
10 Describe the program?

11 MR. SHOREY: That's kind of a two -- a  
12 double-edged sword dealing with the maintenance.  
13 They've got a program that's coming in. They're just  
14 putting it in. So I can't really speak to that on  
15 preventive maintenance. I can tell you that the  
16 emphasis on changing filters, making sure injectors  
17 are changed out or that they're calibrated correctly,  
18 so you're not getting that unburned fuel, that red  
19 mist in a work area. I've seen some pretty nasty  
20 stuff, you know. You go in there and your eyes are  
21 burning and your throat burns and you're wondering how  
22 in the world that guy on the mucker is even making it.

23 Those things are kind of -- you know,  
24 they've changed that. So that's not in existence at  
25 Stillwater. I don't know about other places, but at

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1 Stillwater because there's been a lot of emphasis on  
2 changing filters and making sure those things are  
3 done.

4 But they're just now going to be moving  
5 into a new PM program where they're going to, like I  
6 said, running computerized testing dealing with the  
7 Detroit engines that they put in, so that they'll  
8 actually know when these spikes are starting to occur  
9 and they can correct them before it gets into a range  
10 where it's problematic.

11 So I'm excited about it, but I can't  
12 really -- I can't beat the band too hard here because  
13 it's not in effect.

14 MR. ORTLIEB: As far as dialogue at the  
15 plant, does the mine operator regularly discuss diesel  
16 issues with you, with the Local?

17 MR. SHOREY: And as a matter of fact, I'd  
18 like to have Mike speak on this because he's been  
19 attending more of the DPM meetings than I have. I've  
20 attended a couple, but basically it's a think tank.

21 MR. SIMPSON: Yes, as was referred to  
22 earlier in this conversation, we have -- they have DPM  
23 meetings, minimum of once a month and as much as twice  
24 in one month. And any and all issues regarding DPM is  
25 discussed at these meetings. And again, like I said

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1 earlier, that information is provided not only to me  
2 at the time of the meeting, but any and all notes  
3 afterwards are forwarded to me by the person that  
4 chairs that particular meeting and then that  
5 information is passed on to Mr. Shorey, as I stated  
6 before.

7           And a lot of these things -- you know, one  
8 of the things that we discussed was in regards to a  
9 little bit of a question prior to this one was the  
10 idling of equipment because of the temperatures,  
11 especially here about two or three weeks ago when it  
12 was pretty cold. And being a part of that group and  
13 being able to understand the challenges presented all  
14 different entities in that meeting, as a worker, as a  
15 mine operator, and as a mechanic, underground operator  
16 mechanic, what was -- what's become an issue because  
17 of where we're trying to get to is -- you've got these  
18 filters that you guys keep talking about, the ones  
19 that you regenerate and the ones that you change out.

20       Well, if you leave this equipment idling on the  
21 surface, it just fries them, which of course, we found  
22 out.

23           So you've got some challenges there, but  
24 this kind of stuff, that comes up which is I'm going  
25 to call it a plus, wherein they're talking about ideas

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1 to prevent things or to make things better, but things  
2 like this come up and my participation, I'm able to  
3 bring that information to the employees that maybe  
4 don't understand why they're spending a half a day  
5 trying to get this equipment started. But it all  
6 revolves around what we're talking about today.

7 In any case, I guess that was a bit of a  
8 drawn-out answer. Yes, they do provide that and  
9 discuss that with me and Mr. Shorey when he's  
10 available.

11 MR. ORTLIEB: We'll address respiratory  
12 protection next. Does the company have a written  
13 respiratory protection program?

14 MR. SHOREY: They do.

15 MR. ORTLIEB: Has the local been provided  
16 with a copy?

17 MR. SHOREY: I have.

18 MR. ORTLIEB: Does the mine provide  
19 medical evaluations for miners required to wear  
20 respirators?

21 MR. SHOREY: They do.

22 MR. ORTLIEB: Would you describe that,  
23 describe the program?

24 MR. SHOREY: Well, it's actually not new.  
25 I mean one of the other companies was alluding to the

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1 fact that this is good business practice and I think  
2 that it is. I mean it's something that's been going  
3 on at Stillwater for a little while now. They just  
4 finished up with fit testing. Everyone, I think  
5 that's done because we have to upgrade that all the  
6 time.

7 We have yet to run into an issue of  
8 dealing with an individual that didn't pass, but I  
9 have been reassured through talks with the human  
10 resource manager that if that situation was to arise,  
11 that every effort would be made to ensure the  
12 individual would be moved into another capacity within  
13 that department. If that was impossible, that we  
14 could work something out, if we can, to get them put  
15 into a different position.

16 Of course, as a last resort, if the  
17 individual is maximum medically improved and there  
18 isn't anything that we can do dealing with either  
19 through medications or what have you, that we'd have  
20 to look at it from that point then. But the effort,  
21 the hand has been offered for us to do things prior to  
22 that.

23 MR. ORTLIEB: Could you elaborate a little  
24 more on the medical evaluation, who does it? Is that  
25 a subcontractor or what's the situation there?

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1 MR. SHOREY: Well, I'm pretty sure in -- I  
2 don't want to pick on Buck back there, but I'm pretty  
3 sure that's a joint effort between the industrial  
4 hygienist and Med Corps which we have paramedics that  
5 are on the property that would actually determine  
6 rather the individual was medically sound or not.

7 The industrial hygienist would be doing  
8 the fit tests, the smoke and so on and so forth to see  
9 if that person was able to be fitted, was -- and then  
10 to determine if they were -- if they had the lung  
11 capacity to wear it and it's typical of a lot of what  
12 we've heard in that it would be rare, not impossible  
13 or not unheard of, I should say, but it would be rare  
14 that an individual be required to be in a situation  
15 where you have to wear that the entire shift because  
16 of the way things move around in the mine. But it's  
17 possible. If they had a problem, they would be  
18 expected to report that.

19 MR. ORTLIEB: Who is Med Corps so that  
20 they fully understand that?

21 MR. SHOREY: Med Corps is a contractor and  
22 they are paramedics that have got a medical facility  
23 on site and they basically -- they don't diagnose.  
24 What they do is -- if somebody has got an issue  
25 dealing with an ailment or an injury, they determine

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1 rather the individual is at a point where they need to  
2 be transported. If they do, then they transport them.

3 And they can also prescribe medications. They can --  
4 I think prescribe is probably the wrong word. They  
5 can administer medications, injections, things like  
6 that.

7 They're at a level like let's say an R.N.,  
8 I think or somewhere around in there.

9 MR. SIMPSON: The standard for the  
10 paramedic is I think nationwide, is the same. They're  
11 qualified to do -- push drugs, they call it, in  
12 instances where they need them and those who are  
13 familiar with that type of certification would  
14 understand. I am an EMTB myself and the mine has  
15 about 40 to 50 of us that also do some of the  
16 transporting and what not at that time, unless the  
17 injury or illness indicates that the level of care  
18 needs to be greater, at which point the paramedic has  
19 to go on the journey in order to facilitate meds.

20 MR. ORTLIEB: The last item is medical  
21 evaluation, transfer and earnings protection. Is that  
22 actually reflected in the company's written  
23 respiratory protection program or is that in your  
24 collective bargaining contract?

25 MR. SHOREY: That would be an agreement

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1 between the local and the human resource department on  
2 behalf of the company, dealing with the process that  
3 we would deal with that.

4 MR. ORTLIEB: Basically a verbal  
5 agreement?

6 MR. SHOREY: Yes.

7 MR. ORTLIEB: Okay. Are miners given  
8 periodic breaks from wearing respirators without  
9 relying on job rotation? As is there any formalized  
10 system for doing that or part of a written program?

11 MR. SHOREY: I'm sorry, say that again?

12 MR. ORTLIEB: Miners given breaks from  
13 wearing respirators, let's say a full 8-hour day, give  
14 us a description of what respirators workers wear in  
15 the mine and for what duration of time they're  
16 expected to wear respirators. I understand you have  
17 10-hour shifts.

18 MR. SHOREY: Let's say -- well, there's  
19 several different shifts, but let's say you had 10-  
20 hour shift because that's what the miners run. And  
21 I'm talking about walk breakers. I'm not talking about  
22 the general classification of an individual on the  
23 mine property. So you've got a miner that's got a 10-  
24 hour shift. So he could do an 8-hour run in a  
25 respirator, if he was in an area that warranted that.

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1 I would think that outside of the lunch that they're  
2 entitled which is a half an hour and then a couple of  
3 breaks, I believe that if they were breaking to get  
4 off from the respirator, that that wouldn't be much of  
5 an issue unless it started to get into the way of a  
6 production round or what have you.

7 I don't know that the company would  
8 actually have a problem with the individual, but they  
9 would be questioning his ability to function within  
10 that respirator.

11 MR. ORTLIEB: Okay, as far as what type of  
12 respirators do they primarily rely on, the negative  
13 pressure respirator or powered air purifying  
14 respirators?

15 MR. SHOREY: Negative pressure.

16 MR. ORTLIEB: Elaborate on that for me as  
17 far as number of miners, approximate number of miners  
18 that --

19 MR. SHOREY: That might be forced --

20 MR. ORTLIEB: Yes. Currently on  
21 respirators.

22 MR. SHOREY: Oh boy, I don't know. I  
23 don't know how many would be at this time.

24 MR. ORTLIEB: Okay, very good. Has the  
25 mine site conducted any training for miners concerning

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1 diesel exhaust, formal training programs? If so,  
2 describe.

3 MR. SHOREY: You know, I would have to say  
4 that that hasn't been hit on very much. I mean, like  
5 I said, there's been some talk about the idling,  
6 things like that, but there isn't -- there hasn't been  
7 a whole lot of emphasis dealing with labor, taking an  
8 approach to this DPM versus -- and I'm talking about  
9 the actual workers versus management coming down with  
10 policy to go ahead and try to manipulate the outcome  
11 on the reachings.

12 MR. ORTLIEB: Final items dealing with  
13 MSHA. What has been your overall experience with  
14 MSHA, MSHA inspectors, etcetera. at your site?

15 MR. SHOREY: You know, I'm going to -- I  
16 wanted to say that MSHA, like I said, when I first  
17 took this job five years ago, I mean we're talking  
18 about a big difference between 115, 120 citations a  
19 quarter down this last quarter we had 24, which most  
20 of them were fire extinguishers. I mean and that's  
21 been a joint effort from a lot of different people to  
22 get from there to where we are.

23 I can also remember -- well, we just got  
24 most improved mine here not too long ago, so I mean  
25 we're making a lot of progress, but I can remember

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1 when I first came in, like I said, going into areas  
2 where it's not just the exhaust, but that the engine  
3 wasn't running right and firing right, and so you  
4 actually had diesel, raw diesel fumes in the air. And  
5 that's not -- that's just not good to work in. I  
6 don't care what anybody says about what they think the  
7 diesel particulate is. I can't imagine that that's  
8 good for you.

9 And there's been a huge change from that  
10 to what it is right now.

11 I guess my big -- and I want to thank MSHA  
12 for helping us to get to where we're at. My deal is  
13 is that I guess I wonder if the standard is 400, why  
14 there's areas that are being allowed to run at a lot  
15 more than that, without being cited.

16 And I mean if there's a problem on being  
17 able to make the citation stick because of the way the  
18 system is set up, maybe that needs to be revisited,  
19 but not so much at Stillwater, but there's definitely  
20 some readings that I'm looking at over at East Boulder  
21 that are concerning to me. Over a thousand on the  
22 reading, that's an area that needs to be addressed.  
23 And there are several of them. So I mean I'm going to  
24 be looking at that myself because this is new  
25 information that I just got from MSHA inspectors doing

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1 their testing at Stillwater here recently in 2005. So  
2 I mean I'm going to have to look at it, but I'd like  
3 to see some enforcement. If that's what it's going to  
4 be, I'd like to see it enforced.

5 MR. ORTLIEB: Okay, that concludes our  
6 remarks. We thank you very much for the opportunity  
7 to testify. We'd be happy to take any questions.

8 MR. SEXAUER: Any questions? George.

9 MR. SASEEN: You mentioned about the  
10 preventive maintenance program, testing the engines.  
11 Can you elaborate on -- I don't know if it's under an  
12 SOP, but how often those engines are brought in and  
13 what's your experience with seeing them brought in for  
14 testing?

15 MR. SHOREY: Well, I can't speak to what -  
16 - because like I said, in my opinion, they're a PM  
17 program that they had because this is just now coming  
18 into effect. They made the schedule changes, so on  
19 and so forth. They're going to be on a 28-day cycle  
20 and at that time it will be a 24 hour -- from what I  
21 understand a 24-hour service and that will be from  
22 stem to stern so to speak. And during that process  
23 there will be -- they will be run through the computer  
24 and analyzed on what those peaks are and lows. And  
25 then if there's any major issues, then they'll be

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1 tagged and they'll be put out on the BL line. If they  
2 can run with the issue and be safe, then they'll be  
3 rescheduled later on for the remainder of work.

4 But that's what's coming -- what it's  
5 been, I think to be honest with you, what it's been  
6 has been -- it's been scheduled to some degree to go  
7 ahead and try to, in my opinion. to try to go ahead  
8 and understand what's affecting what dealing with  
9 DPMs. Okay? Does that make sense?

10 Tracking certain equipment to go ahead and  
11 figure out what the DPM readings would be, I think has  
12 been more of the emphasis versus being incorporated in  
13 part of the preventive maintenance program.

14 MR. SASEEN: Will this be every piece of  
15 equipment that will come under this new program?

16 MR. SHOREY: Yes.

17 MR. SASEEN: And will it be brought into  
18 the shop and be performed?

19 MR. SHOREY: Yes. It will all be on a 28-  
20 day cycle, rotation. And so that's the number that I  
21 got. They can do it with all the equipment we have on  
22 a 28-day rotation. They can get every piece in there  
23 to get it looked at and to do the testing and stuff,  
24 my understanding.

25 MR. SASEEN: Thank you.

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1 MR. SEXAUER: Jim?

2 MR. PETRIE: You had mentioned a concern  
3 about MSHA enforcement and I was just wondering is  
4 this primarily recent sampling that has been done?

5 MR. SHOREY: It's recent, 2005, the latter  
6 part of 2005, when the testing was done.

7 MR. PETRIE: What we need to do and before  
8 issuing a citation is we need to determine if the  
9 company has utilized all feasible controls before we  
10 can issue a citation. So perhaps we're going through  
11 that process right now, particularly in light of all  
12 the efforts that Stillwater has made to try and reduce  
13 diesel particulate levels. It may take a little while  
14 to do that.

15 MR. SHOREY: Sure.

16 MR. SEXAUER: Doris?

17 MS. GREEN: Yes. I just wanted to get,  
18 make sure I understand the current state right now is  
19 that you don't have as part of your contract or as  
20 part of a written agreement with the Local and with  
21 the miners, something that would cover the situation  
22 if a miner were not able to wear respiratory  
23 protection, in other words, your understanding is  
24 that's something you would have to work out, but  
25 that's not currently part of a written agreement?

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1           MR. SHOREY: The comment that was made to  
2 me was -- I shouldn't say it was just to me. It was  
3 actually in the setting of a MUC meeting which is a  
4 Management Union Committee Meeting in front of the  
5 entire Workers Committee and the management team. So  
6 I mean yeah, you could say it's a verbal and probably  
7 if I wasn't working on 15 MOUs right now, I probably  
8 would be working on that one too. But you know what I  
9 mean. It's definitely something that needs to be put  
10 in writing, so that we know, if something like that  
11 was to happen, because there's other complications  
12 dealing with the unionized site. So you take a guy  
13 from one of the areas.

14           I also have the issue of dealing with  
15 seniority positions, classifications, all these other  
16 kinds of things. So if we're going to circumvent some  
17 of that, then we need to do it through a Memorandum of  
18 Understanding outside of the collective bargaining  
19 agreement.

20           But as of right now, there is no specific  
21 language in the CBA.

22           MS. GREEN: Okay. And also you said your  
23 miners had been fit tested for the negative pressure.

24           Could you tell me has there been any experience with  
25 the powered air supplies?

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1 MR. SHOREY: It was like a -- I can't  
2 remember. It might have been Mike Crum. I can't  
3 remember, but one of the other mines talked about it  
4 earlier. It's the same with us. Only in a very  
5 limited capacity and we're talking about welders, you  
6 know things like that. But not dealing with the  
7 regular mining workforce, no.

8 MR. SEXAUER: Jim?

9 MR. PETRIE: You mentioned that Med Corps  
10 does your medical evaluations. Do you know if there's  
11 a certified health professional physician or someone  
12 that oversees those medical evaluations or are they  
13 just done by the EMTs that are on the site?

14 MR. SHOREY: Well, when we were talking  
15 about dealing with respirators, to be honest with you  
16 and this is going to be -- this would be a point of  
17 contention between I think the Union and the company  
18 if you did ever run into an issue dealing with that is  
19 that pre-existing condition versus workman's comp. Do  
20 you see what I mean?

21 And so I think that you would probably  
22 have a pulmonary physician outside of Med Corps. Med  
23 Corps could make the initial determination that yes,  
24 the individual is having breathing problems dealing  
25 with -- they probably wouldn't even limit it down. I

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1 doubt that they would even say respirator. They would  
2 probably say he has some kind of pulmonary problem  
3 that needs to be looked at. And then it would be  
4 moved on to a physician for him to go ahead and make  
5 that decision. They don't have that kind of a level  
6 of medical authority. In short, just to make the call  
7 is what they would do and they'd send them to somebody  
8 else.

9 MR. PETRIE: Thank you.

10 MR. ORTLIEB: It says a paramedic too,  
11 which is quite a bit above an EMT status.

12 MR. PETRIE: Okay.

13 MR. ORTLIEB: There's definitely a  
14 difference in medical training there.

15 MR. SEXAUER: George?

16 MR. SASEEN: Mr. Wood testified earlier  
17 that there's been a variety of particulate filters  
18 being installed on various machines over the last  
19 several years. Have you heard from your -- from the  
20 miners yourselves, do they like them on, don't like  
21 them on, see a big difference when they're operating a  
22 machine, with or without a filter? Any insight into  
23 that personal --

24 MR. SHOREY: That particular system isn't  
25 real well received. Well, it depends on which kind.

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1 But the filter that actually attaches to the back of  
2 the exhaust, there's been complaints about smell.  
3 There's been complaints about power, those kinds of  
4 things. The company has a problem with them working  
5 correctly. I mean that's not my forte, so I couldn't  
6 tell you exactly, chemically, why things don't work  
7 the way that they're supposed to.

8 But they're not real well received. I  
9 think that the porcelain regen canisters are probably  
10 a little better. Yeah, the scrubbers, they're kind of  
11 harder to maintain. It would be nice to have a quick  
12 fix that you could slap on and off. We just haven't  
13 been able to find anything that will work that way.  
14 But that's been the biggest complaints.

15 MR. SIMPSON: Yes, I think what needs to  
16 be recognized also, in regards to filtration systems  
17 on these exhausts is that typically they're doing that  
18 and upgrade of ventilation, making -- setting up a  
19 better plan for distributing the -- I should say  
20 deploying their crews, whether it's muck haul, the  
21 trucks or miners and stuff like that. So to put it on  
22 one thing is difficult, especially for me or Brad,  
23 because we're not trained in that specific field.

24 MR. SASEEN: Do you know if the miners who  
25 operate those machines with filters have been trained

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1 to know when the maintenance is needed on those  
2 ceramic filters?

3 MR. SHOREY: If they get one of those  
4 filters, then they're trying to go ahead and isolate  
5 individuals in the areas that will be working with  
6 them to know when the optimal horse power and all this  
7 other kind of stuff. The problem is is that the work  
8 force moves, kind of -- it kind of sways here and  
9 there and so it's kind of hard at any given time to  
10 figure out -- it's not like a factory job in that  
11 somebody punches in, goes to the area, designated  
12 area, works the shift, punches out. You know what I  
13 mean? It just doesn't work that way.

14 I think that's probably the biggest  
15 problem that we'd have, but there has been some  
16 attempts to generalize that in safety meetings and say  
17 you know, this is probably the best way to do this or  
18 do that, to make them run better.

19 MR. SIMPSON: And I believe they do have  
20 some indicator on some of the specific equipment.  
21 That I'm not aware of, you know, I couldn't give you  
22 an exact type, but I know that they do have some that  
23 have warning lights on them and those operators have  
24 been trained to recognize that as an indication that  
25 it needs to be -- I don't know, because I've never run

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1       them, but something else needs to be done, whatever  
2       that would be.

3               As far as the other filters, the  
4       interchangeable filters, I operated -- I've only been  
5       in this position for just over a year, so I'm familiar  
6       with some of the challenges that we've gone through  
7       over the last few years there and when your mucker  
8       starts running crappy, you go get a filter. I mean  
9       it's pretty simple. Insofar as training, it's common  
10      sense in that respect, to the changeable filters, not  
11      the ceramic ones.

12             MR. SASEEN:     You mean that's when it  
13      starts running --

14             MR. SIMPSON:    You start to lose power.

15             MR. SASEEN:     And then you change the  
16      filter?

17             MR. SIMPSON:     Because typically what's  
18      going to happen, at least in my own personal  
19      experience, what's going to happen after that is it's  
20      going to start getting smokey and then it's really  
21      going to get underpowered and obviously needs to be  
22      fixed.

23             MR. SASEEN:     Do you think that's some of  
24      the miners complaints that they do start smoking  
25      because they're not being changed routinely?

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1 MR. SIMPSON: No, I think it's in  
2 different directions, but not specific to that, no. I  
3 think it's from other reasons.

4 MR. SASEEN: Thank you.

5 MR. SEXAUER: Thank you, gentlemen. Thank  
6 you very much.

7 We have one more scheduled speaker and  
8 we'll entertain anyone else who would like to speak.  
9 I think what we'll do before we do the last speaker is  
10 we'll take a five minute break and then we'll come  
11 back.

12 (Off the record.)

13 MR. SEXAUER: Back on the record. Our  
14 last scheduled speaker is Brent Chamberlain.

15 MR. CHAMBERLAIN: Good afternoon. My name  
16 is Brent Chamberlain. I'm the manager of Human  
17 Resources and Safety for Queenstake Resources who is  
18 the owner and operator of the Jarrett Canyon Property  
19 and with me I have Mr. Shane Owen who is our  
20 industrial hygienist for Queenstake and we appreciate  
21 the opportunity to come and discuss --

22 MR. SEXAUER: Will you spell your names  
23 please?

24 MR. OWEN: Shane Owen, O-W-E-N.

25 MR. SEXAUER: Thank you.

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1 MR. OWEN: You're welcome.

2 MR. CHAMBERLAIN: I appreciate the  
3 opportunity to discuss this proposed final rule with  
4 you. We have been here, done this before for a long  
5 period of time, like some of the other commenters have  
6 said and you know, there has been some progress made,  
7 although in a lot of areas, there's still a lot of  
8 progress to be made, a long ways to go before we get  
9 there.

10 We share MSHA's goal of providing a safe  
11 and healthful work environment for our miners and with  
12 this in mine, we have participated and continue to  
13 participate with the Agency throughout this process.  
14 We are -- we will be a participate for the -- or with  
15 the metal and nonmetal DPM partnership for extensive  
16 studies at one of our mines, beginning in earnest,  
17 hopefully in February or so. That process has already  
18 yielded some good ideas and some good things that we  
19 can benefit from and we will continue to work on those  
20 lines.

21 We will provide written comments by the  
22 close of the public comment period. We're not  
23 prepared to do that today, but we will provide some  
24 information and be willing to answer questions.

25 To start off with, I'd like to say that

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1 like most of the other presenters here, we don't  
2 believe that there is sufficient scientific evidence  
3 of a correlation between DPM at any specific level and  
4 a resultant health effect. We therefore maintain that  
5 this rulemaking process in the proposed final rule is  
6 premature and perhaps unjustified. Upon completion of  
7 scientific studies of the correlation between diesel  
8 exposure and human health effects, rulemaking may then  
9 be appropriate.

10           However, as stated, we are moving on a  
11 train and we'll continue to be participants and work  
12 towards the best end that we can. We have implemented  
13 a number of changes at our mine, a number of -- tried  
14 a number of things to try to reduce our DPM exposure  
15 with a fair amount of success in that we have gone  
16 from our averages when we were part of the 31 mine  
17 study, some of our numbers were as high as 1200 and  
18 800 were numbers that we had, something in that range.

19           With the efforts that we have taken to  
20 date, we are generally in compliance with the interim  
21 standard, sometimes a bit below that, occasionally  
22 just slightly above that, so we have seen a better  
23 than halving of our total DPM within our mines as a  
24 result of these efforts. These efforts have included  
25 improvements in ventilation and maintenance,

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1 installing cleaner burning engines and the  
2 installation of some operator cabs.

3 We have been largely unsuccessful in the  
4 use of filters at this point in time, although we have  
5 attempted to use several of those. And again,  
6 probably the most significant effort will be these  
7 efforts that we're doing with the partnership study  
8 that we'll be undergoing as we use our mine to test a  
9 number of these things in an actual in-mine setting,  
10 unlike the Stillwater study that was ISO testing,  
11 whatever testing is done there will be an actual  
12 production setting and should provide value to us as  
13 well as to the industry and we'll certainly share all  
14 that information with the partnership members.

15 As far as the final PEL, since we can't  
16 achieve that at this point in time under any  
17 circumstances, we cannot see ourselves getting to the  
18 160, we've done about all that we can do in many of  
19 these areas. There's a few yet to test. So we  
20 maintain that the best approach to this would be in  
21 conjunction with the proposed implementation period  
22 over five years as been proposed by the Agency. We  
23 support that as being a better, certainly a better  
24 solution than immediate implementation of the final  
25 PEL which was originally intended.

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1           You know, many mines in this country are  
2 going to be -- would be unable to comply at that  
3 point. But what we would recommend is that at each --  
4 prior to the step down of 50 micrograms each year,  
5 that there be a review on what has progressed as far  
6 as technology, the feasibility and availability, these  
7 various technologies. And before a standard is  
8 lowered, we really need to determine can the majority  
9 of mines get there?

10           If you create a standard that requires --  
11 that continues to step down the level, the limit to  
12 the ultimate PEL and then increasing number of mines  
13 are forced to go through the special extension  
14 process, that's not good regulation. The regulation  
15 should allow mines to apply the technology and to get  
16 there, so whether this period takes five years which  
17 maybe it does. Maybe it takes six or seven years, I  
18 don't know, but I think each and every year before  
19 there's a change made in that year or from that year's  
20 limit to another lower level, we should review where  
21 were at as an industry and what's available to that  
22 the standard is based -- the lowering of the level is  
23 based upon some sound basis rather than an arbitrary  
24 number.

25           We have used respirators for a number of

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1 reasons in the past and we have a respiratory program.

2 And can discuss some of the conditions of that, if  
3 you would care to later on. However, we found that to  
4 be fairly successful and unless there's a lot of  
5 technology changes between now and 2007, we will be  
6 requiring a substantial number of our miners to wear  
7 respirators, the way it currently seems.

8 Now it's possible that we will make the  
9 progress we need to between now and then. We just  
10 don't know. Unfortunately, it's based upon technology  
11 to a large degree is not available or applied in our  
12 circumstance.

13 Some of the -- in response to some of the  
14 issues that the Agency was looking for information on,  
15 while we maintain in principle that a miner should not  
16 lose his ability to earn a living if he is unable to  
17 wear a respirator and would do everything within our  
18 reasonable power to transfer a minor if he were unable  
19 to wear a respirator, I think the language there has  
20 to be very carefully constructed because the way it is  
21 currently constructed it could easily be open to a lot  
22 of abuse and so there needs to be proper checks and  
23 balances to be sure that it is done properly, for the  
24 right reasons, the right medical certification and  
25 those things and that the transfer is one that makes

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1 sense.

2 One of the issues that is of great concern  
3 is is if the rule were to require a guaranteed  
4 transfer to a lesser job at an equal pay, it could  
5 become an incentive for some employees to try to go  
6 that way to sort of finish out a career perhaps as to  
7 do it at a lesser job at the same rate of pay and that  
8 creates some real hardship and difficulties with the  
9 work force, with the employee relations within a  
10 workforce. So those are not, I don't know what the  
11 answers are to be honest with you, but those are  
12 difficult questions that must be addressed. Just  
13 wholesale transfer whenever someone is deemed  
14 medically unable to wear a respirator at the exact  
15 same pay is not necessarily the right answer.

16 Having said that, our experience indicates  
17 that it probably is not going to happen very often.  
18 We have had not as a result of DPM, but for other  
19 agents, other things, we have had perhaps two cases  
20 that I can think of in the past 10 or so years where  
21 an employee was unable to wear a negative pressure  
22 respirator. We pursued finding powered respirators  
23 for them in each of those cases and then subsequent to  
24 that the conditions change which brings me to another  
25 point on the transfer and that I think if a transfer

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1 guarantee is there or transfer rights, an employee  
2 needs to take a reasonable effort on his or her part  
3 to make themselves available to wear a respirator  
4 again if they can. In some cases, it may be taking  
5 medication, but an employer should not be required to  
6 transfer an employee when that employee is not making  
7 a good-faith effort to make themselves able to wear a  
8 negative pressure or a positive pressure respirator.  
9 So that needs to be part of the language that's  
10 incorporated in that, I believe.

11 Another factor is the conversion factor of  
12 1.3. It really doesn't work at our mines. I would  
13 propose that as opposed to a hard factor of conversion  
14 from TC to EC, through the sampling process, you will  
15 have both numbers anyway. You will have a TC and an  
16 EC number and I think we continue to do the same thing  
17 that we're currently doing, which is compare the TC,  
18 use the equivalent standard of 400 stepping down to  
19 160, if it ultimately goes that direction.

20 The conversion rate that's proposed for EC  
21 and then hold an operator to whichever standard is the  
22 appropriate of those two, but I think we're finding as  
23 an industry that there probably isn't a hard and fast  
24 number that can be used to equitably convert TC to EC  
25 and I think the approach may be to discontinue to use

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1 both numbers as has been done over the past year or  
2 two.

3 That concludes my comments. We're  
4 certainly -- we welcome any questions that you may  
5 have.

6 MR. SEXAUER: Deborah?

7 MS. GREEN: I'm sorry, Deborah Green. Are  
8 you planning to submit any written comments to us?  
9 And the reason I'm asking is in reference to the issue  
10 about medical evaluation and transfer, you talked  
11 about the good-faith efforts of the employee that that  
12 needs to be a part of the consideration. Is it  
13 possible that you could give us some language that  
14 could help to guide us exactly what you're talking  
15 about? That was a little confusing for me.

16 MR. CHAMBERLAIN: I would be happy to  
17 provide some language on that in our written comments  
18 which we will provide.

19 MS. GREEN: Thank you. One other point  
20 that I should make for the record is when you are  
21 providing your written comments, you might want to  
22 take a look -- it's included in the preamble to the  
23 September proposed rule, but you might want to take a  
24 look at 101(a)(7) under the statute in the Mine Act  
25 and the specificity of how the Secretary, when she is

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1 considering medical transfer, how she is pretty much  
2 locked in for purposes of retaining the pay  
3 compensation of the miner's previous job when they're  
4 initially transferred.

5 Why don't you take a look at that and give  
6 us some comments and reference to that, please.

7 MR. CHAMBERLAIN: I have looked at that  
8 briefly and I think there probably are some ways that  
9 still stay -- and I understand what you're saying.  
10 It's very specific on the language there. However, I  
11 think there may be some ways to construct language  
12 that would accommodate that. We'll give that a stab.

13 MS. GREEN: This is what I'm interesting  
14 in seeing.

15 MR. CHAMBERLAIN: Okay.

16 MS. GREEN: So we can fully consider the  
17 comment.

18 MR. CHAMBERLAIN: Yes, thank you.

19 MR. SEXAUER: George?

20 MR. SASEEN: Brent, you say you've been  
21 unsuccessful with filters. Can you elaborate on which  
22 filters you've tried and possibly what your experience  
23 has been?

24 MR. CHAMBERLAIN: We have tried filters  
25 from three different manufacturers with roughly the

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1 same result. I think what we're learning is that the  
2 filters, for one thing they are designed and when you  
3 go to a manufacturer and give them specifications,  
4 including the engine temperature the exhaust  
5 temperatures, the profile on everything, they will  
6 design a filter for you to use.

7 I think that there is an understating of  
8 the filter capacity that's required to handle an  
9 engine that's operating at 6,000 to 7,000 feet  
10 elevation. I think these things are basically, the  
11 calculations, I think, really must be done at sea  
12 level because what we're finding is is that the  
13 filters are not capable of handling the loading that  
14 they get.

15 We have some of the problems or same  
16 problems that have been mentioned by some of the other  
17 presenters that the engine profiles through our  
18 operating procedure, we are operating cycles, duty  
19 cycles, doesn't render a lot of our pieces of  
20 equipment suitable for passive regeneration. What we  
21 did through the process is even though we were  
22 purchasing passive filters, we purchased an off-board  
23 regenerating oven and we tried doing that, tried  
24 regenerating our passive filters and the result is not  
25 very good either because they're loading too quickly.

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1           Part of the problem that we have is we're  
2 operating fairly large equipment and fairly small  
3 openings. This has been mentioned by at least one  
4 other presenter too is the dimensions and these  
5 filters are already at a size that have to fit outside  
6 of the engine compartment. They're already too big to  
7 fit in the engine compartment. They're sitting on top  
8 and when you start double stacking these things which  
9 is what it appears that we will have to do, because of  
10 the size constraints of ceramics at least, you get  
11 beyond a certain size and they tend to be too fragile.

12       So you're paralleling more than one filter and you're  
13 ending up with something that is very big and very  
14 vulnerable to damage sitting on the space that's  
15 available.

16           So I think the answer -- the problems have  
17 been undersize of filter surface area, but I don't  
18 know that there's a good solution to that. We're  
19 still -- we've tried some unsuccessfully. We just  
20 recently had a -- NIOSH came out and tested a brand  
21 new filter on a brand new engine with us and one of  
22 the things we learned is is that some of these filters  
23 require a break-in period and actually they perform  
24 better after they've been broken in and off the shelf  
25 and that's one of the things that we learned. But we

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1 still were in a situation of under-filtering and I  
2 don't know that we -- I don't know what the right  
3 answer there is, because of size constraints,  
4 etcetera.

5 MR. SASEEN: Thanks.

6 MR. POMROY: Bill Pomroy. I've seen your  
7 equipment inventories, but I can't remember, are you  
8 mostly using Tier I and Tier II compliant engines as  
9 opposed to MSHA-approved engines?

10 MR. CHAMBERLAIN: Yes, we are -- all of  
11 our production equipment is Tier I and Tier II. A lot  
12 of it is going to Tier II. We have -- we've replaced  
13 since June, for example, we've replaced 15 engines.  
14 Those are starting to become some Tier III  
15 equivalents. I don't know if they have the Tier III,  
16 but they're Mercedes and all of our production  
17 equipment have a minimum of a Tier II engine as far as  
18 an electronic engine, etcetera.

19 MR. POMROY: When you had some of those  
20 less than satisfactory experiences with the filters,  
21 was that with Tier I or Tier II engines, do you  
22 recall?

23 MR. CHAMBERLAIN: It's been a little bit  
24 of both because we started this process about four  
25 years ago when we purchased our first filter, about

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1 four years ago and that was a Tier I. And we most  
2 recently tried them on the Tier IIs and the results  
3 haven't been substantially different, but I think it's  
4 because there's just been too far of a mismatch on  
5 filter capacity. And I don't know that I --  
6 certainly, I don't fully understand. I'm not sure  
7 that everybody fully understands the differences that  
8 you run into when you take an engine and then  
9 underrate it because of elevation and then add into  
10 other things. You tend to be running at capacity with  
11 this engine and we tend to be overloading. I think  
12 that's it. Under normal duty cycle, we may be okay,  
13 but there are large engines running at capacity and  
14 therefore I think they just put out a little bit more  
15 than the filters are able to handle.

16 MR. POMROY: You mentioned cabs as one of  
17 your strategies, but you didn't go into much  
18 elaboration on that. Are you still pursuing that  
19 rebuilding of some of your older haulage trucks with  
20 homemade cabs on them?

21 MR. CHAMBERLAIN: Yes.

22 MR. POMROY: How is that project working?

23 MR. CHAMBERLAIN: It's working very well,  
24 actually. We're doing these self-designed cabs for  
25 about half the price of what you can purchase one off

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1 the shelf, but it requires the complete -- you have to  
2 frame off to do it. And so we're doing them as we're  
3 going through major rebuilds.

4 We have about a third of our production  
5 fleet, as I recall, done at this point in time and  
6 when we buy new equipment, we're buying it with cabs  
7 and it's a two-year schedule. It's about two more  
8 years, as I recall, to get everything cabbed up on our  
9 production equipment.

10 MR. POMROY: Have you done any DPM  
11 sampling inside and outside the cab just so you have  
12 some idea of how efficient the cab filtration systems  
13 are in reducing DPM exposures inside?

14 MR. CHAMBERLAIN: Limited. We have  
15 actually done some other testing too. We've done some  
16 total dust and noise which they're very effective in  
17 that and -- but the answer is yes, they are effective  
18 in reducing it well below the current standard. I  
19 can't quote a number for you right now, but they are  
20 effective in reducing DPM certainly.

21 MR. POMROY: How about on your loaders and  
22 jammers? Any of those pieces of equipment have cabs?

23 MR. CHAMBERLAIN: Yes, that's included.  
24 We have about as many. We probably have more loaders  
25 done than I have trucks, actually.

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1 MR. POMROY: All different manufacturers?

2 MR. CHAMBERLAIN: Yes.

3 MR. POMROY: Of equipment?

4 MR. CHAMBERLAIN: Yes.

5 MR. POMROY: I think that's it.

6 MR. SASEEN: You mentioned deration of the  
7 engines. Are they -- I mean have you -- are most  
8 machines derated for altitude as far as reducing the  
9 fuel rates?

10 MR. CHAMBERLAIN: I think what happens and  
11 I'm not a mechanic, so somebody -- Skinner or somebody  
12 back there could straighten me out, but when you take  
13 an engine, an electronically-controlled engine, it  
14 will automatically adjust for the elevation, but you  
15 also lose power in doing so and that's the derating  
16 I'm referring to.

17 MR. SASEEN: Okay.

18 MR. SEXAUER: I just have one more  
19 question here. I have a note down here. Just so I'm  
20 understanding you correctly, you had said that with  
21 respect to a conversion factor between total carbon  
22 and elemental carbon that you don't think there is a  
23 universal factor and that you'd like to see  
24 enforcement on the basis of either total carbon or  
25 elemental carbon, is that correct?

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1 MR. CHAMBERLAIN: Well, actually, you know  
2 the interim standard of what's been happening, what  
3 was happening is that you had collected total carbon  
4 and then if it was in excess, the PEL or the limit at  
5 that time, and do the conversion and see if the  
6 elemental carbon was over, I maintain that that's the  
7 way to go forward, because I don't think that you'll  
8 ever find -- my experience in looking at our numbers,  
9 and our mines are different.

10 Each mine, we have three operating mines  
11 and they each are different as far as the conversion.

12 It works differently depending, I think, on the level  
13 and what the total amount collected and other things.

14 So in my mind, my recommendation is is keep doing  
15 what we were doing.

16 MR. SEXAUER: Just to clarify, that was  
17 the procedure that MSHA was using for enforcement  
18 sampling between July of 2002 and June of 2005?

19 MR. CHAMBERLAIN: That is correct. And  
20 then basically you are, in fact, truing it up for each  
21 mine. You're using whichever number yields the best  
22 result and there would have to be some discussion  
23 exactly what that is, but the lower of the two,  
24 predictably.

25 MR. SEXAUER: Thank you. Jim?

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1 MR. PETRIE: Do you have any experience in  
2 using alternate fuels?

3 MR. CHAMBERLAIN: We have tested fuel  
4 additives. I call them snake oils, none with any  
5 great success. It is our intent to test biodiesel  
6 with this as part of the NIOSH study. This has been  
7 underway for some time and the anticipation of this  
8 and so we've held off on doing that. However, we are  
9 going to run into some of the same problems that have  
10 been discussed up to this point in time. It's very  
11 cold and a good period of time during the year that  
12 make it very difficult to -- I'm afraid we may have  
13 gelling of the product before we get it on site. All  
14 of our fuel is stored on surface. None is  
15 underground.

16 It's conceivable that we could heat the  
17 tanks on the surface, but it's not conceivable to heat  
18 the transport trucks and those kinds of things. So  
19 I'm not -- I don't know that we've solved all the  
20 answers and I can't answer where the closest  
21 distributor -- we've looked at it a little bit. We're  
22 looking at doing it as actually for a number of  
23 reasons, biodiesel.

24 We've even considered -- it's going to  
25 sound crazy, but one of our guys is even looking at

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1 importing from South America because it's a lot less  
2 expensive there and then you pay your shipping and  
3 whatever, but the bottom line is is there isn't a good  
4 source yet locally. We don't have a source near,  
5 anywhere near there that we could be buying bio in any  
6 kind of a quantity that could be required.

7 I think it's possible that if that turns  
8 to be the solution and all the mines there start to go  
9 that direction, I'm hoping somebody will step in and  
10 come up with a reliable source, but right now if I  
11 were to go there, I couldn't do it anyway. I don't  
12 know of a source.

13 MR. PETRIE: And I don't think you  
14 mentioned it, but at what frequency do you conduct  
15 your medical evaluations? Is it annual?

16 MR. CHAMBERLAIN: What we do is we do pre-  
17 employment or pre-employment is not the right term,  
18 but pardon me, we do it prior to placement for all of  
19 our underground employees. Actually, our mill  
20 employees also and we do both medical exam and  
21 spirometry and then what we do is we do an annual fit  
22 test, bring everybody back through and fit test them  
23 to determine that they're still getting a good fit  
24 with the particular respirator and that's the  
25 respirator they're assigned to wear.

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1           At that time, if there's an issue,  
2 generally, you identify it then. If there's any other  
3 medical things that go on over the course of the year  
4 or a period of time -- we don't currently have a  
5 medical re-examination annually or otherwise. I  
6 think the current system works just fine because we  
7 are seeing each employee every year and going through  
8 that fit testing process and if there's any problems,  
9 they're very quick to point that out to you. It could  
10 be an effective and reasonable alternative to a  
11 medical exam where you get the same results if you put  
12 them through a quantitative fit test every year, which  
13 is what we do.

14           MR. PETRIE: Thank you.

15           MR. SEXAUER: Anything else? Doris?

16           MS. CASH: Yes. You mentioned that you  
17 had looked at ventilation maintenance using cleaner  
18 engines, cabs and haven't had a lot of success with  
19 the filters. I'm wondering will you be including in  
20 your written comments any information for us on what  
21 changes were actually made from where you were at the  
22 beginning of this with the ventilation and what types  
23 of changes were made, same sort of thing with  
24 maintenance? Did you institute a complete new  
25 preventive maintenance program? Was it tweaking what

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1 was in place? What type of changes were made for each  
2 of these? And what you've seen success with.

3           Somebody said their filters hadn't been  
4 that successful, but if you can tell us on what types  
5 of equipment and in what instances or situations you  
6 found, if your ventilation changes were effective,  
7 what that type of situation was.

8           MR. CHAMBERLAIN: Yes, I will try to  
9 detail something there in the comments that we have.  
10 Just as a very quick summary, with ventilation, we're  
11 limited by the capacity that we can intake through our  
12 portals. So we don't really have the ability of  
13 substantially increasing them. I mean we've put  
14 additional vent raises in as mining develops and  
15 expands and you do that, but it's not resulted in a  
16 net substantial improvement and the amount of air in  
17 any particular area, the ventilation changes that we  
18 have been able to make is just our mine is very  
19 dynamic in that we are typically -- well, we may only  
20 be actively mining in say three or four headings at  
21 any one time, we typically have maybe 15 or so active  
22 headings that are available. It's located -- it's  
23 moving air to where you need it.

24           Sometimes people get a little careless and  
25 don't use the air in the best way. So it's been more

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1 of an education. We still have a ways to go in that  
2 one. I've got to tell you that's not an easy battle,  
3 because every individual, miner and supervisor and  
4 everybody that's involved in it has to do it right for  
5 things to work right.

6           Probably the biggest single factor has  
7 been maintenance changes and how we do maintenance.  
8 We've taken a good mechanic and dedicated him to BPM  
9 testing and so he's doing sampling on telepipe  
10 sampling on all of our equipment on a regular basis  
11 and determining when adjustments are needed, those  
12 kinds of things.

13           We're also learning that that's -- we're  
14 not perfect there yet either. One of the challenges  
15 is finding skilled mechanics. We lost one of our top  
16 people here just recently. There's so much  
17 competition out there for people and that set us back  
18 a little bit. We're retraining some people. I mean  
19 that's a real challenge that we have to accept is that  
20 there's a real people shortage, particularly in  
21 underground mining, hard rock mining these days and  
22 finding skilled people is not easy.

23           So we have a ways to go, but I'm convinced  
24 that the -- like some of the other commenters, very  
25 difficult to say this specific thing was the result in

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1 our substantial improvement, but I think that  
2 maintenance has probably been the biggest single --  
3 improvements in maintenance and we still have a ways  
4 to go there.

5 I will incorporate something in our  
6 comments there.

7 MR. SEXAUER: George?

8 MR. SASEEN: What's the altitude at the  
9 mine?

10 MR. CHAMBERLAIN: Well, it would vary from  
11 about 65 to about 7500 feet from the different mines  
12 elevation.

13 MR. SASEEN: Okay.

14 MR. SEXAUER: Thank you, gentlemen.

15 MR. CHAMBERLAIN: Thank you.

16 MR. SEXAUER: Is there anyone else in the  
17 audience who would care to address the group?

18 Okay, there being no other speakers, then  
19 this hearing is adjourned.

20 (Whereupon, the public hearing was  
21 concluded.)

22

23

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