

# PLACER DOME AMERICA

*A Member of The Placer Dome Group*

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2002 NOV 25 AM 11: 59  
MSHA  
U.S. Dept of Labor

**RE: COMMENTS ON MSHA DPM ANPRM (67 Fed. Reg. 60199  
(September 25,2002))**

Dear. Mr. Nichols:

This letter is submitted on behalf of Getchell Gold Corporation (“Getchell”)and its corporate parent, Placer Dome America, in response to MSHA’s Advance Notice of Proposed Rulemaking (“ANPRM”) on Diesel Particulate Matter (“DPM”) exposure published on September 25,2002 (67 Fed. Reg. 60199). We appreciate the opportunity to comment on the ANPRM questions, whose resolution is critical to realization of the goals of the DPM litigation Settlement Agreement reached among industry, labor and government parties on July 15, 2002. As you know, Getchell is one of the parties in the DPM litigation and is a signatory to the Settlement Agreement.

Preliminarily, we appreciate the Agency’s decision to provide a 60-day rather than 30-day comment period on the ANPRM, as Getchell had substantially sought on September 20, 2002. However, we are still troubled that essential information required for a final concentration limit that will be both technologically and economically feasible, may not be available within the Agency’s present regulatory schedule. Accordingly, we join the

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AB29-Comm-8

National Mining Association (“NMA”) and the Nevada Mining Association (“NvMA”) in recommending a two-phase rulemaking process in which all issues, other than the final concentration limit, would be resolved by the current July 2003 deadline. This approach would allow the necessary feasibility research to be carried out before rulemaking on the final limit. As we have noted in these proceedings, the history of DPM rulemaking demonstrates the necessity of promulgating such a rule after, not before, the needed empirical data are available.

We also are troubled that information developed in the draft *31-Mine Study* conducted by the Agency, industry, and labor during the parties’ settlement negotiations indicates that, in the underground metal mining sector and other affected sectors as well, major feasibility problems with compliance remain. The new partnership with NIOSH, spearheaded by the NMA, is designed to conduct in-mine testing of the feasibility of current control technology. We urge MSHA to expedite that process, and to await and analyze its results before proposing a final exposure limit.

Our responses follow:

**1. Section 57.5060(a) and (b), Limit on concentration of diesel particulate matter.**

(a) *What are the appropriate interim and final limits if EC is the surrogate?*

As provided by the terms of the Settlement Agreement, the interim level, for compliance purposes, is the Elemental Carbon (“EC”) equivalent of the 400 microgram

("mcg") Total Carbon ("TC") standard contained in the final rule, adjusted by the applicable Error Factor.

We strongly recommend that MSHA give serious consideration in the months ahead to retaining the 400 mcg interim limit as the final limit (suitably adjusted to use of EC as the surrogate). Cetchell vigorously believes that the present final limit in the rule, 160 mcg, is infeasible and unattainable in the foreseeable future for most affected underground metal (and other) mines, including its own, and that the data in the *31-Mine Study* bear this out.

Thus, we believe that it is premature to comment on the appropriate final concentration limit, even with EC as the surrogate. Many substantial issues remain regarding the economic and technologic feasibility of after-treatment control technology, even assuming that such technology is even practically available at the present time. Determination of an appropriate final limit must be based on-going research and further data that will illuminate these feasibility concerns.

(b) *What error factor should MSHA use for determining noncompliance on an EC standard?*

In implementing the Settlement Agreement, the litigating parties have agreed that the following Error Factors should be applied:

Interim limit: 12.2%

Final limit: 15.4%

We continue to support the use of these factors.

(c) *Are there any interferences in the environment of an underground metal and nonmetal mine that would preclude personal sampling with the impactor when EC is used as the surrogate for DPM?*

The 31 Mine *Study* demonstrated that interferences of environmental tobacco smoke (“ETS”) and oil mist are eliminated if EC is used as the surrogate as provided under the Settlement Agreement. However, the *31-Mine Study* did not adequately confirm that carbonaceous materials in host rock will not interfere with personal sampling. (Indeed, carbonaceous host rock contamination remains a very serious concern at the Getchell mine.) Like the NMA, we remain troubled by the likelihood that carbonaceous particulate smaller in diameter than the impactor cut-point may contaminate samples. Additional research and data are vitally necessary.

(d) *Is a field blank required if EC is used as the surrogate?*

Such a step may complicate the process. Nevertheless, we agree with the NvMA that it is an accepted procedure in Industrial Hygiene and may appropriately be included as a part of MSHA enforcement sampling.

**2. Section 57.5060(c) addresses application and approval requirements for an extension of time in which to reduce the concentration of DPM to the final limit.**

(a) *What circumstances would necessitate an extension of time to come into compliance?*

An extension of time is necessary where a mine operator faces either practical, technological, or economic feasibility problems that prevent compliance. The determination of such feasibility constraints must be site-specific, i.e., based on actual conditions faced by an operator at its site, and must be premised on the operator's good faith efforts to control DPM exposure.

(b) *What should be the duration of the extension?*

A one-year period, that is annually renewable and subject to the Secretary's review, is appropriate.

(c) *Should MSHA allow more than one extension?*

Yes, if necessary. And in some cases, it will be necessary. Operators must be afforded flexibility in practically complying with the exposure limits. The NMA has found that, regardless of the representations of control technology manufacturers, in-mine applications often differ radically from laboratory results. Additionally, engine manufacturers are currently concentrating their resources and attention on **new engine technology** to comply with the EPA on- and -off-road engine standards. Ultimately, this new technology will assist the mining community but, in the meantime, it is unrealistic to expect that manufacturers will expend significant sums in research and development of control

technology applicable to existing equipment and engines. Because of such factors, MSHA should be prepared to grant appropriately justified requests for additional extensions.

(d) *What actions should mine operators be required to take to minimize DPM exposures if they are operating under an extension?*

Protecting miners by minimizing DPM exposure is of utmost importance, and is the basic goal of all involved in this process. Therefore, where an extension is in place, operators should use permissible administrative controls and provide affected miners with appropriate respiratory protective devices, i.e., Personal Protective Equipment ("PPE").

**3. Section 57.5060(d) addresses certain exceptions to the concentration limit.**

(a) *Would this provision be necessary if MSHA includes in the final rule its current hierarchy of controls for its other exposure-based health standards for metal and nonmetal mines?*

No. The current hierarchy or triad of controls, if applied to all affected miners, renders this provision moot. The provision refers only to inspection, maintenance, and repair. The Settlement Agreement recognized that irrespective of any particular mining activity, all affected miners are to be protected. Thus, in appropriate circumstances, miners would be permitted to work in concentrations of DPM exceeding the concentration limits, so long as fully protective administrative and PPE measures are being used.

(b) *What would be the impact of removing this provision?*

Removal of this provision combined with implementation of the triad of controls would increase the protection available to all affected miners. Removal of this provision would also be consistent with most of MSHA's exposure-related health standards.

**4. Section 57.5060(e) prohibits use of personal protective equipment to comply with the concentration limits; and sec. 57.5060(f) prohibits use of administrative controls to comply with the concentration limits.**

(a) *Currently, there is no approved respirator for use in protecting miners exposed to DPM atmospheres. If MSHA includes requirements for some form of respiratory protection, what type of respirators would be protective of miners? What are their specifications?*

The NMA has reported that 3M Corporation will be commenting on the availability of respirators sufficient to protect miners from DPM and that 3M series P Filtering Facepiece Respirators and Series P Elastomeric Facepiece Respirators have been approved for similar applications. The NMA has also been informed that these devices have efficiencies of either 95 or 100% in filtering particles smaller in diameter than comparable DPM particles. We join with the NMA and NvMA in suggesting a joint industry/MSHA research program to validate the effectiveness of such devices for underground mining.

(b) *Should MSHA propose to require mine operators to implement a written respiratory protection program when miners must wear respiratory protection?*

While we are willing to explore this notion further with the Agency, we are presently inclined to conclude that such a requirement is unnecessary and would probably prove to be unduly burdensome. Accordingly, we suggest that the subject be addressed through MSHA's existing regulations requiring general respiratory protection plans. This would tend to conserve the resources of all concerned.

(c) *Should MSHA require mine operators to apply to the Secretary for approval to use respiratory protection? Should the application be in writing? What conditions should MSHA require mine operators to meet before approval is granted to use respirators?*

Consistent with the preceding answer, we believe that MSHA can address this subject more efficiently by reliance on its existing respiratory protection regulations.

(d) *Should MSHA propose to require mine operators to implement a written administrative control plan when they use administrative controls to reduce miners' exposures to the required limit?*

We believe that operators should be allowed to post in accessible locations document(s) specifying the administrative controls in question. This would be simpler and less costly than having to draw up one more plan. Of course, documents indicating the administrative controls in use would be made available to any representative of miners and MSHA.



**5. Section 57.5061(b) addresses how MSHA will collect and analyze samples for Compliance purposes.**

We continue to strongly support the change to EC from TC as the sampling surrogate for DPM, as provided in the Settlement Agreement.

**6. Section 57.5061(c) provides for MSHA to conduct personal, area, and occupational sampling for compliance determinations.**

(a) *What would be the cost implications for mine operators to conduct personal sampling of miners' DPM exposures if EC is the surrogate?*

Pursuant to § 57.5071 of the final rule, operators must conduct “environmental” monitoring to determine “whether the concentration of DPM in any area of the mine where the miners normally work or travel exceeds the applicable limit ...” The existing rule contemplates use of personal, area, or occupational samples. However, under the Settlement Agreement, only personal samples will be allowed for compliance determinations, and the final rule must be amended accordingly.

Operators' costs will be reduced through environmental monitoring that requires only personal sampling of EC as the surrogate for DPM. Such sampling will be a much more reliable measure of the exposure levels. Sampling for EC, as opposed to TC, reduces the likelihood of sample contamination, as discussed above, and would tend to eliminate the costs needed to re-sample.

(b) *What experience do mine operators have **with** DPM sampling and analysis?*

A number of mines have relatively extensive experience with DPM sampling, although some of this work pre-dated use of the SKC impactor equipment. The 31 mines participating in the settlement-related study should also be considered. Further in-mine sampling is a necessary ingredient in implementing the goals of the Settlement Agreement. The results should inform the present regulatory process. Regarding the Getchell Mine specifically, the operation is currently in Care and Maintenance status and, hence, our ability to perform meaningful sampling has been limited.

(c) *Is there experience with DPM sampling in other industries and other countries?*

We are generally aware that a Canadian group, DEEP, has been researching DPM control technologies, but we also understand that the work is ongoing and the results, preliminary.

**7. Section 57.5062 addresses the diesel particulate control plan.**

Rather than responding separately to the sub-questions, we agree with NMA and NvMA that DPM control plans are not necessary, would impose unwarranted costs, and would complicate compliance. Operator compliance will be judged by the operators' environmental monitoring and MSHA compliance sampling. If out of compliance, operators will need to take appropriate actions designated for abatement, and abatement sampling will

reflect whether the requisite progress has been made. The hierarchy of DPM controls will ensure the protection of miners during non-compliance situations. A formal plan would add little if anything to this established system, which is used with respect to many other MSHA health regulations.

Adoption and approval of an overall control plan will be a cumbersome and superfluous process. If enforcement concerns develop at a particular site, MSHA can adequately address that problem with existing enforcement tools.

**8. Technological and economic feasibility.**

(a) *What experience do you have modifying ventilation systems to reduce miners' exposure to DPM?*

We have learned from our participation in the NvMA that preliminary findings are showing that major ventilation changes will likely prove much more expensive and less effective than predicted by MSHA's estimator.

(b) *What were the costs to mine operators for auxiliary fans, booster fans, flexible ducts, or major ventilation upgrades necessary to meet the interim concentration limit?*

*See preceding answer*

(c) *What has been the experience of mine operators with retrofitting existing diesel-powered equipment, especially in the range with less than 50 hp, as well as equipment*

*that has greater than 250 hp, with DPM control devices? What adjustment did mine operators have to make to DPM control devices before there were reductions in DPM levels?*

Getchell has not had enough experience to comment.

(d) *What are the engineering costs associated with retrofitting?*

In general, Getchell is aware that engineering costs associated with retrofitting vary widely. In some cases, the retrofitting work may involve the replacement of exhaust systems and relocation of fuel and other lines. Such work could be expensive, and needs to be analyzed on a site-by-site basis, as required.

(e) *What technical assistance should MSHA provide to mine operators in retrofitting DPM control devices or evaluating a mine's ventilation system, or filtration systems in environmental cabs?*

Getchell favors MSHA making widely available helpful information regarding retrofitting, ventilation, and filtration. The Agency should also stand prepared to assist on specific issues at particular sites.

(f) *Are there circumstances where mine operators have had to change an engine model to accommodate DPM control devices? What were the costs of the engine models?*

Getchell has not had sufficient experience to comment.

(g) *How much did control devices cost for different horse-powered engines?*

Not enough information to comment.

- (h) *Did mine operators have to modify the exhaust system to apply the DPM control?*

*What were the costs for doing so?*

Not enough information to comment.

- (i) *What are the advantages, disadvantages, and relative costs of different DPM control devices?*

Not enough information to comment.

- (j) *What types of DPM control devices are commercially available and how much do these devices cost?*

We refer MSHA to the NMA's response to this question.

- (k) *What are the engineering costs of the DPM control devices?*

Not enough information to comment.

- (l) *What current reductions in EC levels are mine operators experiencing from having installed DPM control devices? What is the experience with filtration efficiencies?*

Not enough information to comment.

- (m) *What has been the experience of mine operators with the useful life of DPM filters?*

Not enough information to comment.

- (n) *Is there any information available with DPM control filters in non-mining industries or in other countries?*

Getchell is aware that some preliminary data has been developed under the ongoing DEEP and VERT Programs and is presumably available to MSHA.

(o) *What has been the experience of mine operators with DPM filters? Did filters fail or did they perform as the manufacturer predicted? If they failed, what were the causes of filter failure? What could be done to prolong the life of DPM filters?*

Our understanding is that operator experience to date with currently available filter systems is very limited. DEEP field evaluations have shown somewhat varied and inconclusive results. In general, field experience has not usually matched claimed laboratory results.

(p) *Do mine operators have any technical data on their experience with using cabs with filtered breathing air?*

Not enough experience to comment.

(q) *Have you experienced increases in NO<sub>2</sub> when using any of the following:  
(1) A base-metal catalyzed filter; (2) a non-catalyzed filter; or (3) platinum-based catalyzed filter?*

While Getchell has not used these filters, the increase of NO<sub>2</sub> levels associated with some of these filters is now understood. MSHA has recognized that this problem occurs with use of platinum-based catalyzed filters. Further, the other types of filter fail to prevent relatively high levels of CO, HC and DPM. As the NMA points out in its comment, non-

platinum based filters do not, in most instances, attain sufficient temperatures for passive regeneration to occur and, thus, are of limited use for control purposes.

These serious problems underscore the feasibility issues faced by the mining community with the currently available generation of filters and require further in-mine testing.

(r) *What effect do high altitudes have on the ability of the DPM control device to reduce DPM exposures?*

Not enough experience to comment

(s) *What costs did mine operators incur for filters that were regenerated offboard?*

Not enough experience to comment.

(t) *What costs did mine operators incur for filters that were regenerated on board?*

Not enough experience to comment.

(u) *Would active regeneration be feasible for your mine; such as off-board filter regeneration in an oven, or on-board electrical regeneration?*

Not enough experience to comment.

(v) *What are the costs to mine operators ~~for~~ new engines and venting for filter ovens?*

Not enough experience to comment.

(w) *Would fuel additives used to facilitate regeneration be feasible?*

Getchell is willing to experiment with the use of fuel additives to facilitate regeneration, if the option is compatible with its equipment. This is another area where further in-mine research and data are needed.

(x) *Are there any significant technologies for controlling DPM when EC is the surrogate?*

Not enough experience to comment.

**SUMMARY RESPONSE TO QUESTION 8.:** Most of our answers to Question 8 reflect our lack of in-mine experience with various control options, due to the Care and Maintenance status of our mine. However, we doubt that Getchell's relative lack of experience is unique. At this juncture, individual operators should not be expected to absorb the heavy costs in experimenting with a panoply of unproven options, in effect, inventing the wheel in their mines. These are the areas where carefully structured and targeted field work, involving both NIOSH and MSHA and the mining trade associations, can be invaluable to the entire affected mining community. As emphasized throughout, MSHA should not propose a final concentration limit until this kind of work has yielded significant feasibility information.

**9. Paperwork Burden Issues.**

*What paperwork and other costs will you incur if changes are made to the DPM standard, particularly development of a written program for use of administrative controls, use of respiratory protection, and for development of a control plan?*



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Getchell believes that requirements for a separate respiratory protection plan, an administrative control plan, and a DPM control plan will impose unwarranted costs and burdens, while producing little benefit. Administrative controls can be addressed adequately through simple documents, and the existing, normal system of compliance and enforcement can adequately address the control of DPM exposure without need of yet another plan document. It would also appear that existing respiratory protection regulations are adequate to cover that subject.

Getchell appreciates this opportunity to comment on the Agency's ANPRM. Getchell continues to stand ready to work cooperatively with MSHA and others in the mining community to address DPM issues.

Respectfully submitted,

A handwritten signature in black ink that reads "Steve Schoen". The signature is written in a cursive style with a small "ESF" monogram at the end.

Steve Schoen  
Environmental Coordinator