

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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**FINAL STATEMENT OF REASONS**

CALIFORNIA CODE OF REGULATIONS

TITLE 8: Division 1, Chapter 4, Subchapter 7, Group 16, Article 109, Section 5199 subsection
(g)(3)(B) Exception 2 of the General Industry Safety Orders

Aerosol Transmissible Diseases Respirator Exception**MODIFICATIONS AND RESPONSES TO COMMENTS RESULTING FROM
THE 45-DAY PUBLIC COMMENT PERIOD**

There are no modifications to the information contained in the Initial Statement of Reasons.

SUMMARY AND RESPONSE TO ORAL AND WRITTEN COMMENTS**I. Written Comments:****Bill Taylor, Public Agency Safety Management Association (PASMA), letter dated
February 20, 2013.**

Comment #BT1: PASMA thanks the Board and the Division for addressing their concerns as proposed in the modification to Section 5199.

Response: The Board thanks PASMA for supporting this rulemaking process.

Comment #BT2: PASMA supports this proposal that will allow PASMA members to use N-100 respirators in a safe manner based on the conditions at their particular worksites. PASMA represents various public agencies in Southern California including local government agencies, water districts, and other special districts.

Response: The Board appreciates PASMA's statement of support.

**Bill Kojola, American Federation of Labor and Congress of Industrial Organizations
(AFL-CIO), letter dated February 20, 2013.**

Comment #BK1: AFL-CIO opposes the proposal. The P100 respirator is a default device in situations where the nature of the atmosphere is unknown. In contrast, the N100 is supposed to be limited to atmospheres that are free of oil aerosols. Also, there are currently no R100

respirators on the market, so the inclusion of these types of respirator is moot.

Response: The Board notes that during the variance proceeding for Rural Metro Ambulance, a private emergency medical responder, the representative presented testimony that the actual high hazard procedures that would require respiratory protection would not be performed in an area where the atmosphere is contaminated with oil aerosols due to procedures that are followed by responders. In the case where firefighters respond to a call, personnel would wear self-contained breathing apparatus (SCBA) to remove the person needing care from a contaminated area to a clean atmosphere, or if necessary, they would conduct the procedure while wearing the SCBA. If the person is contaminated with oily materials, the responder would remove the contaminated clothing before conducting the procedures. Private EMS personnel would not make entry into hazardous areas, but would wait for firefighters to retrieve the person needing care, and if necessary, decontaminate the person before high hazard procedures are begun. A representative of American Medical Response, another private emergency responder, stated at the Division's Advisory Committee that, in general, private responders have working agreements with their local fire department to respond jointly to a fire or emergency situation presenting a hazardous environment. The Board, through its variance and advisory meeting processes, has decided that this sufficiently addresses the concern of unknown atmospheres.

The Board also agrees that there are few, if any, R100 type respirators currently commercially available; however, there is no indication that R100 respirators will not be marketed in the future. The NIOSH testing protocol, and the other evidence presented by the Division during the variance hearing for CalFire indicated that R filters will be more resistant to oil particulates than the N materials, though not as resistant as P materials. Including that class of filters allows for the eventuality that R type respirators will be available in the future.

Comment #BK2: During emergency response, if an emergency medical responder has both P100 and N100 respirators to choose from, the need to choose the proper respirator will add complexity and confusion to the process of response, and cause unwanted delays in the process of responding.

Response: The Board believes that, if employers choose to have both N and P respirators, the training that is to be provided in keeping with the proposed modification will address this concern.

Comment #BK3: Emergency situations may not be assessed correctly or quickly enough for the presence of oil aerosols, and the need to make a decision will increase the stress and can contribute to error on the part of the employee who needs to select between a P100 and N100. Having just the P100 would eliminate the need to decide.

Response: The Board believes that firefighters' professional judgment and experience are sufficient for responders to determine if sources of oily particulates present a hazard to them or to private emergency responders who are working in conjunction with the fire department.

Comment #BK4: Employers were already given a significant cost saving when the P100 was allowed as an alternative to the Powered Air Purifying Respirator (PAPR) for emergency response. The cost savings for allowing the use of N100 respirators would also tend to be offset by the need to train employees and conduct fit testing for the N100 respirators. The P100 is more cost effective overall.

Response: The Board agrees that allowing the use of P100 respirators provides the employers with a far less costly alternative to a PAPR. The Division also argued in the variance proceedings that the cost differential between the P and N respirators might not be significant for the same reasons stated in the comment. However, the Board did not make the variance decisions on the basis of cost. The Board decided that allowing the use of N respirators, even with the required additional conditions, provided the employers with greater flexibility in determining the procedures that are appropriate for them. Please also see the response to Comment #RW4.

Mark Catlin, Service Employees International Union (SEIU), letter dated February 21, 2013.

Comment #MC1: SEIU opposes the proposed amendment. The current exception allowing the use of P100 respirators which are the most resistant to oil aerosols and high humidity should not be changed.

Response: Please see the response to Comment #BK1.

Comment #MC2: Employers have already been allowed a substantial cost savings by permitting the use of P100s instead of PAPRs for emergency response. The N100 is likely to have only a 10% cost saving from the P100. Also, the saving is likely to be offset by the need to train employees about the N100 selection procedure and to fit test the N100s.

Response: Please see the response to Comment #BK4.

Comment #MC3: Allowing the use of the N100 would burden the employee with added assessments and decision making about selecting the proper respirator in time critical situations.

Response: Please see the response to Comment #BK2.

Comment #MC4: If emergency personnel have only the N100, they would have to decide whether or not to enter an oil contaminated atmosphere, contrary to training.

Response: Please see the response to Comment #BK1.

Dorothy Wigmore, Worksafe, letter dated February 21, 2013.

Comment #DW1: Worksafe is opposed to the proposed change to Section 5199 because of the feasibility of the procedures, the protection offered by N100 respirators for the employees, and the lack of evaluation of the proposed changes. Worksafe is concerned that specific variances are being adopted as changes to existing regulations.

Response: Please see the response to Comment #BK1. The Board would add that in this case, the separate applicants in the variance proceedings mentioned above presented conditions and procedures that were very consistent in various parts of the state, and the Board believes that it would be unlikely that a competent emergency medical service provider would not be granted the same variance agreement if this issue were to be continually presented individually.

Comment #DW2: Although P100s are currently allowed to be used by emergency medical responders in place of a PAPR, there is no peer-reviewed published evidence that this type of respirator is actually effective in protecting emergency responders especially when oil aerosols are present. There is also a 2008 study by Eninger that questions the ability of the NIOSH protocols to test filtration of ultrafine particles that are relevant to aerosol transmissible pathogen transmission.

Response: The Board notes that the Division based the selection of the P100 on the recommendation of the California Professional Firefighters made during the rulemaking to adopt Section 5199 in 2009. The recommendation was to require a minimum of a P100 filtering facepiece respirator for fire fighters and other emergency medical services personnel. The Division, in reviewing the testing protocols that NIOSH uses for certifying filtering facepiece respirators concurred and the Board adopted that recommendation. The Board does not believe that it can undertake a review of the adequacy of NIOSH protocols in this context. Therefore, the Board declines to undertake the recommended research.

Comment #DW3: The Division's memorandum to the Board on September 14, 2010 said that fires and other emergency response situations can have oily particles present and Division staff raised questions about the practical issues facing emergency responders to insure suitable respirators are available.

Response: Please see the response to Comment #BK1.

Comment #DW4: Training does not ensure that proper respirators will be available when an oily atmosphere is encountered. If employees do not have the right respirator it forces them to choose whether to help victims or possibly expose themselves to airborne hazards.

Response: Please see the response to Comment #BK3.

Comment #DW5: The Board should conduct a literature search to find research in the last two

years that compare the effectiveness of N100s and P100s as used by emergency responders.

Response: The Board believes that the Division has done such a literature review but did not find any research that caused them to modify this proposal. Consequently, the Board declines to conduct another search.

Comment #DW6: If the Board passes this amendment, it should require employers who use the exception to evaluate each use of the N100 and P100 filtering facepiece respirators in the next two years in terms of the training, the ability of employees to access effective protection, and the protection actually provided in the form of monitoring results and worker reports. As such, the Board and the Division should be required to review the evaluations and report the results once the two years ends.

Response: The Board notes that the suggested additions to the conditions of the exception have not been previously proposed either during the variance hearings or the advisory meeting. The Board believes that adding the exposure monitoring and the described recordkeeping as a proposal would require another advisory meeting to allow the potentially affected parties to review it all in detail. The Board further believes that the comment does not provide any evidence that such a change to the proposed modification is necessary and thus declines to make the proposed change.

Comment #DW7: If the Board does not adopt the amendment, the Board should add the reporting requirement described previously for P100 usage for a two year period to the existing Exception.

Response: The Board notes that requiring employers who currently comply with the existing language of Section 5199 to undertake monitoring and recordkeeping as described in the previous comment is outside the scope of this rulemaking.

Robert Weber, 3M Personal Safety Division, letter dated February 21, 2013.

Comment #RW1: 3M supports the Board's action to amend the ATD Standard to allow more flexibility for employers to find appropriate respirators but believes that the issue is unclear and the proposed amendment should be modified. The use of the designations P, R, and N should not be restricted to only filtering facepiece respirators.

Response: The Board thanks 3M for supporting this amendment of Section 5199. However, the Board notes that the proposed modification intentionally did not specify filtering facepiece respirators so that half-face elastomeric respirators could be used. The Board believes that the Division left the option open even though the issue had not been raised previously, presumably because the elastomeric respirators are more costly on a unit basis than the FFR and require more maintenance. The Board thanks the commenter for allowing this to be clarified.

Comment #RW2: 3M believes that the Board's conclusion in a variance proceeding that an N95 respirator was not as protective as a P100 is erroneous, because the analysis should have been based on the assigned protection factor (APF) of the respirators that would have taken into account face seal leakage as well as filtration. GISO, Section 5144 assigns the same APF to all half mask respirators regardless of the type of particulate removing filter.

Response: The Board notes that the variance proceeding in question was very lengthy and reviewed extensive research comparing the performance of N95 respirators and P100 respirators. The Board's hearing panel decided that the Division established that the filtering performance of the P100 was significantly better than the N95. However, there was little research at the time comparing the N100 with the P100 directly so that there was no reason to believe that the filtration, as specified by the NIOSH certification procedures and conditions of use, would be different. Please also see the oral comment from Hank McDermott.

Further, the Board is aware of the concept of the APF that is used in GISO, Section 5144 but does not believe that this requirement should supersede the Exception in Section 5199(g)(3)(B) which was written specifically to provide emergency medical service personnel with the most protective type of air purifying filtration media while conducting high hazard procedures. Subsection (g)(3)(B) itself requires that high hazard procedures are to be conducted with PAPR units that have HEPA filtration. For the exception to this requirement, N, P, or R 100 equipped air purifying respirators are thus the next best alternatives for this type of work. Other standards such as the Construction Safety Order, Section 1532.1, Lead, subsection (f)(3)(D) which specifies the use of HEPA filters for air purifying respirators, apply more stringent requirements than the generalized requirement of the Assigned Protection Factors. The Board, therefore, rejects this argument.

Comment #RW3: In addition to the APF issue, research comparing the performance of N95 and P100 filters exposed to grinding aerosols showed that the workplace performance of both types were statistically equivalent (Hinds and Berlin: Effect of Facial-seal Leaks on Protection Provided by Half-mask Respirators: Appl. Ind. Hyg. Vol. 3 No. 5 May 1988). Other data from various researchers shows that the N95 can achieve filter efficiency between 99.6 and 100%. Consequently, the proposed modification should be amended to allow any N-series, P-series or R-series NIOSH approved respirators, including elastomeric respirators and the N95, to be used as an alternative to the P100 in accordance with its approval.

Response: The Board is aware that there has been an extensive body of research to assess the performance of air purifying respirators, and as noted above, heard extensive reviews of literature pertaining to the relative performance of P100 filtering facepiece respirators as compared to the N95 FFR and determined that the N95 should not be allowed as a substitute for this type of occupational exposure. The Board also notes that the comment does not present any information pertaining to the filtration of biologically active particulates which is more relevant to this occupational exposure, and therefore, does not find that there is compelling evidence to revisit the issue of allowing N95s to be used in this Exception and declines to make that change.

Comment #RW4: The amended proposal would allow more flexibility in terms of costs. P100 filtering facepiece respirators are more expensive than a R100 or a P95. N95s would be the least costly.

Response: Although the Board is sensitive to the economic impact that regulations have on the regulated public, it is not required to place that consideration above the safety and health of the employee. The Board believes that cost comparisons should not be the primary consideration for the regulation or for the employer to select respirators. For example, buying a low-priced respirator that does not fit a significant segment of an employer's workforce could result in more costs to the employer than buying a more expensive model. Thus, the Board declines to make the suggested change.

David Y. Shiraishi, MPH, Area Director, Occupational Safety and Health Administration, Oakland Area Office, letter dated February 20, 2013.

Comment: Mr. Shiraishi indicated that the proposed occupational safety and health standard appears to be commensurate with the federal standards.

Board's Response: The Board thanks Mr. Shiraishi and Federal OSHA for their participation in the rulemaking process.

II. Oral Comments

Bill Taylor, Public Agency Safety Management Association (PASMA).

Comment: PASMA supports this proposal. The proposed modification will allow PASMA members to use N-100 respirators in a safe manner based on the conditions at their particular worksites.

Response: The Board appreciates Mr. Taylor's participation and support of this rulemaking.

Henry McDermott, Board Member.

Comment #HM1: Mr. McDermott stated that he served on several of the variance panels mentioned above and confirmed his support of the Board's decisions on those matters. He noted that the original wording for this subsection regarding the oil-proof P100 came from an international fire fighter association publication that indicated it was prudent to require the P100s until more is known. He thus supports the modification that retains the filtration level with N materials as proposed.

Response: The Board appreciates Mr. McDermott's remarks.

ADDITIONAL DOCUMENTS RELIED UPON

None.

ADDITIONAL DOCUMENTS INCORPORATED BY REFERENCE

None.

DETERMINATION OF MANDATE

This regulation does not impose a mandate on local agencies or school districts as indicated in the Initial Statement of Reasons.

ALTERNATIVES CONSIDERED

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed, would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.