54-234

Mobil Oil Corporation

ENVIRONMENTAL HEALTH
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GENERAL MANAGER

April 14, 1995

The Docket Office
Docket H-049
U.S. Department of Labor
Occupational Safety and Health Administration
Room N2625
200 Constitution Avenue
Washington, D.C. 20210

OSHA
DOCKET OFFICER
DATE APR 14 1995

Mobil Comments on OSHA's Proposed Revisions
to the Agency's Respiratory Protection Standards

Dear Sir/Madam:

Mobil Oil Corporation (Mobil) appreciates the opportunity to provide comments to the Occupational Safety and Health Administration (OSHA) rulemaking docket on the Agency's proposed revisions to its standards on respiratory protection (29 CFR 1910.134, 29 CFR 1915.152 and 29 CFR 1926.103).

Mobil is the second-largest fully integrated petroleum company in the U.S. Our operations involve all aspects of the oil industry as well as chemical manufacturing and phosphate mining. Mobil has established respiratory protection programs at all of our major facilities, therefore, we have a direct and significant interest in this rulemaking.

We support the efforts by OSHA to improve its respiratory protection standards. Mobil agrees that the current standards are out of date and need to be updated. As noted by OSHA, the technology of respiratory protection has changed substantially in the past twenty-five years since the 1969 ANSI standard was adopted. It is this version of the ANSI standard that is the basis for the current OSHA respiratory protection standards.

Although we commend the Agency's efforts to update its respiratory protection standards, we have reviewed the proposal and have a number of serious concerns. These include:

- **Definition of "Hazardous Exposure Level"**--The proposal would establish an inappropriate defacto standards setting process by adopting, without public comment, all existing Threshold Limit Values (TLVs) and NIOSH Recommended Exposure Limits (RELs) as "hazardous exposure levels".

- **Frequency and extent of periodic requirements for fit testing, medical evaluations,**

program evaluations and training--The proposal provides no basis for repeating such evaluations on an annual basis (or less in the case of asbestos) and no benefit has been established versus the cost involved. In addition, proposed requirements for assessment of respirator selection and program evaluation would place an extreme administrative burden on employers without providing any significant benefits.

- **Cost/benefit analysis**--The proposal's regulatory impact analysis, which purportedly shows a substantial benefit, is flawed and poorly documented.

Our detailed comments and recommendations on these and many additional issues are attached. In addition, Mobil has been actively involved in developing the comments of the American Petroleum Institute, the Chemical Manufacturers Association and Organization Resources Councilors, and we strongly endorse their positions on the proposal.

Mobil appreciates the opportunity to comment on this important proposal and we are looking forward to working with the Agency to develop a flexible, yet effective final rule. If there are any questions regarding our comments, please feel free to contact Bruce Larson of my staff. Bruce can be reached at 609-737-5945.

Very truly yours,

A. J. Silvestri

RP495
Attachment

54-234A

WRITTEN COMMENTS OF
MOBIL OIL CORPORATION

ON

THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
NOTICE OF PROPOSED RULEMAKING ON

"REVISION OF OCCUPATIONAL HEALTH AND SAFETY STANDARDS FOR RESPIRATORY PROTECTION"

29 CFR 1910.134, 29 CFR 1915.152, 29 CFR 1926.103

APRIL 14, 1995

MOBIL OIL CORPORATION COMMENTS ON OSHA'S PROPOSED REVISIONS TO OCCUPATIONAL HEALTH AND SAFETY STANDARDS FOR RESPIRATORY PROTECTION

1.0 Introduction

Mobil supports the efforts by OSHA to improve its respiratory protection standards. Mobil agrees that the current standards are out of date and need to be updated. As noted by OSHA, the technology of respiratory protection has changed substantially in the past twenty-five years since the 1969 ANSI standard was adopted. It is this version of the ANSI standard that is the basis for the current OSHA respiratory protection standards.

Although we commend the Agency's efforts to update its respiratory protection standards, we have reviewed the proposal and have a number of serious concerns. These include:

- Definition of "Hazardous Exposure Level"--The proposal would establish an inappropriate defacto standards setting process by adopting, without public comment, all existing Threshold Limit Values (TLVs) and NIOSH Recommended Exposure Limits (RELs) as "hazardous exposure levels".

- Frequency and extent of periodic requirements for fit testing, medical evaluations, program evaluations and training--The proposal provides no basis for repeating such evaluations on an annual basis and no benefit has been established versus the cost involved. In addition, proposed requirements for assessment of respirator selection and program evaluation would place an extreme administrative burden on employers without providing any significant benefits.

- Cost/benefit analysis--The proposal's regulatory impact analysis, which purportedly shows a substantial benefit, is flawed and poorly documented.

Mobil's comments and recommendations on these and other issues are detailed below.

2.0 Major Issues and Concerns

2.1 Definition of "Hazardous Exposure Level"

OSHA has defined the term hazardous exposure level as: (1) The permissible exposure limit (PEL) for the hazardous chemical in 29 CFR Part 1910, Subpart Z, of the General Industry Standards of the Occupational Safety and Health Administration (OSHA); or, (2) If there is no PEL for the hazardous chemical, the Threshold Limit Values (TLVs) recommended by the American Conference of Governmental Industrial Hygienists (ACGIH) in the latest edition of Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment: or, (3) If there is no PEL or TLV for the hazardous chemical, the NIOSH Recommended Exposure Limit (REL); or,(4) If there is no PEL, TLV, or REL for the hazardous chemical, an

exposure level based on available scientific information including material safety data sheets.

OSHA further explains option 4 to mean that "...If there is no PEL or TLV for the chemical, the employer must determine the "hazardous exposure level" based on available scientific information including the MSDS. In some situations, the suppliers of the chemicals may make recommendations for appropriate exposure levels based on their own experience. In any event, the employer must establish a protective goal, based on available information, in order to choose the appropriate respirator, and must be able to substantiate how that goal was chosen."

Though OSHA states that "...This does not mean that OSHA is in effect establishing permissible exposure limits for these other substances. However, OSHA also requires that feasible engineering controls be installed and requires all other provisions of the respirator standard to be enforced." So in fact OSHA is engaged in defacto standard setting without allowing for public input into the process. We believe that by establishing TLVs and RELs as compliance limits, OSHA has exceeded its regulatory authority.

We are also concerned with OSHA's proposal that an exposure goal be established when other exposure limits are not available. The process of setting an exposure goal is expensive and time consuming. It requires that those setting goals have a minimum amount of information on the toxicity of the chemical in question. Generating this information by itself can cost thousands of dollars for each chemical. OSHA has not considered the full implications of this requirement and must consider its technical and economic feasibility before it can impose such a burdensome requirement on employers.

Currently, respirator use decisions are made on a voluntary basis under the existing standard. In this process, professional judgment is used to determine which respirator will be acceptable. Estimates of toxicity and exposure limits from many sources are used in this process. In most instances, the choice of a respirator is based on the use situation rather than specific limits and air concentration measurements. For example, during the initial entry into a confined space, an air supplied respirator would normally be specified as a precaution pending further evaluation. This level of protection is sufficient for virtually all chemicals that would be encountered (other considerations are made for skin and eye effects separately).

In summary, the definition of hazardous exposure level should be defined only as the PEL. Employers should be required to use estimates of toxicity and exposure concentrations to make decisions on respiratory selection.

2.2 Frequency and Extent of Requirements that are to be Repeated Periodically

OSHA requires that a number of provisions be repeated periodically, such as fit testing, training, medical evaluations and program evaluations. In the proposal no basis is given for the need to repeat the these provisions at such a frequency. Some of the more burdensome requirements are described below.

2.2.1 Maintenance, Inspection and Storage--OSHA proposes that respirators be cleaned and disinfected after each use. We agree that this is appropriate for respirators being used by more than one person. But when a respirator is assigned to a single person, there is no need for cleaning and disinfecting after every use. The need for cleaning will depend on the environment in which it is worn and how long and often it is used. For example, a respirator used for 10 minutes once a day does not need to be cleaned and disinfected at the end of each day. We suggest that the following performance language from the ANSI Z88.2(1992) be used to set a cleaning and disinfecting schedule:

> "Maintenance, Inspection, and Storage. Maintenance shall be carried out according to the manufacturer's instructions and on a schedule that ensures that each respirator wearer is provided with a respirator that is clean, sanitary, and in good operating condition. Each respirator shall be inspected by the wearer prior to its use to ensure that it is in proper working condition."

2.2.2 Training--OSHA is proposing that training be given annually. While we agree that initial training in respirator use is necessary, we do not believe that the complete respirator training program listed in the standard is needed on an annual basis for all respirators. Rather we propose that the employee be given refresher training on a periodic basis such as the type of training given for other types of skills. For example CPR refresher training or a demonstration of the ability to use the equipment.

2.2.3 Assessment of Respirator Program--OSHA is proposing an annual assessment of the respirator program. We agree that some sort of assessment is needed, but disagree that this is necessarily an annual requirement. We support the following performance language for an assessment requirement:

> "Periodic Assessment: The program shall be periodically audited to ensure that it is implemented and reflects the written procedures."

For very simple programs, i.e. with a single air purifying respirator in use with a single contaminant, periodic might mean once every three or five years. While a program with numerous hazards that change repeatedly (a batch production process) reviews may be needed more frequently.

With respect to the content of the required assessments, OSHA has placed a requirement for assessments in several sections of the proposal. These include:

- The annual review is to include an assessment of each element of the program that is required to be included under paragraph (c)(1).

- In section (d)(3) on respirator selection, OSHA requires that:"..In addition, the employer shall obtain and evaluate the following information for each work situation:...".

These two requirements obligate the employer to document a myriad of actions taken. Such a requirement is unnecessary and burdensome and should be replaced with the performance language proposed above.

2.2.4 Respirator Selection--Under its proposed respirator selection requirements, OSHA would require the employer to document each and every aspect of an exposure to select a respirator. In most cases, a simple review will be sufficient to select the appropriate respirator. For exposure to a nuisance dust during a loading operation, an industrial hygienist can easily understand the effect of each of the items listed by OSHA as being required to obtain and be able to select the appropriate dust respirator based on their experience without the need to document that each item was obtained. We believe the ANSI Z88.2(1992) standard is correct where the requirement is written that selection shall be based on the considerations such as those listed by OSHA without a requirement to obtain information on each item where it can be estimated or approximated.

2.3 Regulatory Impact Analysis

OSHA in the proposal states that:

> "...Based on data found in the OSHA Integrated Management Information System (IMIS), OSHA determined that there is an annual average of 66,500 illnesses that are due to acute exposures to airborne hazardous substances. OSHA estimated that compliance with the existing standard could have prevented about 20 percent of these incidents, and that the proposed revisions to the existing standard could prevent an additional 5 to 10 percent. Thus, full compliance with proposed revisions to the existing standard could prevent between 3,325 and 6,650 illnesses due to acute exposures annually. In addition, using an Office of Technology Assessment estimate that 5 percent of all cancers are occupationally related, OSHA estimated that there are annually between 9,085 and 15,660 new cancer cases, between 6,850 and 11,000 cancer deaths, due to chronic exposures to occupational airborne carcinogens. In addition, airborne exposure to hazardous substances such as silica are estimated to account for another 4,200 chronic illnesses annually. OSHA anticipates that full compliance with the existing standard would prevent about 10 percent of these cases, and that proposed revisions to the existing standard would prevent an additional 2.5 to 5 percent. Thus, after a period of time, between 227 and 783 new cancer cases, between 171 and 550 cancer fatalities, and between 105 and 210 chronic illnesses could be prevented each year by full compliance with the proposed revisions to the respirator standard."

This statement forms the basis for the benefit OSHA expects to achieve by revising the current respirator standard. In this statement, OSHA is making a statement of risk reduction that lacks documentation. Nowhere in the proposal has OSHA provided a rationale for any additional reduction in disease due to enforcing the current standard or for a revised standard. OSHA has not provided any data to show that following the current standard could accomplish a 20% reduction in illness incidence or a 10% reduction in cancer cases. OSHA has not established what in a respirator program would lead to a reduction in illness. In the "Preliminary Regulatory

Impact Analysis of Alternative Respiratory Protection Standards" by Centaur Associates Inc. (Exhibit 34), there is a discussion on the benefits anticipated by promulgating a new respiratory protection standard which we assume forms the basis for OSHA's estimate of risk reduction. This contains an analysis of workplace studies with respirators. The report concludes that a 100 to 200% improvement in respirator performance as measured by workplace protection factors, would result if respirators were selected properly and minimal programs instituted. We agree that properly selected, fitted and used respirators will perform better than a respirator that is not used or fitted properly. But for OSHA to assume that improvements in respirator performance will result in a decrease of adverse health effects requires that OSHA show that exposures are excessive where respirators are being used improperly and that OSHA demonstrate that the individual program defects actually lead to a decrease in performance in these instances. This is stating that good respiratory protection practices implemented since the promulgation of 1910.134 have not worked. We strongly disagree.

For example, although we agree that fit testing is necessary, it does not necessarily follow that improved fit testing will lead to large improvements in overall performance. Our experience is that employees being fit tested normally achieve an adequate fit on the first try. Fit testing does not increase the performance of the respirator they use. Second, all respirator users do not need the full capability of the respirator being worn. A protection factor of two is sufficient for someone using the respirator at 1.5 times the exposure limit.

Fit testing is important to find those who may not achieve adequate respirator performance. But the improvement is protection on an individual basis and does not mean that each and every single user will benefit from the test.

We support OSHA's effort to issue a revised respiratory protection program. The revised standard is needed because the current rule is out of date. On that basis alone, a revised standard is needed. However, we do not agree that OSHA has performed an adequate assessment of risk or benefit to support any rulemaking.

3.0 Comments on Specific Requirements in the Proposal

3.1 Section (b) Definitions:

3.1.1 "Adequate Warning Properties"--Mobil recommends revision to the definition of "adequate warning properties" to clarify OSHA's intention to address both specific chemicals and mixtures, and the inclusion of the Permissible Exposure limit as the concentration limit of concern limit. Mobil recommends the following revised definition:

> "*Adequate warning properties* means the detectable characteristics of a hazardous chemical and or mixture including odor, taste, and/or irritation effects which are detectable and persistent at concentrations at or below the Permissible Exposure Limit, and exposure at these low levels does not cause olfactory fatigue."

3.1.2 "Atmosphere-supplying Respirator"--Mobil recommends that OSHA consistently refer to the use of oxygen throughout the standard. As written, the standard does not adequately define when oxygen can be used, or if it can be used at all. Mobil recommends the term "pure oxygen" be used when referring to neat oxygen, such as in (i)(3). Mobil recommends that OSHA adopt the following definition for "atmosphere-supplying respirator":

> "*Atmosphere-supplying respirator* means a respirator which supplies the wearer with breathing air from a source independent of the immediate ambient atmosphere. This includes air-supplied respirators and self-contained breathing apparatus (SCBA) units."

3.1.3 "Disposable respirator"--Mobil recommends that OSHA differentiate between disposable respirators and those with disposable cartridges and elastomeric facepieces. Various substance specific standards allow for elastomeric facepieces which under the proposed definition of disposal respirator would insinuate that the elastomeric facepiece was disposable too, when in fact they are not.

3.1.4 "Fit Factor"--Mobil finds that the definition of "fit factor" is inconsistent with the rest of the standard, and Mobil recommends the following revised definition:

> "*Fit factor* means an estimate of the ratio of the average concentration of a challenge agent in the atmosphere to the average concentration inside the respirator."

3.1.5 "Positive Pressure Respirator"--OSHA defines a positive pressure respirator as an atmosphere-supplying respirator that is designed so that air pressure inside the facepiece is positive in relation to the outside air pressure during inhalation and exhalation. This definition excludes PAPRs as well as hoods, helmets and loose-fitting facepieces. The Z88.2-1992 definition is more accurate since it includes all respiratory inlet coverings and acknowledges that positive pressure is not necessarily maintained all the time.

3.1.6 "Service Life of Canisters/Cartridges"--OSHA defines service life of a chemical or organic vapor cartridge or canister as the period of time it takes for a specified concentration of a specific substance to break through the cartridge or canister. OSHA also states that this concentration is determined by the manufacturer for each type of cartridge or canister for particular substances. We suggest that the sentence "This concentration is determined by the manufacturer for each type of cartridge or canister for particular substances." be deleted since the manufacturer is unlikely to run service life tests.

3.1.7 "Immediately Dangerous to Life or Health (IDLH)"--Mobil is concerned with the current NIOSH process for determining IDLH values. The NIOSH methodology for

updating IDLH values does not provide for peer review and public comment and is another example of an inappropriate defacto standards setting process. Mobil urges the Agency to adopt the IDLH definition found in ANSI Z88.2-1992.

3.2 Scope of a Respiratory Protection Program:

In the current 1910.134, OSHA requires in section (a)(3) that "...The employee shall use the provided respiratory protection in accordance with instructions and training received." In the proposed rule, this requirement has been left out. In the "Preliminary Regulatory Impact Analysis of Alternative Respiratory Protection Standards" by Centaur Associates Inc., there is an analysis of workplace studies on respirators. The report concludes that a 100 to 200% improvement in respirator performance as measured by workplace protection factors, would result if respirators were selected properly and minimal programs instituted. The primary cause of decreased performance is the fact that the respirator was not worn. Thus OSHA's contractor has demonstrated that a cost effective approach for improving respirator performance would be to require that employees use the equipment as instructed. We support such a concept and urge that OSHA add to the proposed rule a requirement that is already contained in (a)(3) of the current standard. Namely:

> "The employee shall use the provided respiratory protection in accordance with instructions and training received."

3.3 Selection of Respirators.

OSHA in the proposal, where elastomeric facepieces are to be used, requires that a selection of respirators from an assortment of at least three sizes for each type of facepiece from at least two manufacturers. OSHA "believes that nothing in the course of respirator use is more important than achieving the best possible fitting respirator". While we agree that an appropriate respirator needs to be selected, we do not agree that OSHA's method of requiring the various respirators will achieve this goal. OSHA in the record cannot point to data that supports the notion that the availability of multiple respirators will give any added benefit.

The record supports as outlined below that fewer respirators would be an appropriate number. First as will be discussed in detail in the section of fit testing, OSHA has not demonstrated, nor does the record support OSHA's belief that a better fitting respirator can be selected from a group of respirators.

Second, most of the workplace protection factor studies used a smaller selection of respirators than OSHA would require, yet the results of these studies demonstrate that adequate protection was achieved.

As noted by OSHA, either qualitative or quantitative fit testing can be used to select

a respirator. If a qualitative fit test is used, the result is simply a pass or fail, no distinction on the degree of passing can be made. If quantitative testing is used, a number is obtained. But as is discussed in the section on fit testing, the record demonstrates that this number is not a perfect indicator of performance.

OSHA has also not addressed the difficulty and costs involved to maintain different face sizes and manufacturers equipment. This is particularly difficult if OSHA were to require the selection of facepieces for SCBAs. In many cases SCBAs are staged throughout a process to be used in an emergency, they are not assigned to individual employees. Thus the effect of this requirement is that employers would need to maintain at least two sets of SCBAs and three facepiece sizes since which SCBA model would be required at a location would be unknown.

We believe the performance language contained in the ANSI Z88.2(1992) standard on respirators available for fit testing is the appropriate language that OSHA should include in the final rule. Namely: "No one size or model of respirator will fit all types of faces. Different sizes and models will accommodate more facial types. Therefore, an appropriate number of sizes and models shall be available from which a satisfactory respirator can be selected." If someone is not able to fit comfortably in the available selection there are other alternatives, such as the fitting of a full facepiece respirator.

3.4 Medical Evaluations.

Of the three alternatives proposed for medical evaluations, Mobil urges the Agency to adopt Alternative 3--"Questionnaire". Mobil believes that in the medical evaluation OSHA should focus on respirator fitness and not on job fitness. Section (e)(1)(i)-(vii) addresses the general fitness for duty issue and not respirator fitness. Mobil recommends this information be provided to the physician only when requested. The Medical Evaluation Questionnaire, which Mobil supports, should be used as a screening tool with further medical evaluation for only those individuals with possible problems, as identified on the questionnaire.

In regard to the subject of duration of use, Mobil believes that anyone who uses a respirator for valid hazard protection should be appropriately trained and evaluated. Low frequency users are least familiar with the devices and are in the most need of training. Therefore, Mobil recommends that OSHA delete the "for more than five hours during any work week" provision of §(e)(1).

3.5 Section (f) and Appendix A: Fit testing.

Mobil believes that the requirement to conduct three separate successful fit tests to complete an acceptable Quantitative Fit Test (QNFT) is counter-productive to the intent of the regulation. The purpose of fit testing is to assure that an employee can achieve a proper fit, and that by doing so, they will be adequately protected against

airborne contaminants. By requiring three fit tests for a successful QNFT while requiring only one for a Qualitative Fit Test (QLFT), OSHA is discouraging the use of the better fit test method. Three test adds appreciable to the time and cost of conducting fit testing without adding value to the process. QLFT is a one-test, pass/fail process. It provides no numerical fit factor, no strip chart or printout for documentation. Each QLFT has been validated against a valid QNFT method. How can OSHA accept a one-test, pass/fail QLFT method and not accept the one-test, pass/fail QNFT method that was used to validate the QLFT?

Mobil proposes that the QNFT methods should be a one-test, pass/fail process as are QLFT methods. If a quantitative fit test results in a greater than 100 protection factor for a one-quarter or one-half facepiece respirator or a greater than 500 protection factor for fullface respirators, the QNFT should be considered successful.

3.5.1 Section (f)(2) Frequency of Fit Testing: OSHA is proposing that fit testing be performed before an employee first starts wearing a respirator in the work environment and at least annually thereafter. In contrast, OSHA would retain semi annual fit testing for substance specific standards, e.g., asbestos. OSHA, in keeping the 6 month testing in the asbestos standard, has clearly not been consistent. Moreover, OSHA has not demonstrated that more frequent testing provides any benefit. Mobil urges OSHA to not mandate a specific frequency of fit testing beyond the initial test.

3.5.2 Section (f)(4) Alternative Methods: Mobil recommends that fit test manufacturers be included in the §(f)(4) provision allowing for approval of an alternative fit test procedure. Additionally, OSHA does not specify the reviewer of the alternative method. Mobil supports the use of NIOSH to review the alternative fit test procedure, as NIOSH is recognized as a reputable source for respirator research. Thus, pending NIOSH's review, OSHA would have final review and approval of the method. Therefore, Mobil recommends OSHA incorporate NIOSH into the review of alternate fit test procedures.

3.5.3 Section (f)(6) Fit Testing Protocols: Mobil recommends that OSHA replace reference to "the chamber" with "in the atmosphere" in both §(f)(6)(i)(b) and §(f)(6)(ii)(b). This revision better reflects the true fit test environment.

3.5.4 Section (f)(8) Employee Selection: Mobil supports OSHA's intention to afford employees the opportunity to select a different respirator facepiece if the original facepiece is uncomfortable. However, the prescriptive language of §(f)(8) does not support a performance based standard. Mobil recommends the following revision to §(f)(8):

> "If an employee finds their respirator unacceptable, the employee shall be given the opportunity to select a different respirator facepiece and be retested."

3.5.5 Sections (f)(3) and (f)(6)(iii): Fit testing of all tight fitting respirators: In section (f)(3) and in (f)(6)(iii), OSHA requires that air supplied respirators be either qualitatively or quantitatively fit tested. The proposal specifies that only the mask needs to be tested, not the entire respirator unit. OSHA based the requirement to fit test these masks because "...comments suggested that it is appropriate to require the fit testing of positive pressure devices since it has been determined that positive pressure respirators do not always maintain positive pressure. Further, the possible adverse effects of the negative pressure spikes can be minimized by providing positive pressure respirator users with good fitting facepieces. Therefore, it has been suggested that quantitative fit testing should be required for positive pressure equipment."

Available data demonstrates that although negative pressure can occur inside the facepiece of pressure demand SCBAs, the length of excursion is so brief that the effect on protection is limited. This effect would even be less for pressure demand air line respirators that are given an assigned protection factor of 1000 by ANSI (and a proposed 2000 by OSHA). For these reasons we believe OSHA has not demonstrated a need for fit testing of all tight fitting respirators. Mobil agrees that negative pressure respirators need to be fit tested.

3.5.6 Use of the Portacount for Quantitative Fit Testing: OSHA has not included a protocol for the TSI Portacount fit testing method as an established quantitative fit test protocol in the proposal. We strongly believe that sufficient data has been generated to establish the Portacount as a viable method of fit testing. The data available is both laboratory comparison studies and workplace protection factor data. DaRoza concluded that the Portacount showed a good correlation with a photometer during simultaneous measurements of fit factors. The fit factor measurements were biased, with the Portacount fit factors 1.7 times less than the photometer. Also he concluded that "....The Portacount could be used with ambient aerosols to confidently measure fit factors of 100. When used to measure fit factors of 1000 with ambient aerosols, several complications can occur that cause the fit factor to be low..... Although this is undesirable, it errs on the side of safety."

In a number of workplace studies, which include both full face and half mask respirators, the Portacount was used to select respirators as part of the fit test program required for a workplace protection factor study (WPF). In each case the WPFs measured were consistent with the assigned protection factor for the respirator type. Thus the Portacount has demonstrated that it can distinguish acceptable respirators for use in both laboratory and workplace settings.

3.5.7 Appendix A: Fit Test Methods and Test Agents: Mobil recommends that the Portocount method be accepted as a viable method of fit testing. We also agree with OSHA that the isoamyl acetate (IAA) and saccharin fit tests have both been shown to be effective methods of fit testing. However, with regard to the IAA protocol, we believe that it is unnecessarily restrictive in the means of generating test atmospheres

for odor screening and fit testing. A more reasonable performance-based approach would be to specify the maximum airborne concentration of IAA to be used for odor screening and the minimum airborne concentration of IAA to be used for fit testing. It should then be possible to use commercially-prepared test swabs as long as these have been demonstrated to supply the required airborne concentrations under specified use conditions.

In addition, the proposed IAA protocol requires respirator selection, screening test and fit test to be conducted in separate rooms that are not connected to a common recirculating ventilation system. This elaborate precaution against olfactory fatique and general background contamination is burdensome and unnecessary. In Mobil's experience, olfactory fatique has never been a problem during IAA testing. Ventilation should simply be adequate to prevent IAA odor from becoming evident in general room air where odor sensitivity testing or respirator selection and donning takes place.

3.6 Section(g) Use of Respirators

3.6.1 Section (g)(3) Facial Hair: In the proposed rule, OSHA invited comments on the wording of the proposed provision concerning facial hair, and whether OSHA should require that employers provide respirators that do not rely upon a tight facepiece when employees had facial hair. We believe that the standard should simply state:

> "A respirator, either positive or negative pressure, equipped with a facepiece (tight or loose fitting) shall not be worn if facial hair comes between the sealing surface of the facepiece and the face or if facial hair interferes with valve function."

3.6.2 Use of contact lenses: We support OSHA's proposal to not limit the use of contact lenses with respiratory protection. Besides no data being presented to show that contact lenses are a problem, there are suggestions that substantial benefits could be gained, particularly with full face air supplied equipment. If contact lenses are not allowed, this requires that insert glasses be provided. For emergency personnel, this is a problem, since you need to have the proper glasses mounted and available. With contact lenses, no special provisions are needed. Also, there are problems with placement of the glasses inside the mask, leading to vision problems and out of focus lenses.

3.7 Section (h) Maintenance and Care of Respirators

3.7.1 Section (h)(2) Storage of respirators: OSHA requested comments on whether it was appropriate to keep the language on storage conditions in performance language. For example, temperature ranges are not specified. We agree that the current language should be maintained as written. The manufacturer's recommendations should be followed since there may be a particular storage

requirement for a specific piece of equipment. To place storage requirements in specific language may actually contradict specific recommendations of the manufacturer.

3.8 Section (i) Supplied air quality and use

OSHA requested comments on whether it should require carbon monoxide filters with continuous monitoring alarms for all breathing air compressors. We support the language in the ANSI standard that requires acceptance testing of the air from compressors. As noted by OSHA, the placement of the air intake is critical for any air compressor.

Rather than require continuous monitoring, acceptance testing as described by ANSI can be used. We also believe that the standard should require that purchased breathing air be tested for oxygen content or that the employer obtain a certificate of analysis for the air that is purchased.

3.9 *Substance Specific Standards: Respirator Selection*

OSHA has adopted various approaches to deal with respirator provisions in those substance specific standards that differ from the respirator selection tables included in the proposal. Based on the information and data in the respiratory protection docket, OSHA has stated in the proposal that it believes in order to maintain an effective respirator program regardless of the contaminant or workplace conditions, there should be a minimum program level. Thus, for provisions in substance specific standards that are more protective than the counterpart revised provisions of this standard, OSHA does not propose any changes. OSHA provides an example where in the ethylene oxide standard the least protective respirator allowed is a full facepiece respirator with an ethylene oxide canister regardless of protection factor required, whereas respirator selection according to this proposal would allow a half mask or quarter facepiece cartridge/canister respirator up to the NIOSH assigned protection factor of 10.

We believe that there should be a single minimum respirator program and that information in the docket for each substance specific standard should support a single respirator practice. If not, then OSHA has done a poor job in proposing this rule. Several examples point to the need for OSHA to more carefully review the docket for the individual standards and review what OSHA proposes as respiratory practice for the substance specific standards.