August 3, 1998

MEMORANDUM TO: ALL REGIONAL ADMINISTRATORS

FROM: JOHN B.MILES JR., DIRECTOR

SUBJECT: QUESTIONS AND ANSWERS ON THE RESPIRATORY PROTECTION STANDARD

The purpose of this memorandum is to provide the Regional Offices with a copy of the Question and Answers on the Respiratory Protection Standard (Q and A document.) It is intended to provide guidance to the field on topics relating to the Respiratory Protection Standard, 29 CFR 1910.134. This document will be useful to assist the staff in the Area Offices to answer most of most frequently asked questions.

The Q and A provides a series of questions and answers on each paragraph of the revised standard. The document includes four “attachments” that the compliance staff can use for outreach to employers. The attachments include a Spanish translation of Appendix D, a respirator-use flowchart, addresses and phone numbers of State Licensing Boards, and a “usable” copy of the Medical Questionnaire, both in English and Spanish.

The National Office will issue a Compliance Directive on the Respirator standard. The Directive will include inspection and citation guidance to ensure uniform enforcement of the respiratory standard as well as interpretations of the standard.

QUESTIONS AND ANSWERS ON THE RESPIRATORY PROTECTION STANDARD

Note: The page numbers referenced at the end of some of the Questions refer to specific pages in the January 8, 1998, Federal Register, Volume 63, No. 5.

(Revised August 17, 1998)

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Paragraph (a) Permissible Practice

(a)(1) and (2)

Q. What changes did OSHA make to paragraph (a) of the old standard that are now reflected in the new final rule? (FR p. 1179)

A. The final rule is essentially unchanged from the corresponding paragraphs (a)(1) and (a)(2) in the prior rule and the proposed rule. Paragraph (a)(3) was removed and not included in the Final rule.

Q. When does the standard require respirators to be worn? (FR p.1180 & 1181)

A. Whenever it is necessary to protect the health of the employee from contaminated or oxygen deficient air. This includes situations where respirators are necessary to protect employees in an emergency.

Q. Does the standard cover biological hazards? (FR p.1180)

A. The standard applies to most biological hazards (such as Histoplasma capsulatum spores and Bloodborne pathogens) with the exception of *Mycobacterium tuberculosis* (TB). OSHA will continue to enforce respirator use for TB under the previous respirator standard that has been redesignated 29 CFR 1910.139.

Q. When is the employer required to provide engineering controls? (FR p. 1181)

A. This standard does not make any changes to the longstanding hierarchy of controls which requires employers to use engineering and work practice controls where feasible. Only if such controls are not feasible or while they are being implemented may an employer rely on a respirator to protect employees.

Q. Can a combination of administrative controls and respirators be used as interim controls while engineering control measures are developed and implemented?

A. In general, yes. However, some of OSHA's substance specific standards, such as the asbestos standard, prohibit the use of employee rotation as an administrative control .

Q. Will OSHA require respirators to be worn for chemicals that do not have Permissible Exposure Limits (PEL) ? (p.1181)

A. OSHA requires respirators to be worn whenever such equipment is necessary to protect the health of employees. If an exposure to an airborne contaminant, that does not have a PEL, could result in serious illness or injury, the general duty clause could be cited in accordance with the provisions in the Field Inspection Reference Manual (FIRM), CPL 2.103 Chapter 3.

Q. Why did OSHA drop paragraph (a)(3)?

A. This paragraph stated that employees must use the respiratory protection provided in accordance with instructions and training they have received. However, employees' responsibilities are already stated in the OSH Act.

Paragraph (b) Definitions

Q. Why did the final revised standard remove the definition of **Adequate Warning Properties**? (FR p. 1181 and p. 1204)

A. The proposed definition of "adequate warning properties" was deleted from the final standard because the new standard does not permit employers to rely on such properties as the sole cause for changing filters. The two major warning properties, odor and irritation, are unreliable or otherwise inappropriate to use as indicators because of the fact that the air purifying materials are no longer providing adequate protection (sorbent exhaustion). Most toxic substances do not have appropriate sensory warning properties, and reported values for odor thresholds vary widely and are experienced differently by each individual. However, upon smelling or being irritated by a substance when wearing a respirator, the worker must leave the work area to change filters or replace the respirator..

Q. For which specific air contaminants will OSHA allow the use of **air purifying respirators**? (FR p.1182)

A. With some exceptions, air purifying respirators can be used for most air contaminants. Respirators for gases and vapors must either be equipped with an end-of-service-life indicator (ESDI) or the employer must implement a canister or cartridge change schedule.

Air purifying respirators must not be worn in unknown and/or Immediately Dangerous to Life or Health (IDLH), atmospheres in oxygen deficient atmospheres or in situations where the employer cannot prevent the canister or cartridge from becoming saturated. They also cannot be worn if prohibited by the respirator requirements for substance specific standards (i.e. methylene chloride) or other OSHA standards (i.e., abrasive blasting section in 29 CFR 1910.94, Ventilation). Also, the respirator manufacturer have lists of contaminants for which air purifying respirators are not recommended.

Q. Will OSHA be using the NIOSH or the ANSI **assigned protection factors** for enforcement?(FR p. 1182)

A. OSHA decided to address the entire "assigned protection factor"(APF) issue in a subsequent phase of the rulemaking. OSHA will continue to refer to NIOSH APFs in the interim, except in cases where APFs have been published in substance specific standards. Employers must rely on the best available information when selecting the appropriate respirator.

Q. Does OSHA consider a disposable paper respirator (or **dust mask**) a negative pressure

particulate respirator? (FR p. 1183)

A. Yes, this type respirator is referred to as a **filtering facepiece** in the final standard and is defined as a negative pressure particulate respirator with a filter that is an integral part of the facepiece or with the entire facepiece composed of the filter medium.

Emergency Situation

Q. Which standard would apply where respirators are in use on a hazardous waste site?(FR p. 1182)

A. The respirator standard is applicable whenever respirators are used unless a more specific applicable standard addresses the hazard of breathing contaminated or oxygen deficient air. The Hazardous Waste Operations standard (29 CFR 1910.120) has provisions that address respiratory protection. Therefore, those provisions would apply.

Escape -Only Respirators

Q. Can employees use mouthpiece respirators (also known as mouth breathers) for escape? (p. 1182)

A. Yes, if the mouthpiece respirator is properly selected for the potential hazard. It is important that escape-only respirators be NIOSH approved and appropriate for the potential airborne concentration and class of substances involved. However, a mouthpiece type respirator alone would not be appropriate for escape from a chlorine spill because irritation to the eyes could impede the ability of the worker to escape. However if chemical goggles are also provided, the use of a mouthbit respirator in conjunction with chemical goggles might be acceptable in cases where employees can make an immediate and unobstructed exit from an outdoor, relatively level area involved in an emergency.

Fit Factor vs Fit Test

Q. What is the difference or relationship between a fit test and fit factor ? (FR p. 1183)

A. A fit test is used to estimate how well the face piece of the respirator is able to form a seal with an individual's face. The "test" consists of procedures specified in Appendix A of the standard. The fit factor is a number based on the ratio of concentration of contaminate outside the respirator to the concentration inside the respirator.

High Efficiency Particulate Air (HEPA)

Q. Why is OSHA using this outdated terminology in this standard?(FR p.1183)

A. This definition is included because the term "HEPA filter" is used in many of OSHA's substance specific standards is familiar to the regulated community. NIOSH 42 CFR 84 particulate filters, that are considered as protective, are the N100, R100, and P100 filters.

Immediately Dangerous to Life or Health (IDLH)

Q. There are various published and sometimes conflicting IDLH limits. What levels will OSHA use for enforcement purposes?(FR p.1185)

A. OSHA has not established its own set of IDLH values. OSHA considers an atmosphere to be IDLH when it poses an immediate threat to life, could cause irreversible adverse health effects, or could impair an employee's ability to escape. The 1990 recommended IDLH values found in the NIOSH Pocket Guide to Chemical Hazards may be used to support OSHA enforcement action. An employer may show however that another source of IDLH values is valid and then may rely on such a source.

Q. How will OSHA address a short, one time acute exposure that does not immediately cause death but causes immediate or near-term adverse effects that do not last? For example, a single exposure to an atmosphere containing life threatening or health impairing concentrations of fluoride, cadmium fumes or radioactive substances may not cause death or permanent impairment for days or even weeks after the exposure.(FR p.1184)

A. In these situations the key considerations are the severity of the adverse effects and the certainty that health impairment will occur following an acute exposure . Where the immediate adverse effects are severe or ultimate health impairment is certain, the short duration of the effect or the delay in the onset of the health impairment is not a factor.

Q. Does OSHA consider exposures in excess of short term exposure limits (STELs), or ceiling limits a potential IDLH atmosphere? (FR p.1184)

A. Generally, no. Most STELs and ceiling values are designed to reduce the risk of less serious effects, such as sensory irritation. Only an acute exposure, that would threaten life, cause irreversible health effects, or impede the ability of the worker to escape is considered IDLH.

Q. Does OSHA consider all oxygen deficient atmospheres to be potential IDLH situations? (FR p.1186)

A. Yes. An atmosphere with an oxygen content below 19.5% by volume is considered

oxygen deficient. 29 CFR 1910.134(d)(2)(iii) of the final Respiratory Protection Standard provides specific exceptions in accordance with various altitudes as described in Table II of the standard.

Physician or Other Licensed Health Care Professional (PLHCP)

Q. Is a licensed vocational or practical nurse, (LVN or LPN) and/or Registered Nurse, (RN) considered a PLHCP and qualified to review the employee medical evaluation questionnaire?(FR p.1186)

A. The OSHA standard requires the Health Care Professional to be legally permitted to provide the healthcare services required by paragraph (e). It is state law that determines the legal scope of practice. Licensing rules vary from state to state.

Qualitative Fit Test, (QLFT)

Q**.** What is the maximum fit factor for which an employer may use a QLFT? (FR p.1225)

A. 100, since the OSHA accepted QLFT protocols have been validated for a fit factor of 100.

User Seal Check

Q. Specifically, what action is required of the respirator user to determine if the respirator is properly seated? How often must a seal check be done?(FR p.1187)

A. The "action" required in a user seal check is described in Appendix B-1 of the standard. The standard in paragraph (g)(1)(iii) requires the user to perform a user seal check each time a tight fitting respirator is put on.

Paragraph (c) Respiratory Protection Program

(c)(1)

Q. Do all the required elements of a respiratory protection program need to be addressed in writing? (FR p. 1190)

A. All the worksite specific procedures and elements for required respirator use applicable to the particular worksite must be in writing. However , paragraph (c)(2)(ii) makes clear that the written program need not address those employees who are not required to use respirators, but who voluntarily wear filtering facepiece respirators.

(c)(1)

Q. How frequently should the written respiratory protection program be updated?

A. The standard requires that employers revise the program as necessary to reflect changes in the workplace or in respirator use. The written program shall be updated whenever the change occurs. Changes would include different respirator choices, changes in fit testing , and work operations that change.

(c)(1)

Q. What if the employer requires respirators to be worn, although employees are not exposed to airborne contaminants in excess of the PEL? (FR p.1191)

A. Employer required use triggers a full respirator program covering all the elements.

(c)(1)(vii)

Q. Does training on hazardous chemicals required by the Hazard Communication standard meet the requirement for training on respiratory hazards? (FR p.1193)

A. Yes, but only partially. Some respiratory hazards are exempt from the Hazard Communication rule; i.e., biological hazards and radioactive hazards. Annual training on all applicable respiratory hazards is required by the Respiratory Protection standard.

(c)(1)(ix)

Q. How often should the effectiveness of the respiratory protection program be evaluated?(FR p. 1193)

A.. OSHA does not have a required interval. In workplaces where worksite specific conditions are relatively stable, such as a manufacturing site, program evaluation may be conducted on a regular schedule. Where worksite conditions are less stable, such as in the construction industry, employers must develop evaluation schedules that reflect the actual conditions at the worksite as necessary.

Q. Does the employer have the flexibility to develop a corporate written program that would be applicable to all facilities (a generic program)?

A. Yes. The employer may have different sites with very similar operations, where a corporate program could be used. It must however, include site specific provisions to reflect different site conditions.

(c)(2)

Q. In situations where employees choose to wear elastomeric respirators voluntarily, is a written respiratory program addressing medical evaluation, cleaning, disinfecting, storage and maintenance required?(FR p.1189)

A. Yes, the employer must have a written program that covers the elements that could affect the health of any employee who wears this type of respirator.(FR p.1183)

(c)(2)(ii)

Q. Is a written respiratory protection program required for voluntary use of filtering facepieces?

A. No. The employer is obligated to determine that such respirator use will not itself create a hazard and to provide the respirator users with the information contained in Appendix D of the standard.

Q. If the employer has determined that no hazard exists, but an employee asks the employer for a respirator because a “smell” is bothersome, would this be considered “voluntary use”? If all the employees in the area wore a respirator, is this still voluntary use?

A. Yes, in both situations.

(c)(3)

Q. How will the Compliance Safety and Health Officer (CSHO) determine that a person is

qualified and/or trained to be a respirator program administrator? (FR p.1194)

A. The CSHO will review the written program and interview the respirator program administrator (program administrator). Questions asked during the interview would focus on determining how familiar the person is with the respirator standard and the use of the respirators at the particular workplace.

(c)(3)

Q. What is meant by "appropriate" training or experience? (FR p.1194)

A. Training or experience must be extensive enough for the program administrator to fulfill the minimum requirements. The appropriate training will be dependent on the complexity of their respiratory program needs.

(c)(3)

Q. May an employer have more than one program administrator? (FR p.1195)

A. Yes. Each worksite where respirators are required must have a respiratory program. However, where there is more than one worksite, there will be a program at each site. In that circumstance there may be a program administrator for each program.

(c)(3)

Q. Does the standard provide a list of approved training courses for program administrators(FR p.1193)

A. No. OSHA only requires the program administrator to have a level of training adequate to deal with the complexity of the respirator program at the worksite.

(c)(3)

Q. Where can a small employer receive help on compliance with this standard?

A. OSHA is preparing a Small Entity Compliance Guide with a sample respirator program. It will be available on the OSHA web site at *http://www.osha.gov*.

(c)(4)

Q. Does the employer have to pay for any of the expenses associated with the voluntary use of respirators? (FR p.1195)

A. The voluntary use of an **elastomeric mask** requires that the employer have a written

program, ensure the employee is medically able to use the respirator, and that the respirator does not present a health hazard and provide a copy of Appendix D to the employee. To the extent that the above items may create an expense, these costs would be covered by the employer. The employer can choose to supply the respirator and cartridges at no cost to the employee. If the employee supplies their own respirator, the cost of the respirator and cartridges would be the responsibility of the employee. For **voluntary users wearing dust masks**, the employer must provide at no cost to the employee, a copy of Appendix D. Where respiratory protection is required either by the employer or by the OSHA, the employer must pay all costs associated with the standard.

Q. Can an employer (whether or not a small business) rely on the Small Entity Compliance Guide?

A. The Small Entity Compliance Guide is being provided to help employers to comply with the standard. All businesses, small and large, must have a full respirator program where respirators are required. This guide contains a sample Respiratory protection program that many employers will find useful. Under the Small Business Regulatory Enforcement Act, small businesses may use the guide in challenging the appropriateness of a penalty in an OSHA enforcement action.

Paragraph (d)Selection of Respirators

(d)(1)(i)

Q. What is meant by user factors? (FR p.1196)

A. User factors may include medical conditions that may make usage of particular types of respirators difficult i.e. high level of exertion, poor sense of smell, and physical characteristics such as facial scars that may cause difficulties with fit.

(d)(1)(i)

Q. What is meant by workplace factors? (FR p. 1196)

A. "Workplace factors" mean the amount of time the respirator will be worn, dimensions and configuration of the work space , temperature and humidity of the work environment, need for unimpeded vision, need for communication with other workers, need for other personal protective equipment, and the presence of other contaminants.

(d)(1)(ii)

Q. What is meant by conditions of a respirator's certification? (FR p. 1197)

A. Respirators are certified by NIOSH as an assembly. Also conditions of certification means limitations of use stated by NIOSH that accompany certification. Parts from other manufacturers or models cannot be substituted. In the case of airline respirators, the conditions of the certification include operating pressures and hose specifications. Air purifying respirators are certified with limitations that include not using them in IDLH conditions and not using them in atmospheres containing less than 19.5% oxygen.

(d)(1)(iii)

Q. What is meant by "a reasonable estimate of employee exposures?" (FR p. 1198)

A. Exposures must be characterized, through methods that may include actual measurements of exposure at a worksite , exposure data from industry or supplier, and calculations of concentration based on amount used (mathematical models). Data from industry-wide surveys by trade associations may be used as long as they closely resemble the processes and work conditions as described in the survey. The standard does not specify how an employer is to make a reasonable estimate, nor does it require the employer to measure employee exposure. (The comprehensive substance-specific health standards have employee exposure monitoring requirements.) Even with actual measurements of exposure, some estimation is still involved, since monitoring only determines the exposure on a particular day for a specific employee.

(d)(1)(iii)

Q. Is the employer required to have personal monitoring data when selecting a respirator? (FR p. 1200)

A. While personal exposure monitoring is the most reliable approach for assessing the level of respiratory protection required, it may not always be necessary to take personal exposure measurements to determine whether (or what level of) respiratory protection is needed. Appropriate safety factors should be used when using estimates of employee exposures.

(d)(1)(iii)

Q. Do estimates of employee exposures have to be made by a credentialed individual, for example, a certified industrial hygienist? (FR p. 1200)

A. The standard does not require that the person making the estimate have a particular credential. Persons trained and experienced in evaluating respiratory hazards posed by workplace atmospheres are the most competent to evaluate exposure levels.

(d)(1)(iii)

Q. If an employer cannot identify the contaminant or reasonably estimate employee exposures, is the employer required to consider the atmosphere to be IDLH?

A. Yes, unless under worst case assumptions, exposures would not be IDLH. For example, there may be some information available on air concentrations, but not enough data to reasonably estimate the actual employee exposures. However, by making reasonable assumptions about the maximum concentrations that could exist, the employer may be able to show that IDLH conditions would not occur. In other situations it may not be feasible to identify <u>all</u> of the air contaminants, but through information on the process one may be able to determine that IDLH conditions could not occur.

(d)(1)(iv)

Q. How many respirator models and sizes are sufficient? (FR p. 1200)

A. The requirement of the standard is performance- based; the numbers of models and sizes must be sufficient to provide a range of sizes and configurations so that all users can achieve acceptable fits.

(d)(2)(i)

Q. Can any supplied air respirator be used for entry into IDLH atmospheres? (FR p.1201)

A. No. Paragraph (d)(2)(i) requires a full facepiece pressure demand Self Contained Breathing Apparatus (SCBA) certified by NIOSH for a minimum service life of thirty minutes or a combination full facepiece pressure-demand supplied-air respirator with auxiliary self-contained air supply.

(d)(2)(iii)

Q. When is an oxygen-deficient atmosphere considered IDLH? (FR p.1202)

A. All oxygen-deficient atmospheres(O_2 < 19.5% by volume) are considered IDLH with one exception. If the employer demonstrates that, under all foreseeable conditions, the oxygen concentration can be maintained within the ranges specified in Table II (i.e., for the altitudes set out in Table II), then any atmosphere-supplying respirator may be used.

(d)(2)(iii)

Q. Why is altitude an important consideration for determining oxygen deficiency? (FR p.1202-1203)

A. An increase in altitude results in a decrease of atmospheric pressure along with a decrease in the partial pressure of oxygen. A reduction in the partial pressure of oxygen may result in oxygen deficiency for the worker. For additional information reference American National Standards Institute (ANSI) Z88.2-1992, Section A.5.

(d)(3)(i)

Q. Does the employer need to consider emergency situations? (FR p. 1203)

A. Yes. When selecting respirators for non-IDLH routine use, the employer must consider additional problems related to reasonably foreseeable emergency situations. In addition, there are substance-specific standards such as asbestos, and other standards such as HAZWOPER that have requirements to be followed in the event of an emergency.

(d)(3)(i)(A)

Q. What assigned protection factors (APFs) may be used? (FR p. 1203)

A. Until APFs are established through rulemaking, employers must rely on the best available information when selecting the appropriate respirator. OSHA will continue to refer to NIOSH APF's except where different APF's have been published in substance specific standards. Where OSHA has specific compliance interpretations that set APFs for certain respirators, such as abrasive blasting respirators used for protection against lead, these must be followed.

(d)(3)(ii)

Q. What is meant by 'physical form' of air contaminant? (FR p. 1204)

A. Physical form refers to whether the air contaminant is a gas, vapor, mist, fume, or dust; or some combination. For example, solvents commonly used in paints may be present as vapors and as mists, and an air purifying respirator would need to provide protection against both.

(d)(3)(ii)

Q. What is meant by 'chemical state' of an air contaminant? (FR p. 1204)

A. Chemical state refers to its valence state. For example, chromium needs to be identified by its valence state (or the chemical compound) because chromium VI compounds have much lower exposure limits than chromium metal, chromium II or chromium III compounds.

(d)(3)(iii)(B)

Q. Can end of service life indicators (ESLI) be used under all workplace conditions? (FR p. 1205)

A. ELSIs are NIOSH certified for only a few contaminants. NIOSH tests them under most conditions of use. Cartridges and canisters equipped with ESLIs can be used only if they are appropriate for the conditions of the employer's workplace. An example of a workplace condition that may adversely affect an ELSI is where a cartridge equipped with a moisture dependent ESLI is used in an extremely dry atmosphere.

(d)(3)(iii)(B)

Q. Where can change schedules be obtained? (FR p. 1205)

A. Data supporting schedules may be available for certain chemicals and respirator cartridges through respirator manufacturers and suppliers, industry associations and chemical manufacturers.

(d)(3)(iii)(B)

Q. How can an employer develop a change schedule? (FR p. 1206)

A. Employers must develop cartridge change schedules based on available data or information that can be relied upon to ensure cartridges are changed before the end of their useful service life. Workplace factors such as contaminant concentration, presence of other contaminants, airflow through the filter, temperature, and humidity must be

considered. Certain chemicals "migrate" through the sorbent in storage. Employees must be aware of this information as well.

(d)(3)(iv)

Q. Are N95 filters allowed for contaminants with permissible exposure limits below 0.05 mg/m^3?

A. Yes, if oil aerosols are not present, and there are no applicable OSHA standards requiring the use of HEPA filters. If filters are chosen from among those certified under 30 CFR Part 11, which carry the designation TC 21C-xxxx, only HEPA filters can be used.

(d)(3)(iv)

Q. How can an employer determine if the mass median aerodynamic diameter (MMAD) of a contaminant is less than 2 micrometers?

A. Ranges of MMAD for various processes have been reported in published articles. It also is possible to determine ranges through testing. If the MMAD cannot be determined, a HEPA filter, or a filter certified for particulates by NIOSH under 42 CFR part 84 (N95 or higher) must be selected.

Paragraph (e) Medical Evaluation

(e)(1)

Q. Are seasonal or temporary workers exempt from the requirement for medical evaluations? (FR p. 1209-1210)

A. No. The frequency and duration of respirator use and the worker's term of employment, does not affect the requirement for medical evaluation.

Q. Can a fit test for a respirator be performed before the initial medical evaluation has been completed? (FR p.1209)

A. No. The initial medical evaluation must be conducted prior to fit testing to identify individuals whose health may be harmed by the limited amount of respirator use associated with fit testing.

Q. Are employees who use filtering facepiece respirators (dust masks) voluntarily (e.g., for employee comfort) also required to have medical evaluations? (FR p.1190, 1210)

A. No. If the employer has determined that there is no hazard, and dust mask use is voluntary, then no medical evaluation is required. If employers allow voluntary use of this type of respirator, then they must provide the employee the information contained in Appendix D of the standard, and ensure that such respirator use will not itself create a hazard.

Q. Are medical evaluations required for positive pressure, as well as negative pressure, respirators? (FR p.1210)

A. Yes. Clinical studies show that positive pressure respirator use can harm the employee.

(e)(2)(i)

Q. Are physicians the only medical professionals allowed to perform medical evaluations for respirator use? (FR p.1211)

A. No. A variety of health care professionals may do this depending on the scope of practice permitted by the state's licensing, registration, or certification agencies. Each employer must check with the state licensing agency to see if other health care professionals under their state law can independently perform this evaluation, or must do so under the direction of a licensed physician. Attached to this document is a phone listing of all the

State Licensing Boards in the United States, to assist in determining compliance with this provision.

Q. Can a nurse who does not meet the qualifications of a PLHCP assess a questionnaire? (FR p. 1212)

A. A nurse not otherwise qualified to be the PLHCP can perform some tasks, such as distributing the questionnaire, respond to some questions such as providing advice to employees on where they can obtain assistance in understanding or reading the questions, and gathering the completed forms in preparation for delivery to the PLHCP. If the nurse is working under the direction of a physician (or other PLHCP consistent with state law) who will perform the final review of the assessment, then this arrangement is acceptable.

(e)(2)(ii)

Q. Does the employer have to use the exact language of the questionnaire in Appendix C if they choose to evaluate by medical questionnaire? (FR p. 1212)

A. The language of Part A , Appendix C is mandatory if the employer chooses to medically evaluate by questionnaire. The employer may choose a medical examination in lieu of the medical questionnaire.

Q. If the employer chooses to provide physical exams , rather than use the questionnaire, what information must be obtained?

A. The employer who chooses to skip the questionnaire, and instead go directly to an exam shall ensure that the exam obtains the same information as is found in the questionnaire.

Q. May the PLHCP add questions to the questionnaire provided in Appendix C? (FR p. 1283)

A. Yes. Part B of the questionnaire contains 19 optional questions that may be added In addition, the instructions to Part B state that any other questions not listed can be added.

Q. Why do employees have to answer questions about hearing and vision impairments ? (FR 1214)

A. Questions 10 through 15 of Appendix C must only be answered by those who will use full facepiece or SCBA respirators. The configuration of these respirators can further reduce hearing and vision.

Q. If an employee will be wearing an SCBA, does a positive response to any of the items in Questions 10 thru 15 of Part A, Section 2 require a medical exam?.

A. Yes.

(e)(3)(i)

Q. Who determines the scope and form of the medical evaluation if an employee gives a positive response to questions 1 through 8 in Section 2, Part A of the questionnaire? (FR 1214)

A. The PLHCP makes this determination. The PLHCP is also expected to refer the employee to a physician if warranted.

Q. If there is a single positive response on the questionnaire, does that automatically require a face-to-face visit with the PLHCP? (FR p. 1214)

A. No, the scope of the medical evaluation is left to the discretion and professional judgment of the PLHCP. There may be occasions where all that is needed is clarification of an issue by telephone.

(e)(3)(ii)

Q. If a PLHCPs scope of practice is limited to questionnaire evaluation or a basic physical exam, can that PLHCP still be used even though further testing and decision making may be necessary? (FR p.1214)

A. Yes. In some cases where medical issues arise that are beyond the scope of the PLHCP's license, the remainder of the evaluation will need to involve a physician or other authorized health care professional (for example, conducted under the direction of a physician).

Q. Can an employee decline to be medically evaluated for the use of a respirator? (FR p.1220-1221)

A. Paragraph (e)(1) requires the employer to provide a medical evaluation to an employee before the employee uses a respirator in the work place. Therefore, an employee cannot refuse to undergo medical evaluation and continue to use a respirator.

(e)(4)(i)

Q. Who pays for the medical evaluation and any subsequent exams? (FR 1214)

A. The employer must pay for the medical evaluation and any related expenses incurred by the employee during the evaluation, including travel costs.

Q. Does the medical questionnaire have to be administered by a PLHCP? (FR 1214-1215)

A. While the employee must be able to discuss the results of the questionnaire with the PLHCP, the standard does not specify the qualifications of the individual who administers the medical questionnaire.

Q. How does an employer ensure the employee understands the questions on the medical questionnaire if the employee only speaks and/or reads a language other than English? (FR p. 1215)

A. Under these circumstances, the PLHCP can assist the employee in filling out the questionnaire, with the aid of an employer-provided interpreter. The interpreter need not be a professional and can be a bilingual employee, family member, or friend who is fluent in the native language of the person answering the questionnaire. The employer may also have the questionnaire translated into the appropriate language.

Q. What happens if an employee has difficulty reading or understanding the questionnaire? (FR p.1215)

A. The employer must take action to ensure the employee understands the questionnaire. The employer may have the PLHCP assist the employee in filling out the medical questionnaire or go directly to a physical examination.

Q. Why does the questionnaire in Appendix C begin with the question “can you read”? (FR p.1215 & 1282)

A. This question is included to remind those who are responsible for administering and reviewing the questionnaire that employees who cannot read may need additional assistance in completing the questionnaire.

(e)(4)(ii)

Q. How can an employer ensure the employee understands the medical questionnaire while still meeting the requirements of confidentiality? (FR p.1215)

A. Since the medical questionnaire provided in the standard was designed to be easily understood, oversight should not generally be necessary. When employees have questions

about the questionnaire, they must be provided with the opportunity to discuss the questions with the PLHCP.

Q. What procedures should be used to maintain confidentiality if the questionnaire is administered by the employer? (FR p.1215 & 1282)

A. The directions to the employee for answering the medical questionnaire state that the employer must not look at or review their answers. The employee must be instructed on how to deliver or send the completed questionnaire to the PLHCP who will review it. One method for accomplishing this task is for the employer to provide the employee with a stamped envelope addressed to the PLHCP at the time the questionnaire is administered.

(e)(5)(i)

Q. Why does supplemental information need to be provided to the PLHCP? (FR p.1216-1217)

A. When evaluating an employee's medical limitations, the PLHCP may need to consider other workplace variables that may increase pulmonary and cardiovascular stress during respirator use.

Q. Why is there no specific requirement to give the PLHCP a list of substances the employee may be exposed to? (FR 1215-1216)

A. The company's written respiratory program already specifies the exposure conditions that require the use of a respirator. A copy of the written program must be provided to the PLHCP instead. The program will provide the necessary information to the PLHCP without imposing an additional paperwork burden on employers.

Q. Does the PLHCP have to visit the worksite to perform a medical evaluation? (FR p.1217)

A. While it might be helpful for the PLHCP to visit the site, there is no requirement to do so under the standard. The supplemental information required to be provided to the PLHCP by the standard is sufficient for the PLHCP to make a valid recommendation on the employee's ability to wear a respirator.

(e)(5)(ii)

Q. How often must supplemental information be provided to the PLHCP? (FR p.1217)

A. It need only be provided once, unless there are changes in the supplemental information;

in that case updated information must be provided to the PLHCP. If you change PLHCP's, then the employer must assure that all the information has been transferred or that new documents are provided to the new PLHCP.

Q. Can an employer choose to let each employee use their own personal physician to provide a medical evaluation rather than using the employer's PLHCP? (FR p.1217)

A. Yes. This may be a workable system where few employees are involved. The employer will have to contact each of these PLHCPs and provide them with a copy of the Respiratory Protection standard and other required supplemental information, as well as updates when required. The employer shall bear the costs of the evaluation. It is not acceptable for an employee to use their health insurance for this purpose, unless the employer pays 100% of the insurance premiums.

(e)(6)(i)

Q. Who is responsible for determining an employee's ability to use a respirator? (FR p.1218)

A. The responsibility rests with the employer. The PLHCP's opinion regarding the employee's medical ability to wear a respirator is an important element in making the final determination.

Q. Does the PLHCP's opinion on the employee's medical ability to use a respirator have to be in writing? (FR p. 1218)

A. Yes.

Q. If the PLHCP discovers that the employee uses drugs, does the PLHCP have an obligation to tell the employer? (FR p.1218)

A. No. The PLHCP must maintain strict confidentiality on specific medical findings unrelated to the ability to wear a respirator. Information regarding pregnancy, genetic susceptibility, mental health problems, and drug use are not to be revealed to the employer when they result from the medical evaluation process. These findings must remain confidential. How specific medical information is addressed between the employee and PLHCP should be determined by the legal, professional, and ethical standards that govern the PLHCP's practice.

Q. Can the employer maintain a copy of the employee's completed medical questionnaire? (FR p.1218 & 1282)

A. No. The employer must maintain only the PLHCP's written recommendation on an employee's eligibility to wear a respirator. The completed questionnaire and PLHCP's documented findings or diagnosis are confidential and must not be maintained by the employer. An exception is made when the employer's health office is administratively separate from the employer's central administration offices.

Q. How does the PLHCP's opinion affect periodic medical evaluation? (FR p. 1218)

A. The final standard does not automatically require periodic medical reevaluation. It is critical, however, that the PLHCP address this issue in their medical opinion. If there is an underlying medical concern that requires periodic medical reevaluation, it must be included in the written medical opinion so that the employee can be monitored in the future by the PLHCP.

Q. How can the employee obtain a copy of their medical evaluation or the medical questionnaire? (FR p.1218)

A. The employer is required to provide a copy of the written opinion to the employee. The written opinion should be provided by the PLHCP but can be provided by the employer. Requests for copies of the questionnaire should be made to the PLHCP consistent with the requirements of 29 CFR 1910.1020, "Access to Employee Exposure and Medical Records".

(e)(6)(ii)

Q. Does the employer have to provide a powered air-purifying respirator (PAPR) to an employee who can't wear a negative pressure respirator? (FR p.1218-1219)

A. The employer must provide a PAPR if the PLHCP determines that the use of a negative pressure respirator would place the employee at increased risk for adverse health effects and the PLHCP finds that the employee can use a PAPR. If a subsequent medical evaluation finds that the employee is able to use a negative pressure respirator, a PAPR need no longer be provided.

(e)(7)

Q. Does the employer have to medically reevaluate the employee's ability to wear a respirator on an annual basis? (FR 1219)

A. No. There is no annual or periodic requirement for medical reevaluation. The standard lists four conditions that trigger medical reevaluation: an employee reports signs or symptoms related to the ability to wear a respirator; the PLHCP, administrator or

supervisor determine it is necessary; information from the respiratory protection program indicates a need for reevaluation; or a change in workplace conditions substantially increases the physiological burden placed on the employee.(FR p.1219-1220)

Q. Is there a medical removal provision in this standard for persons medically unable to wear a respirator? (FR p.1220)

A. No. The final standard does not include a medical removal provision.

Paragraph (f) Fit testing

(f)(1)

Q. Do all tight-fitting respirators which are required by the employer or by OSHA have to be fit tested? (FR p. 1188, 1189, 1191, 1222)

A. Yes. Both negative pressure and positive pressure tight-fitting respirators must be fit tested.

(f)(1)

Q. Does a Self-Contained Breathing Apparatus (SCBA) require fit testing? (FR p. 1223, 1224)

A. Yes, SCBAs require a fit test. Most workplace use of positive pressure atmosphere-supplying respirators occurs in high hazard atmospheres where a high degree of certainty is required that the respirator is maximally effective. Fit testing of tight-fitting positive pressure facepieces is appropriate to reduce the chance of leakage into the facepiece.

(f)(1)

Q. Do tight-fitting negative pressure respirators that are worn voluntarily require a fit test? (FR p. 1222)

A. No, respirators worn when not required by OSHA or the employer do not require a fit test.

(f)(1)

Q. Do loose-fitting respirators require a fit test? (FR p. 1222)

A. No, loose-fitting respirators do not require a qualitative or quantitative fit test. (FR p.1222)

(f)(2)

Q. Which respirator use requires fit testing? (FR p. 1222, 1223, 1225)

A. Fit testing is required when OSHA or the employer requires employees to wear tight-fitting respirators. The employee must pass a fit test prior to the initial use of the respirator. Additional fit tests are required whenever the employee reports, or the employer, PLHCP, Supervisor or Program Administrator observes changes in the employee's physical condition that could affect respirator fit.

If the employee changes to a different fitting facepiece a new fit test is required. An annual fit test is required after the initial fit test.

(f)(4)

Q. When would the fit of a respirator be unacceptable? (FR p. 1225)

A. A respirator may be unacceptable if it causes irritation or pain to an employee, if the employee is unable because of discomfort to wear the respirator for the time required, or if the employee is unable to maintain proper seal.

(f)(5)

Q. Can an employer use any method of fit testing? (FR p. 1223,1226)

A. No. The employer must use one of the OSHA-accepted qualitative or in some cases quantitative fit test protocol. OSHA-accepted protocols are found in Appendix A of the 29 CFR 1910.134 Respiratory Protection Standard.

(f)(5)

Q. Can an employer develop its own fit testing method?(FR p. 1228)

A. Any new fit testing methods must first meet the acceptance requirements of Section II of Appendix A, before it can be used.

(f)(5)

Q. Does a "user seal check" qualify as a fit test? (FR p. 1188)

A. No, a User Seal Check is a procedure the employee performs each time they don the respirator. The purpose of the User Seal Check is to ensure the respirator is properly seated to the user's face. It is not a substitute for a fit test of a particular type, model, and size of a respirator.

Q. Can a qualitatively fit-tested tight fitting negative pressure air-purifying respirator be used in an atmosphere greater than 10 times the PEL? (FR p. 1227)

A. No. A qualitatively fit-tested tight fitting negative pressure air-purifying respirator can only be used in an atmosphere less than or equal to 10 times the PEL.

(f)(5)

Q. Will OSHA establish a mechanism to evaluate and approve new fit testing methods?

A. The mechanism is already described in Part II of Appendix A of the standard. Parties with a new fit testing method must supply a detailed description of the method as well as data from an independent government research laboratory or from a study published in a peer reviewed industrial hygiene journal supporting the new method's performance. Upon receipt of this information, OSHA will initiate rulemaking to add this method to Appendix A of the Respirator Standard.(FR p. 1221)

(f)(6)

Q. What negative-pressure respirators may be fit tested with a QLFT?

A. Negative-pressure air purifying respirators that will be worn in concentrations that are equal to or less than ten times the Permissible Exposure Level may be fit tested using QLFT. The limitation on the air contaminant concentration is discussed in (f)(7) below.

(f)(6)

Q. Can QLFT be used to test the fit of a full facepiece negative pressure air purifying respirator? (FR p. 1222)

A. The factor that limits the use of QLFT is the concentration of the air contaminant in which it is being worn. If the full facepiece respirator is only being worn in air contaminant concentrations that are equal to or less than ten times the PEL, then QLFT can be used. However, it cannot be used in air concentrations greater than ten times the PEL unless it is fit tested using a Quantitative Fit Test (QNFT).

(f)(6)

Q. How will OSHA deal with an application for a QLFT protocol that measures fit factors greater than 100?

A. If new methods are developed that permit QLFT use for higher fit factors, OSHA may, as part of the acceptance process for these new methods (described in the explanation for (f)(5) above), adjust the present language in (f)(6) appropriately.

(f)(7)

Q. Since the standard does not define the term "assigned protection factor" can an employee wear tight fitting air purifying respirators to concentrations of 100 times the PEL for half facepiece respirators and 500 times the PEL for full facepiece respirators if they are quantitatively fit tested?

A. No. The fit factors of 100 and 500 only define what fit factor is necessary to pass the fit test. The preamble states that the standard incorporates a safety factor of ten because protection factors in the workplace tend to be much lower than the fit factors achieved during fit testing. The use of a safety factor is a standard practice supported by most experts to offset this limitation. The use of safety factors of ten is recommended by a number of experts and is included in the ANSI standard for respiratory protection.

(f)(7)

Q. What are acceptable fit factors for tight-fitting half facepieces and tight-fitting full facepieces respirators that are fit tested using QNFT?

A. The acceptable fit factors are explained in section (f)(7): 100 for a half facepiece and 500 for a full facepiece.

(f)(8)

Q. Does this paragraph require fit testing of positive pressure respirators such as SCBAs, PAPRs, and Supplied Air Respirators (SARs) ? (FR p. 1226)

A. Yes. The standard requires fit testing of the facepiece to check for leakage. The standard allows the employer to conduct the test by using a negative pressure respirator with a facepiece of the same make, model and size as the positive pressure facepiece, or by temporarily converting the facepiece for the positive pressure apparatus to a negative pressure device and performing the fit test.

(f)(8)

Q. Can a tight fitting PAPR be tested simply by not turning the fan motor on?

A. Yes. By not turning on the fan motor, a PAPR would be operating in the negative pressure mode.

(f)(8)

Q. Is there a frequency of use below which fit testing would not be required for atmosphere supplying respirators? Often, emergency SCBAs are available for fire brigade or hazardous substance emergency response personnel, but these personnel may not use the equipment in a hazardous atmosphere for several years.(FR p. 1226)

A. The standard's requirement of annual fit testing applies to emergency response personnel who wear respirators to protect against hazardous atmospheres. Proper fit is especially necessary for emergency personnel.

These people may only wear the equipment infrequently, but when they do use the equipment, they often use it in very dangerous atmospheres.

(f)(8)(iii)

Q. Can a probe hole be drilled in a facepiece to perform QNFT and then the probe hole be sealed so the facepiece can be used on the respirator?

A. No. As the second sentence of section (f)(8)(ii) says, the permanently probed respirator only serves as a surrogate for testing purposes. A face piece with a probe hole drilled in it cannot be restored to its NIOSH-approved configuration.

Q. For quantitative fit testing, must employers still perform three fit tests?

A. No.

Paragraph (g) - Use of Respirators

(g)(1)(i)(A)

Q. Can an employee wear a tight-fitting respirator with a beard or other facial hair? (FR p.1237)

A. No. When respirators are required, an employer is prohibited from allowing respirators with tight-fitting facepieces to be worn by employees who have "facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function."

Q. May employees who have facial hair wear respirators? (FR p. 1238)

A. The standard requires employers to take the presence or absence of facial hair into consideration in selecting respirators; different company policies may affect the range of choices available. However, several types of respirators such as loose-fitting hoods or helmets accommodate facial hair.

Q. Does section (g)(1)(i)(A), facial hair, apply to voluntary use?

A. If the employer has determined that there is no hazard, voluntary users are not prohibited by the standard from wearing a beard. Traditionally, good industrial hygiene practice recommends that facial hair that interferes with the face-to-facepiece seal should be avoided.

(g)(1)(i)(B)

Q. What employee conditions prohibit the use of tight-fitting respirators? (FR p. 1238)

A. An employer cannot allow employees who have any condition that interferes with the face-to-facepiece seal or valve function to wear respirators with tight-fitting facepieces. Examples of these conditions include, but are not limited to, missing dentures, the presence of facial scars, the wearing of jewelry, or the use of headgear that projects under the facepiece seal. This provision prohibits employers from placing an employee in a tight-fitting respirator if there is any factor that could prevent an adequate facepiece-to-face seal. Respirator use is permitted where conditions such as missing dentures or facial scars do not prevent an adequate seal.

(g)(1)(ii)

Q. Can corrective glasses, goggles, or other personal protective equipment be used with tight-fitting respirators? (FR p.1239)

A. The standard is written in performance terms so that any particular piece of equipment may be used as long as it does not interfere with the facepiece seal. Corrective glasses or goggles or other personal protective equipment can be used with tight-fitting respirators, but employers must ensure that they are worn in a manner that does not interfere with the seal of the facepiece to the face of the user. Eyeglass inserts or spectacle kits are acceptable if the devices: (1) do not interfere with the facepiece seal; (2) do not cause any distortion of vision; and (3) do not cause any physical harm to the wearer during use.

(g)(1)(ii)

Q. What does OSHA mean by "other personal protective equipment"? (FR p. 1239)

A. "Other personal protective equipment" applies to faceshields, protective clothing, and helmets, as well as to any other form of personal protective equipment that an employee may wear that could interfere with safe respirator use.

(g)(1)(ii)

Q. May employees wear contact lenses with respirators ? (FR p. 1239)

A. Contact lenses may be used with respirators. OSHA's review of the record identified no evidence that the use of contact lenses with respirators increases safety hazards. Employers who have employees who wear corrective eyewear must be sure that the respirator does not interfere with the eyewear, make it uncomfortable, or force the employee to remove the eyewear. Employers should use the respirator selection process to make accommodations to ensure that their respirator-wearing employees can see properly when wearing these devices.

(g)(1)(iii)

Q. What procedures must be followed to perform a "user seal check"? (FR 1239)

A. The "user seal check" procedures in Appendix B-1 or equally effective procedures recommended by the respirator manufacturer must be used.

The positive/negative user seal checks described in Appendix B-1 cannot be performed on some tight-fitting respirators by employees with small hands who cannot block off the valves. Some manufacturers make a fit check cup that can be used to perform a user seal check with filtering facepiece respirators. The final rule allows for the use of the methods in Appendix B-1 as well as manufacturers' recommended procedures for user

seal checks where these are equivalently effective. This means that respirator manufacturers' recommended procedures may be used for user seal checking if the employer demonstrates that the manufacturer's procedures are as effective as those in Appendix B-1 of the standard. The "equally effective" phrase ensures that the procedures used have been demonstrated to be effective in identifying respirators that do not seal properly when donned or adjusted.

OSHA does not permit the use of respirators that cannot be seal checked. If no method exists to check whether a respirator re-seals during multiple re-donnings, under actual workplace conditions, OSHA does not consider the respirator acceptable for use.

(g)(1)(iii)

Q. What does OSHA mean by "...ensure that employees perform "user seal checks"..."? (FR 1240)

A. It is not OSHA's intent that each employee be continually monitored. Employers are required to take actions that will result in appropriate employee use. These actions consist of: rules with sanctions, training employees in the required use, and exercising reasonable care in monitoring the safety behavior of employees.

(g)(2)(i)

Q. What is meant by "..appropriate surveillance..."? (FR p.1240)

A. This means that employers are required to evaluate workplace conditions routinely so that they can provide additional respiratory protection or different respiratory protection, when necessary. By observing respirator use under actual workplace conditions, employers can note problems such as changes in the fit of a respirator due to protective equipment or conditions leading to skin irritation. The employer can then make adjustments to ensure that employees continue to receive appropriate respiratory protection.

(g)(2)(ii)

Q. When employees must leave the respirator use area where are they supposed to go? (FR p. 1241)

A. Employers must ensure that employees are allowed to leave the respirator use area in several circumstances. The intent of this requirement is to ensure that employees leave the area where respiratory protection is necessary when they need to remove the respirator or where it appears that the respirator is not functioning properly. The final standard stipulates that, in these circumstances, employees are to leave the "respirator use" area, which does not always equate with the work area or workplace. This language is intended to give employers the flexibility to establish safe areas in their workplaces that will minimize interruptions in work flow and production while ensuring that the area

where respirators are removed is free of respiratory hazards or contamination.

(g)(2)(iii)

Q. When do respirators have to be replaced or repaired? (FR p. 1241)

A. The employer must replace, repair, or discard a respirator that is not functioning properly. This requirement applies in addition to the provisions in paragraphs (d) and (h) of this section that address the routine replacement of respirators and respirator parts. A malfunctioning or otherwise defective respirator must be replaced or repaired before the user returns to the work area. Employees must receive the necessary protection whenever they are in a respirator use area, and employers must ensure that employees in the respirator use area are wearing respirators that are in good working order. This is a performance-oriented approach to the replacement, repair, or discarding of respirators, and focuses on the need for respirators to function properly to provide protection to employees.

(g)(3)(i)

Q. For all IDLH entry, how many employees must be located outside an IDLH atmosphere.

A. Environments containing IDLH atmospheres are frequently well-enough understood and controlled that a single standby person is adequate. In most fixed workplaces, the atmosphere is known, i.e., has been well defined either through analysis of monitoring results or through a process hazard analysis. In many industrial IDLH situations, only one respirator user is exposed to the IDLH atmosphere at a time, which means that a single standby person can easily monitor that employee's status. (when needed, the standard requires more than one employee outside) Even in situations where more than one respirator user is inside an IDLH atmosphere, a single standby person can often provide adequate communication and support. For example, in a small pump room or shed, even though two or three employees may be inside an IDLH atmosphere performing routine maintenance activities such as changing pump seals, one standby person can observe and communicate with all of them. In this type of situation, one standby person is adequate and appropriate, as long as the employee(s) outside is able to perform an effective rescue..

There are instances where more than one standby person is needed, however. The requirement for standby personnel is performance-oriented: “one employee or, when needed, more than one employee must be located outside the IDLH atmosphere.” For example, to clean and paint the interior of a multi-level, multi-portal water tower, a process that often generates a deadly atmosphere as a result of cleaning solution and paint solvent vapors, employees often enter the tower through different portals to work on different levels. In such a situation, there will be a need for good communications at each entry portal, and more than one standby person would be needed to maintain adequate communication and accessibility.

(g)(3)(iv)

Q. What does OSHA require in the situation where the standby person must enter an IDLH atmosphere to provide emergency rescue? (FR p.1244)

A. The employer has flexibility in determining who will respond to such emergency rescue situations. The employer or authorized designee must be notified before the standby personnel undertake rescue activity and the employer or designee must then provide appropriate assistance for the particular situation. The employer must ensure that before entering an IDLH environment to provide emergency rescue, standby personnel notifies the employer or the employer's designee who has been authorized by the employer to provide necessary assistance that they are about to enter. The employer will have determined, in advance, as part of the written respirator program's worksite-specific procedures, the procedures that standby personnel will follow and whom they specifically need to notify in rescue situations. The employer's emergency response team may provide the necessary support, or other arrangements may have been made with local firefighting and emergency rescue personnel.

(g)(3)(v)

Q. Must the standby person(s) wait for a backup before beginning rescue operations? (FR p.1244)

A. Normally, standby personnel must contact the employer or employer's designee before undertaking any rescue activities in an IDLH atmosphere. The employer or authorized designee must take responsibility for ensuring that rescue operations are carried out appropriately, that rescuers are provided with proper respiratory equipment, and that employees are prepared to facilitate rescue attempts through proper preparation. However, the notification provision does not require standby employees to delay entry as they attempt to contact the employer or wait indefinitely for their employer or designee to respond to notification before entering the IDLH atmosphere when employees inside are in danger of succumbing and standby personnel are appropriately trained and equipped to provide assistance.

In the majority of cases, however, rescuers should not enter the IDLH environment until receiving some response to the notification that rescue is necessary, i.e., the employer or designee should know that the rescuers are entering, and emergency response units should be on their way to the incident.

Once the employer or designee has been notified the employer or designee who is authorized to do so must provide the necessary assistance appropriate to the situation. Such assistance does not always require that additional standby personnel enter the hazardous atmosphere. In some cases, the appropriate assistance could be, for example, the provision of emergency medical treatment. If standby employees do need to enter the

hazardous environment to perform rescue operations, however, the employer must ensure that those rescuers are fully protected.

(g)(3)(vi)

Q. What equipment must be available for rescue efforts? (FR p.1245)

A. Standby personnel must have appropriate equipment to minimize the danger to themselves during rescue efforts. They must be equipped with pressure demand or other positive pressure SCBA, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA. The requirements that address appropriate retrieval equipment and means of rescue are written in performance-based language. Established rescue procedures are well-known, and retrieval equipment is readily available. Retrieval equipment must be used unless its use would increase the overall risk associated with entry into or rescue from the IDLH environment. Situations exist in which retrieval lines (harnesses, wristlets, anklets) may pose an entanglement problem, especially in areas in which air lines or electrical cords are present in the work areas in which the IDLH atmosphere occurs. Most of the time, however, rescue with retrieval equipment is effective, and much safer for the rescuers.

(g)(4)

Q. Who must comply with "two-in, two-out"?

A. The Federal Respiratory Protection Standard applies directly to private sector workers engaged in firefighting, including those working in industrial fire brigades and private incorporated fire companies, and to Federal employees covered under Section 19 of the Occupational Safety and Health Act. Federal OSHA's jurisdiction does not extend to employees of State and local governments; however, States that have chosen to operate OSHA-approved occupational safety and health State plans are required to extend their jurisdiction to these workers. Therefore, **public sector firefighters are covered only in the 23 States and two Territories which have chosen to operate their own OSHA-approved State programs**. These States and Territories are: Alaska, Arizona, California, Connecticut, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington and Wyoming.

States with OSHA plans are required to adopt a standard at least as effective as the Federal standard within six months of Federal promulgation and must cover public sector employees. **Coverage of volunteers varies by State and depends on State law.** State and local government employees in States which do not operate OSHA-approved State plans are not covered by these requirements, unless the requirements are voluntarily adopted for local applicability.

Q. What is the difference between incipient stage firefighting and interior structural firefighting? How can one tell when the"two-in, two-out" requirement takes effect?

A. The "two-in, two-out" requirement does not take effect until firefighters begin to perform interior structural firefighting. Interior structural firefighting is firefighting to control or extinguish a fire in an advanced stage of burning inside a building. Because the fire is producing large amounts of smoke, heat and toxic products of combustion, exposure of firefighters is extremely hazardous and is considered an "immediately dangerous to life or health" (IDLH) environment.

Incipient stage firefighting, on the other hand, involves the control or extinguishment of a fire in the initial or beginning stage, using portable fire extinguishers or small hose lines without the need for personal protective equipment. Interior incipient fires expose firefighters to limited amounts of smoke and heat. Firefighters can approach and extinguish these fires without the need for self-contained breathing apparatus and, sometimes, without turnout gear.

It is the incident commander's responsibility, based on training and experience, to judge whether a fire is an interior structural fire, and how it will be attacked.

Q. If firefighters put on respiratory protection, does that mean that an Immediately Dangerous to Life or Health (IDLH) atmosphere exists, and that "two-in, two-out" applies?

A. Not necessarily. **Respiratory protection and "two-in, two-out" are required in all interior structural firefighting situations. Interior structural fires are considered to be IDLH atmospheres**. However, the use of respiratory protection does not, by itself, invoke the requirements associated with an IDLH atmosphere. The use of a self-contained breathing apparatus could be unrelated to exposure to an IDLH atmosphere associated with an interior structural fire. For example, many fire companies require that firefighters put on respiratory protection while on their way to the fire. It may later be determined that the fire is still in the incipient stage, and therefore not an IDLH atmosphere. It is only when firefighters are engaged in interior structural firefighting that the use of respirators is mandatory and the "two-in, two-out" requirement applies.

Q. Must the number of firefighters stationed outside always equal the number of firefighters sent inside to conduct interior structural firefighting?

A. No. There must always be at least two firefighters stationed outside during interior

structural firefighting, prepared to enter if necessary to rescue the firefighters inside. However, the incident commander has the flexibility to determine whether more than two outside firefighters are necessary when more than two firefighters go inside. In a situation where the burning structure is very large, additional outside firefighters may be warranted to ensure effective assistance and rescue. For example, where the firefighting involves entry from different locations or levels, two outside firefighters may have to be stationed at each point of entry.

Q. What duties may the outside firefighters perform in addition to monitoring the inside firefighters?

A. One of the outside firefighters must actively monitor the status of the inside firefighters and may not be assigned additional duties. The second outside firefighter may be involved in a wide variety of activities. Both of the outside personnel must be able to provide support and assistance to the two interior firefighters; any assignment of additional duties for the second firefighter must be weighed against the potential for interference with this requirement. OSHA cannot describe all specific compliance scenarios with a performance oriented standard. From OSHA's perspective, proper assignment of firefighting activities at an interior structural fire must be determined on a case-by-case basis and are dependent on the existing firefighting situation.

Some examples of other activities or duties that are commonly performed by firefighters and may be performed by one of the outside team members include: pump operations, incident command, the feeding and direction of hose to the entry team, hydrant operations, and outside hose line operation. Factors such as the distance of an individual from the entry point into the involved structure, training and equipment provided to the individual, and the existence of an immediate communication link between the individual and the firefighters entering the structure should be considered in making the assignment. Outside firefighters assigned additional duties must be able to immediately discontinue their other work assignments to perform rescue. Rescue and personal protective equipment must be available to outside firefighters so that there will be no delay in performing rescues. Compliance will always depend on consideration of all the worksite variables and conditions, and the judgement of the incident commander is critical in meeting this performance standard.

Q. Must firefighters wait until four workers are assembled before attempting to rescue victims inside the burning structure?

A. No. There is an explicit exemption in the respiratory protection standard that if life is in jeopardy, the “two-in, two-out” requirement is waived. The incident commander and the

firefighters at the scene must decide whether the risks posed by entering an interior structural fire prior to the assembly of at least four firefighters is outweighed by the need to rescue victims who are at risk of death or serious physical harm. There is no violation of the standard under rescue circumstances.

Q. Is "two-in, two-out" a staffing requirement?

A. No. The "two-in, two-out" requirement is and has been standard practice in the firefighting community for many years, and reflects only the number of firefighters who must be on the scene prior to initiating the interior attack on an interior structural fire. "Two-in, two-out" is strongly supported by an analysis of information from the International Association of Fire Fighters, the National Fire Protection Association, and existing OSHA standards and interpretations. OSHA's respiratory protection standard codifies recommended practice. It does not require fire departments to hire additional firefighters; it does not require four-person fire companies; it does not require four persons on a fire truck. Most fire departments have more than four firefighters and can assemble the numbers required on the scene by waiting for others to arrive. During this time the fire may be attacked from the outside, sizing-up operations may occur, and emergency rescue necessary to save lives may take place. Additional staff can be assembled by such means as calling for a second fire company at the scene, calling in additional firefighters who are on standby, and calling on other nearby fire departments when necessary. It is anticipated that small fire departments may rely on "mutual aid" agreements with neighboring jurisdictions to supply additional firefighters to assist with interior structural firefighting, if that is necessary to ensure compliance with "two-in, two-out." The intent of the "two-in, two-out" rule is a worker safety practice requirement, not a staffing requirement.

Paragraph (h) Maintenance and Care of Respirators

(h)(1)

Q. Does OSHA require the employer to provide company time to employees to clean and maintain the respirators assigned for their exclusive use?(FR p. 1250)

A. The employer is allowed to choose the cleaning and disinfecting program the best meets the requirements of the standard and the particular circumstances of the workplace. It is OSHA policy that if the employer elects to have employees clean their own respirators, the employer must provide the cleaning and disinfecting equipment, supplies, and facilities, as well as time for the job to be done. Failure to provide the equipment, supplies, facilities, or the on-the-job time to clean the respirators would be a violation of paragraph (h)(1).

(h)(1)

Q. If an employer provides a respirator to an employee at the request of the employee(volunteer use) or in the event that the employee brings his/her own respirator into the workplace (volunteer use) must the respirator be cleaned and disinfected?

A. Yes, cleaning and disinfection would be necessary so as to prevent the use of the respirator from presenting a health hazard to the employee using it. For example, an unsanitary respirator may pose a skin disorder to the employee wearing it.

(h)(1)

Q. Can alcohol wipes be used to clean the inside of the face pieces of respirators?

A. Yes, if permitted by the manufacturer of the respirator. It should be noted that Appendix B-2 of the standard has guidance on appropriate respirator cleaning and disinfecting procedures.

(h)(1)

Q. What is meant by “equivalent effectiveness” when comparing cleaning and disinfection procedures found in Appendix B-2 versus the procedures recommended by the respirator manufacturer? (FR p.1248)

A. “Equivalent effectiveness” simply means that the procedures used must accomplish the objectives set forth in Appendix B-2, i.e., must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

(h)(1)

Q. Who can clean and disinfect respirators? (FR p. 1249)

A. The employer is allowed to choose the cleaning and disinfecting program the best meets the requirements of the standard and the particular circumstances of the workplace. In other words, the employer can have respirators cleaned and repaired in a centralized type operation where respirators are passed out to employees OR the employer may require the respirator user to handle all cleaning and respirator maintenance functions. What ever method the employer chooses, respirator cleaning, disinfection, and repair activities must be performed by employees who are adequately trained in the proper respirator care procedures.

(h)(1)(i)

Q. Did OSHA intend a set time or frequency when it stated that respirators that are issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintain in a sanitary condition?(FR p. 1249)

A. The standard is written in performance language, so the decisions must be made on a case-by-case basis. The employer should pay particular attention to where the respirator is stored during breaks and lunch and the extent to which the respirator is protected between each wearing, to determine if the respirator is maintained in a sanitary condition. A respirator worn by employees working in a very dusty environment and left hanging on a nail in the workplace would need cleaning each time it is donned. The respirator must be checked and cleaned as often as necessary to ensure that the respirator continues to function properly.

(h)(2)(i)

Q. Is there any additional guidance as to what constitutes acceptable respirator storage conditions besides what is required in subparagraph (h)(2)(i) on storage?

A. Questions about appropriate storage of respirators, such as protection against excessive moisture, extreme temperatures, damaging chemicals, etc. can best be addressed by the employer contacting the respirator manufacturer to determine what if any additional specific recommendations are warranted for the workplace-specific use of the respirator(s).

(h)(2)(ii)(B)

Q. What is acceptable storage of emergency respirators such as SCBA's used on fire trucks for firefighters? (FR p. 1250)

A. The standard allows emergency use respirators to be stored in compartments OR in covers, both of which must be clearly marked as containing the emergency respirators. Brackets with covers that are mounted on a wall or to a stable surface (e.g. on a fire

truck) may be used to store emergency respirators so long as the respirator is secured and covered to prevent damage when not in use.

(h)(3)

Q. What constitutes a minimally acceptable inspection of a respirator? (FR p. 1251)

A. For ALL respirators the employer must ensure that the following items are included in the visual inspection : a check of respirator function, tightness of connections and the condition of the various parts, including but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters, or filters, and a check of the respirator's elastic parts for pliability and signs of deterioration. At the minimum, the employer should follow the manufacturer's instructions that accompany the respirator.

Self-contained breathing apparatus (SCBA) type respirators require an inspection of the air and oxygen cylinders to assure that the cylinder pressure is maintained at or above 90% of the manufacturer's recommended pressure level and that the regulator and low pressure warning devices function properly. To assure that both the regulator and low pressure warning devices function properly the warning device must be activated and heard by the person performing the inspection.

For respirators that are available for emergency use: the employer must certify in writing, on a tag or label attached to the storage compartment, that an inspection was performed and include, the name (or signature) of the person who made the inspection, the findings of the inspection, any remedial action, and a serial number or other means of identifying the inspected respirator.

(h)(3)(i)(B) & (h)(3)(ii)(A)

Q. What is meant by "a check of respirator function" under paragraph (h)(3) dealing with respirator inspection?(FR p. 1251)

A. OSHA does not intend that the respirator be physically placed on the employee to ensure that it is working properly. Visual inspection can detect factors that would interfere with proper performance, e.g. distortion in shape (often the result of improper storage), missing or loose components, blockage, and improper connections. Alarms can also be examined without actually putting the respirator on the employee. In addition, examining elastic parts for pliability and signs of deterioration, as required in (h)(3)(ii)(B), can be performed without wearing the respirator.

(h)(3)(i)(C)

Q. What does OSHA require for the inspection of emergency escape-only type respirators?(FR p. 1251)

A. Emergency escape-only respirators must be inspected before being carried into the workplace for use. These types of respirators (e.g. mouthbit type respirators) are carried in by the individual worker into the workplace for personal use in an emergency, and must be inspected for proper condition prior to being carried into the workplace. The monthly inspections are no longer required.

(h)(3)(iii)

Q. Why was **90%** "of manufacturer's recommended pressure level" chosen as the minimum pressure level for SCBA's cylinders? (FR p. 1251)

A. OSHA selected the **90%** level to "ensure that sufficient air remains in the cylinder to allow emergency responders to perform their required duties in the contaminated or oxygen-deficient atmosphere, and still have air available to escape from these conditions." The **90%** level was also recommended by the American Industrial Hygiene Association.

(h)(3)(iii)

Q. Do the air or oxygen cylinders for SCBA's have to be inspected monthly even if they are not available for immediate use?

A. No, as long as the cylinders are out-of-service and not available for employees to use under any circumstances.

(h)(3)(iv)(A)&(B)

Q. Do the certification and tag or label requirements of these paragraphs apply to emergency escape type respirators that are stored in the workplace?

A. Yes.

(h)(4)

A. What is an example of a way of ensuring that respirators that fail an inspection or are otherwise found to be defective are removed from service and not used?(FR p.1252)

Q. The employer could use a tag system where a tag stating “out of service” is placed on the respirator to help ensure that a defective respirator is not inadvertently used.

(h)(4)(i)

Q. What would constitute an "appropriately trained" person who is responsible for performing repairs or adjustments to respirators?(FR p. 1252)

A. The use of the term ‘appropriately trained’ refers to an individual who has received training from the manufacturer or otherwise has demonstrated that he/she has the skills to return the respirator to its original state of effectiveness.

(h)(4)(iii)

Q. Can any employee repair the respirator reducing or admission valves?

A. No. These are two types of valves found in atmosphere-supplying respirators. They are used in conjunction with the respirator's regulator to provide the respirator wearer with proper pressure and flow of air supply. These valves serve such a critical function and the respirator standard requires that these parts be returned to the manufacturer or given to an appropriately trained technician for adjustment or repair.

Paragraph (i) Breathing air quality and use.

(i)(1)

Q. What are employers required to do to ensure that breathing air is of high purity? (FR p. 1252)

A. Paragraph(i) provides standard references which establish parameters for breathing air quality. Compressed and liquid oxygen are required to meet the specifications for breathing air outlined by the United States Pharmacopoeia (USP); compressed air, at a minimum, is required to meet the specifications outlined in the ANSI/Compressed Gas Association (CGA) Commodity Specification for Air, G-7.1-1989 for Grade D breathing air. Cylinders of purchased breathing air must have a certificate of analysis for purchased breathing air quality obtained through the supplier.

Q. What guidance is available for determining adequate air quantity and air flow for atmosphere-supplying respirators?

A. The NIOSH respirator certification standard, 42 CFR Part 84 can provide additional guidance. Compressed air sources must have the capacity to provide an adequate supply of breathing air. Since each airline respirator requires a minimum of 4-6 cubic feet per minute (cfm) air, compressed air sources should be sized to provide at least this amount of air for each respirator at the operating pressure specified for the particular respirator(s) in use. Proper air flow can then be verified by monitoring airline pressure. The NIOSH respirator certification process establishes the proper air pressure required for each particular respirator and airline combination. If the air pressure is within the proper range, the air flow should also be correct. For this reason, an air pressure gauge should be installed at the point where the airlines are connected to the air supply manifold.

Q. What are the minimum specifications for Grade D breathing air? (FR p. 1252 - 1253)

A. The ANSI/CGA G.7-1 - 1989 specifies the contents of Grade D breathing air as: oxygen (volume/volume) of 19.5 to 23.5 %; hydrocarbon (condensed) of 5 mg/m^3 of air or less; carbon monoxide of 10 parts per million (ppm) or less; carbon dioxide of 1,000 ppm or less; and a lack of a noticeable odor.

(i)(2)

Q. Why is the use of compressed oxygen or utility oxygen prohibited in atmosphere-supplying respirator systems which have previously used compressed air? (FR p. 1253)

A. The use of compressed air can introduce oil and grease into the air lines. This provision is intended to reduce the potential for fire and explosion which can occur where high pressure oxygen comes in contact with residual oil or grease.

(i)(3)

Q. When may oxygen in greater concentrations than 23.5 % be used in supplied air systems? (FR p. 1253)

A. To avoid the potential for fire and explosions, oxygen in greater concentration than 23.5% may only be used with equipment designed specifically for oxygen service or distribution.

(i)(4)(i)

Q. What regulations apply to the handling, testing, and storage of cylinders used to supply breathing air to respirators? (FR p. 1253)

A. Cylinders must be constructed, tested and maintained in accordance with the Shipping Container Specification Regulations of the Department of Transportation (DOT) 49 CFR Parts 173 and 178. These regulations are also required for NIOSH certification. The in-plant handling and storage of compressed gas cylinders must be in accordance with 29 CFR 1910.101(b) which incorporates by reference CGA Pamphlet P-1-1965.
(Note: Air receivers used to supply breathing air must be maintained in accordance with 29 CFR 1910.169 Air receivers.)

(i)(4)(ii)

Q. Is the employer required to obtain a certificate of analysis from the supplier for every cylinder of breathing air that is purchased, documenting that the contents and quality meet the requirements of Grade D breathing air? (FR p. 1253)

A. No, the supplier could provide one certificate for a lot or batch of cylinders that were all filled the same day, using the same source.

(i)(4)(iii)

Q. If an air compressor used to fill breathing air cylinders does not meet the minimum moisture content in the cylinders(not to exceed the dew point of -50" F/-45.6" C at 1 atmosphere pressure) will OSHA require the facility to purchase a new compressor to meet this specification?

A. This requirement prevents respirator valves from freezing which can occur when excess moisture accumulates on the valves. Most compressors can be retrofitted with specially designed water traps similar to those used for air compressors supplying self-contained

underwater breathing apparatus (SCUBA) systems. Contact the manufacturer of the compressor to determine if this option is available.

(i)(5)

Q. Are there any restrictions on the placement of compressors supplying breathing air? (FR p. 1254)

A. Yes. The location of the compressor intake is critical to the purity of air supplied to the respirator user. The compressor must be located in an area uncontaminated by either combustion exhaust gases produced by vehicles or the compressor motor itself (if applicable), or by other gases from plant processes.

Q. OSHA requires compressors to be equipped with suitable in-line air-purifying sorbent beds and filters to ensure breathing air quality. What does "suitable" mean? Do all compressors which supply breathing air have to be equipped with sorbent beds and filters? (FR p. 1254)

A. The term suitable means that the compressor is capable of delivering a continuous supply of Grade D breathing air. On some compressors, especially those that are oil-lubricated, in-line sorbent beds and filters will need to be installed and maintained to ensure Grade D air. To further ensure breathing air quality, the air-purifying sorbent beds and filters must be changed according to the manufacturers' instructions. Other compressors, such as some ambient air movers, may be capable of delivering Grade D air without the addition of sorbent beds and filters.

Q. Tags that contain the signature of the person authorized by the employer to change the in-line sorbent beds and filters and the date of the change shall be maintained at the compressor. Must all the tags be retained under the OSHA recordkeeping requirements? (FR p.1254 - 1255)

A. No, only the tag containing the most recent change must be kept at the compressor.

(i)(6) & (7)

Q. Do all air compressors used to supply breathing air have to have a carbon monoxide alarm? (FR p. 1255 - 1257)

A. A compressor that is not oil lubricated is not required to have an alarm. However, the employer must ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm. Methods for ensuring that the carbon monoxide level does not exceed 10 ppm include the placement of the air intake for the compressor in an area known to be free

from contaminants, frequent or continuous monitoring of the breathing air supply, the use of carbon monoxide filters, or the use of high temperature alarms or shut off devices where necessary.

For an oil lubricated air compressor carbon monoxide can be produced where oil enters into the compression chamber and is partially combusted. Carbon monoxide can also enter the air intake for the compressor if the intake is not properly located. This type of compressor must have either a carbon monoxide alarm, high temperature alarm, or both. If only a high temperature alarm is used then the breathing air must be tested for the presence of carbon monoxide at intervals sufficient to ensure that carbon monoxide levels do not exceed 10 ppm.

Q. Is it required for an employer to monitor for the presence of carbon monoxide if the employer is using a oil-lubricated compressor equipped with a high temperature alarm or automatic shutoff device?

A. Yes, carbon monoxide which enters the compressor due to an improperly located air intake would not be detected by a high temperature alarm. Also, the location of high temperature alarms on air compressors can vary and are typically placed to protect the equipment from damage due to overheating. When the alarm sounds, depends on the location of the alarm sensor.

Q. What type of testing equipment is available to test for the presence of carbon monoxide?

A. Common methods of measuring carbon monoxide include the use of chemical detector tubes or direct reading instruments employing electrochemical sensors. When using a detector tube to test for the presence of carbon monoxide, either a “grab” sample of the breathing air may be tested or the air may be sampled directly using a specialized kit available by several manufacturers. The tube reading error for most low range carbon monoxide detector tubes ranges from 10 - 15 %. Electrochemical sensors can be used for periodic and continuous monitoring of breathing air for the level of carbon monoxide. These sensors must be calibrated periodically (typically on a monthly basis) to perform accurately. The measurement error reported for most electrochemical sensors is 5%.

Q. May the carbon monoxide filters with color-change indicators which convert carbon monoxide to carbon dioxide be used to detect the presence of carbon monoxide in breathing air? (FR p. 1255 - 1256)

A. No, the color change in the indicator is a warning of the presence of moisture in the

breathing air that is trapped in the filter. Moisture can render the filter ineffective. Thus, the color-change indicator cannot be used to detect the presence of carbon monoxide.

Q. How often should the employer test breathing air which is supplied by a compressor for the presence of carbon monoxide?

A. The frequency of monitoring will depend on the breathing air system in place in the facility, adherence to required maintenance procedures, and the location of the air intake for the compressor. For example, keeping in mind that a given measurement represents only that instant in time and must be representative of long-term air quality, periodic monitoring may be appropriate in situations where the compressor is well maintained and the air intake for the compressor is located in an area free from contaminants. In contrast, continuous monitoring would be warranted for older compressors where oil blow-by is more likely due to piston ring and cylinder wear, or in situations where rental compressors are used and/or the maintenance history is not known.

Q. Under the previous standard, OSHA required that the compressor be equipped with a "receiver of sufficient capacity to enable the respirator wearer to escape from a contaminated atmosphere in the event of compressor failure". Why was this provision dropped from the new standard? (FR p. 1254)

A. Paragraph (d)(2) of the new standard requires that respirators used in IDLH situations be either a SCBA or an airline respirator equipped with an auxiliary escape air supply. This requirement eliminates the need for a compressed air receiver. (Ambient air movers, small compressors that are not oil lubricated and have no air receiver, are considered to be compressors and fall under the requirements of paragraph (i)).

(i)(8)

Q. May the same air line couplings be used on both breathing air lines and worksite airlines used to pneumatically power other industrial equipment ? (FR p. 1257)

A. No, all couplings for breathing air must be incompatible with couplings and outlets for non-respirable compressed air and other gases used at your workplace. This provision is intended to prevent the cross-contamination and introduction of hazardous contaminants into breathing air lines.

Q. May nitrogen be used to purge or blow out the breathing air lines ? (FR p. 1257)

A. No, to prevent the contamination of breathing air lines with a non-respirable gas, the

standard specifically prohibits the introduction of an asphyxiating substance such as nitrogen into breathing air lines under any circumstance.

(i)(9)

Q. May breathing gas containers be labeled in accordance with the American National Standard (ANSI) Method of Marking Portable Compressed Gas Containers to Identify the Material Contained, Z48.1-1954(Revised 1971)? (FR p. 1257)

A. Yes, the standard requires that breathing gas containers be marked in accordance with the NIOSH respirator certification standard, 42 CFR Part 84. The ANSI standard as well as the Federal Specification BB-A-1034a, 1968, and the Federal Specification GC-13-00676b, 1976 have been incorporated by reference by NIOSH in 42 CFR Part 84.

Paragraph (j) Identification of filters, cartridges, and canisters

Q. Why does OSHA require that the employer ensure that the NIOSH label is not removed, obscured, or defaced while in service?

A. The NIOSH label serves several purposes. It ensures selection of appropriate filters for the contaminants encountered in the workplace and permits the employee using the respirator to check and confirm that the respirator has the appropriate filters before the respirator is used. Color coding and labeling allow fellow employees, supervisors, and the respirator program administrator to readily determine that the employee is using the appropriate filters.

Q. Would dust, dirt, paint overspray, or other substances on the label cause the employer to be cited if the label is still legible?

A. No. The label only needs to be legible. The employer may adopt whatever procedures are appropriate to ensure that the label remains on the filter and is not removed, defaced, or obscured during respirator usage.

Paragraph(k) Training and Information

(k) Introduction

Q. Is the annual retraining required by the standard expected to be a full retraining exercise?

A. The annual retraining must address each element required by this section. Emphasis in the training elements can vary based on the need of the worksite and knowledge of the workers.

Q. Does the standard specify the format or method of training?

A. The standard is performance oriented with respect to the format of training. The employer may use whichever training method is effective for the particular worksite provided the method addresses the required topics. Thus, the employer may use audiovisual and slide presentations, classroom discussion, informal discussions during safety meetings, etc., or a combination of these methods.

Q. May an employer use computer-mediated training?

A. Yes. However the employer must ensure that training is conducted in a manner that is understandable to the employee.

(k)(1)

Q. How can the employer comply with the section (k)(1) requirement that the employer ensure that the employee demonstrates an understanding of the information communicated during the training program ?

A. The employer can comply with this provision by asking the employee, either in writing or orally, about the required information and by observing the employee's hands-on use of respirators. The employer is not required to have written documentation.

(k)(1)(i)

Q. What type of information would be discussed when a employer explains to the employee why the respirator is necessary, as required in section (k)(1)(i) of the standard?

A. The type of information involved would include the nature, extent, and effects of the respiratory hazards. This includes identification of the hazardous chemicals involved, what contaminant levels the employee would breathe if no respiratory protection were used, and what the potential health effects of that exposure would be. Training

concerning the health effects of hazardous chemicals is also required under the Hazard Communication standard. Training under the Hazard Communication standard could help satisfy this portion of the training under the respirator standard.

(k)(1)(ii)

Q. What type of information would the employer transmit to the employee concerning the limitations and the capabilities of the respirator, as required in section (k)(1)(ii) of the standard?

A. A discussion of the limitations and capabilities of the respirator would address how the respirator operates. This would include an explanation of how the respirator provides protection by filtering the air, absorbing the vapor, or providing clean air from an uncontaminated source. Where appropriate, it should also include limitations on the equipment such as prohibitions against using air-purifying respirators in case of an emergency in IDLH atmosphere, and an explanation of why they should not be used in such situations.

(k)(1)(iii)

Q. What type of information must the employer provide concerning respirator use in emergency situations, as required in 29 CFR 1910.134(k)(1)(iii)?

A. The training program must discuss different emergency situations as appropriate to the facility such as respirator malfunctions, changes in work routines, and emergency situations that require the use of a different respirator.

(k)(1)(iv)

Q. What type of information would the employer transmit to the employee concerning how to inspect and check the respirator?

A. This would include the steps that employees are to follow if they discover any problems during the inspection, i.e., to whom they should report problems and where they can obtain replacement equipment if necessary. If the employer routinely has extensive inspections done by separate personnel then the standard does not require that individual respirator wearers be trained how to do full inspections. Training the employees in only those parts of the inspection process that they are expected to do is sufficient. The training must also include the procedures for donning and removing the respirator, checking the fit and seals, and using the respirator.

Employees are to be trained in how to check the respirator seal. Employers must train employees in the methods set forth in Appendix B or in alternative methods that are equally effective.

(k)(1)(v)

Q. How extensively must the employees be trained concerning the maintenance and storage of respirators?

A. Where employees perform some or all respirator maintenance and store respirators while not in use, detailed training in maintenance and storage procedures may be necessary. In other facilities, where specific personnel or central repair facilities are assigned to perform these activities, most employees may need only to be informed of the maintenance and storage procedures without having to learn significant technical information.

(k)(1)(vi)

Q. What type of information would the employer provide concerning recognition of the medical signs and symptoms that may limit or prevent the effective use of respirators as required in section (k)(1)(vi) of the standard?

A. The employer need only give employees medical information sufficient for them to recognize the symptoms of medical conditions that may affect their use of respirators. Examples of medical conditions and signs and symptoms that may affect an employee's ability to use a respirator are provided in Appendix C of the standard.

(k)(1)(vii)

Q. How extensive must the employer train employees on the general requirements of the standard as specified in 29 CFR 1910.134(k)(1)(vii)?

A. The discussion does not need to focus on all the details of the standard but could, for example, simply inform employees that employers are obligated to develop a written program, properly select respirators, evaluate respirator use, correct deficiencies in respirator use, conduct medical evaluations, provide for the maintenance, storage, and cleaning of respirators, and retain and provide access to specific records.

(k)(2)

Q. Section (k)(2) requires that the employer conduct training in a manner that is understandable to employees. How is the employer to accomplish this?

A. Employers are to develop training programs suitable to the employee's educational level and language background.

(k)(4)

Q. Under what circumstances is an employer allowed to wait before repeating training for a new employee?

A. This standard provides for limited "portability" of training. The employer may wait up to 12 months from an employee's previous training, if the employee demonstrates sufficient knowledge concerning the training elements in section (k)(1). This may be accomplished through a discussion with the employee and the previous employer.

(k)(5)

Q. Employees who are emergency responders as well as other employees who may use SCBAs may need training more than annually. Is this addressed in the standard?

A. The employer must assure that an employee can demonstrate knowledge of the elements specified in (k)(1)(i) through (vii). Employees who can not demonstrate such knowledge are to receive additional training even if they have received training within the last 12 months.

Q. Section (k)(5) requires retraining annually and in certain situations. Explain the certain situations.

A. The training for those situations is different from the annual retraining provisions of the standard. Retraining is needed only on those elements for which there exists a need to provide the retraining. For example, retraining with respect to the nature of the hazard may be necessary because of an increase in the workplace level of a hazardous substance. Retraining under section (k)(5) is required if a change in the written respirator program renders one or more of the elements listed in paragraph (k)(1) obsolete, thus requiring retraining in the elements affected. Retraining is also required on any program element of the section that is not sufficiently understood by the employee.

(k)(6)

Q. How often is the employer required to provide information to employees who voluntarily use respirators that are not required to be worn by the standard or by the employer?

A. Section (k)(6) requires that the employer initially provide the basic advisory information in Appendix D to employees who voluntarily use respirators that are not required by OSHA standards or the employer. Appendix D, a mandatory appendix may be used or alternatively, the employer may develop material that is equivalent in content to this appendix. This information may be transmitted either in written form or verbally. This information is not required to be provided other than initially.

Paragraph (l) Program Evaluation

(l)(1)

Q. How often should the respirator program be re-evaluated? (FR p. 1262)

A. Employers must review the written program and revise, as necessary, the written program elements specified in paragraph (c)(1) when workplace conditions affecting the use of respirators change. An annual written program review is not required, but instead a program review and revision is required as necessary based on workplace changes. Evaluation frequency is to be based on program complexity and on factors such as the nature and extent of workplace hazards, types of respirators in use, variability of workplace processes and operations, number of respirator users, and worker experience in the use of respirators. The employer must review respirator use in the workplace with sufficient frequency to ensure that continuous, successful implementation of all written respirator program elements prescribed under paragraph (c) is being achieved.

(l)(1)

Q. What must be reevaluated? (FR p. 1263)

A. The areas to be reevaluated include: whether the respirator program is achieving proper respirator fit, whether the appropriate respirators are being selected, and the proper use and maintenance of respirators. If respirators are not being used properly, the employer is required to correct any problems found during the assessment.

(l)(2)

Q. What type of information would be obtained from employees in the periodic assessment of the respirator program? (FR p. 1262)

A. The type of information involved includes difficulty with breathing or fatigue during respirator use, whether the respirator interferes with hearing, vision, communication, or job performance or restricts movement, whether the respirator causes discomfort, and whether the employee has confidence in the respirator's effectiveness. The employer must correct any problems that are revealed by the evaluation.

(l)(2)

Q. Is the presence of medical conditions part of the program evaluation? (FR p. 1264)

A. Identification of respirator-related medical conditions, such as skin irritation, would properly be part of the program evaluation. Employees identified during the evaluation as having skin irritation can either be referred to the PLHCP or be advised by the program

administrator about the need to leave the respirator use area as necessary to wash the face and face piece, as permitted by paragraph (g). It should be noted that final paragraph (e)(7)(iii) requires medical evaluation if observations made during the program evaluation indicate that such evaluation is necessary.

Paragraph (p) Revisions to Specific OSHA Standards

Q. Why is OSHA revising the respirator-related provisions of existing standards? (FR p. 1265)

A. The primary purpose of revising the respirator-related provisions of existing standards is to be consistent with OSHA's respiratory protection requirements. OSHA believes that uniformity will improve compliance with respiratory requirements, reduce the regulatory burden on employers, and enhance the protection for workers who use respiratory protection. Where appropriate, the respiratory protection requirements of future standards will refer to provisions of revised 29 CFR 1910.134 as well.

Q. Which specific standards are affected by the revision of 29 CFR 1910.134? (FR p. 1265, 1266)

A. Both industry-specific and substance-specific standards are affected by this revision. Specific standards that reference the Bureau of Mines and MSHA/NIOSH 30 CFR Part 11 for respirator certification or the ANSI Z88.2 - 1969 for respirator use requirements are updated to the recently published NIOSH regulation at 42 CFR Part 84 and the revised 29 CFR 1910.134 respectively. Standards that reflect this revision include 29 CFR 1910.94, 1910.111, 1910.156, 1910.252, 1910.261, 1926.57, and 1926.800.

In general, substance-specific standards that have provisions addressing respirator use, selection, and fit testing now reference the corresponding provisions of the revised 29 CFR 1910.134 (paragraph (b)Definitions; paragraph (c) Respiratory protection program; certain sections of paragraph (d) Selection of respirators; paragraph (f) Fit testing; paragraph (g) Use of respirators; paragraph (h) Maintenance and care of respirators; paragraph (i) Breathing air quality; paragraph (j) Identification of filters, cartridges, and canisters; paragraph (k) Training and information; paragraph (l) Program evaluation; and paragraph (m) Recordkeeping). Standards which reflect this revision include 29 CFR 1910.94, 1910.1001, 1910.1003 (this standard also references paragraph (e), the provision for medical evaluation), 1910.1017, 1910.1018, 1910.1025, 1910.1027, 1910.1028, 1910.1029, 1910.1043, 1910.1044, 1910.1045, 1910.1047, 1910.1048, 1910.1050, 1910.1051, 1910.1052, 1926.57, 1926.60, 1926.62, 1926.1101, and 1926.1127.

Q. Which portions of revised 29 CFR 1910.134 paragraph (d) have not been incorporated into the substance-specific standards? (FR p. 1267)

A. Revised paragraphs (d)(1)(iii) & (iv) and (d)(3) of 29 CFR 1910.134 have not been incorporated into the 13 Carcinogens standard, 29 CFR 1910.1003. In this standard there are no permissible exposure limits or other exposure criteria relevant to respirator

selection. In addition, paragraph (d)(1)(iii) of the revised 29 CFR 1910.134 has not been incorporated into any of the substance-specific standards. This paragraph requires employers to estimate exposures for respirator selection. The substance-specific standards already have requirements for exposure assessments that are more specific than those of paragraph (d)(1)(iii). Also, paragraphs (d)(3)(iii)(B)(1) and (2) of revised 29 CFR 1910.134 have not been incorporated into those substance-specific standards that already contain requirements for cartridge- and canister-change schedules (Vinyl Chloride, Benzene, Acrylonitrile, Formaldehyde, and 1,3-Butadiene). The change schedules in these substance-specific standards were based on the chemistry of the substances, exposure conditions, and respirator type and are more specific than the general requirements found in paragraph (d)(3)(iii)(B)(1) and (2).

Q. Are the tables in the substance-specific standards that specify requirements for respiratory selection affected by the revision? (FR p. 1203 - 1204, 1266)

A. No. The tables will remain unchanged in the substance-specific standards (29 CFR 1910.1001, 1910.1017, 1910.1018, 1910.1025, 1910.1027, 1910.1028, 1910.1029, 1910.1043, 1910.1044, 1910.1045, 1910.1047, 1910.1048, 1910.1050, 1910.1051, 1910.1052, 1926.60, 1926.62, 1926.1101, and 1926.1127) until OSHA's supplemental rulemaking on assigned protection factors is completed.

Q. In standards with a fit testing requirement, what is the frequency at which employees must now be fit tested? (FR p. 1266)

A. The revised standard requires annual fit testing.

Q. Will the revision of 29 CFR 1910.134 affect the medical evaluation requirements for the substance-specific standards?

A. Only the 13 Carcinogens standard (29 CFR 1910.1003) will be affected by the medical evaluation requirements of the revised 29 CFR 1910.134. The 13 Carcinogens standard did not contain medical evaluation requirements for employees who use respirators. OSHA incorporated paragraph (e) of the revised 29 CFR 1910.134 into the 13 carcinogens standard to conform with current industry practice and facilitate compliance with the respiratory protection requirements of 29 CFR 1910.1003. The remaining substance-specific standards have provisions for medical evaluation that are unique to a particular substance and, therefore these provisions were not changed to correspond to the medical evaluation requirements of the revised Respiratory Protection standard.

Q. Will the revision of 29 CFR 1910.134 affect substance-specific standards which contain specific fit testing procedures?

A. Yes, the appendices and regulatory text addressing fit testing procedures will be removed from the affected substance-specific standards and replaced with a reference to Appendix A of the revised 29 CFR 1910.134. Substance-specific standards affected by this revision include Asbestos (29 CFR 1910.1001 and 1926.1101), Inorganic Arsenic (29 CFR 1910.1018), Lead (29 CFR 1910.1025 and 1926.62), Cadmium (29 CFR 1910.1027 and 1910.1127), Benzene (29 CFR 1910.1028), Acrylonitrile (29 CFR 1910.1045), Formaldehyde (29 CFR 1910.1048), Methylenedianiline (29 CFR 1910.1050 and 1926.60), 1,3-Butadiene (29 CFR 1910.1051), and Methylene chloride (29 CFR 1910.1052).

Note: CFR 1910.1029 (Coke Oven), CFR 1910.1043 (Cotton Dust), CFR 1910.1045 (DBCP), and CFR 1910.1047 (Ethylene Oxide) fit testing requirements have been improved with this revision.

Respirator Standard Appendix A
Fit Testing Procedures

Q. May fit testing methods not listed in this appendix be used to comply with the fit testing requirements in section (f) of the standard?

A. No. Section (f)(5) limits the acceptable fit testing methods to those listed in Appendix A.

Part I. OSHA Accepted Fit Test Protocols

Q. How many respirators must be available for an employee to choose from when picking out their respirator?

A. There must be enough models and sizes of respirators present so that the user can find a respirator that is acceptable and that fits correctly.

Q. Why isn't the grimace required for a QLFT?

A. The grimace is designed to temporarily break the face piece to face seal to test how well the respirator reseals itself if the seal is temporarily broken. A break in the seal during QLFT could cause sensory fatigue that would invalidate the results of the exercises, and if the grimace is performed as the last exercise, there will be no future testing to assess how well the respirator resealed.

B. Qualitative Fit Test Protocols (a)

Q. How can an employer ensure that persons administering the QLFT are able to make up the solutions, calibrate the equipment and perform the tests properly, recognize invalid tests and ensure that test equipment is in proper working order?

A. The employer must ensure the capabilities of the tester regardless of whether the tester works for the employer or for an outside contractor. This is a performance oriented provision giving the employer wide discretion. Some possibilities would include training an employee to perform the tests, hiring a credentialed professional to conduct the tests or learning to perform the tests and performing the tests himself or herself.

(b)(5)

Q. How can it be demonstrated that an isoamyl acetate (IAA) swab or ampule will generate a sufficient atmosphere of IAA that the swab or ampule can be used in place of the IAA soaked paper towel described in the appendix?

A. The National Bureau of Standards found that the minimum IAA concentration in the chamber using the soaked towel method is 100 parts per million during fit testing. An employer who wishes to use test swabs or ampules will have to show that the swab or ampule in use generates a similar minimum concentration. The employer may rely on data obtained from the manufacturer of the swabs or ampules as long as the employer uses the products in a way that reproduces the concentrations obtained by the manufacturer under the original test conditions. Of course, the employer could conduct studies and generate company specific data, as well.

3.(a)(4), 4.(a)(4)

Q. Does one have to use the DeVilbiss Model 40 inhalation medication nebulizer to spray the saccharin or the Bitrex test agent into the test chamber?

A. No. The wording now allows the employer to use that nebulizer or an equivalent.

Q. Since the irritant smoke method uses a toxic gas, how does OSHA intend to ensure the safety of the procedure?

A. The preamble lists a large number of presenters at the hearings that presented data that the test can be done safely. Many felt that any risk to the employee during the test is outweighed by the efficaciousness of the test in assuring adequate respirator fit. However, it is very important that testers be properly trained to carry out this procedure. The preamble points out that conducting this test improperly is a violation of the standard.

(a)(3)

Q. Why can't the irritant smoke protocol be performed in a test enclosure or hood?

A. The irritant smoke method generates hydrogen chloride, a toxic material that can cause permanent lung damage at elevated concentrations. Therefore, this test must be done in a well ventilated area so that there is no build up of the hydrogen chloride concentration. It may never be performed in a test enclosure or hood.

(b)(1)

Q. Does the irritant smoke protocol still require the use of an air pump that pumps 200 ml of air per minute through the smoke tube?

A. No. The text also allows the use of an aspirator bulb. However, the preamble states that the aspirator should be squeezed in such a manner that it pumps 200 ml per minute through the tube. The tester should know the volume of air that the aspirator aspirates with each squeeze and squeeze the bulb the number of times per minute that will make the

flow 200 ml per minute. For example, if the aspirator pumps 50 ml of air with each squeeze, the tester should squeeze the bulb 4 times per minute.

Apéndice D de la sección 1910.134 (Obligatoria) Información para empleados que utilizan respiradores cuando no lo requiere la norma

Los respiradores son un método eficaz de protección ante peligros designados cuando se seleccionan y se ponen de forma apropiada. Se aconseja el uso del respirador, inclusive en el caso de exposiciones menores al límite de exposición, con el fin de ofrecer un nivel adicional de confort y protección a los trabajadores. No obstante, si se usa un respirador inadecuadamente o no se mantiene limpio, el respirador en sí puede volverse peligroso para el trabajador. En ciertas ocasiones, los trabajadores pueden llevar respiradores para evitar exposiciones ante peligros, inclusive si el nivel de sustancia peligrosa no excede los límites establecidos por las normas de OSHA. Si su empleador provee respiradores para uso voluntario o si usted trae su propio respirador, debe seguir ciertas precauciones para asegurarse de que el respirador en sí no presenta un peligro.

Usted debe hacer lo siguiente:

1. Lea y respete todas las instrucciones provistas por el fabricante con respecto al uso, el mantenimiento, la limpieza y el cuidado, así como las advertencias acerca de las limitaciones de los respiradores.

2. Seleccione respiradores certificados para usarse como protección ante el contaminante en cuestión. El Instituto Nacional para la Seguridad y la Salud Ocupacionales, (National Institute for Occupational Safety and Health, o NIOSH por sus siglas en inglés) del Departamento de Salud y Servicios Humanos de los Estados Unidos, certifica respiradores. Una etiqueta o declaración de certificación debería estar sobre el respirador o el empaquetamiento del respirador. Dicha etiqueta le indicará para qué función se ha diseñado el respirador y cuánta protección debe brindar.

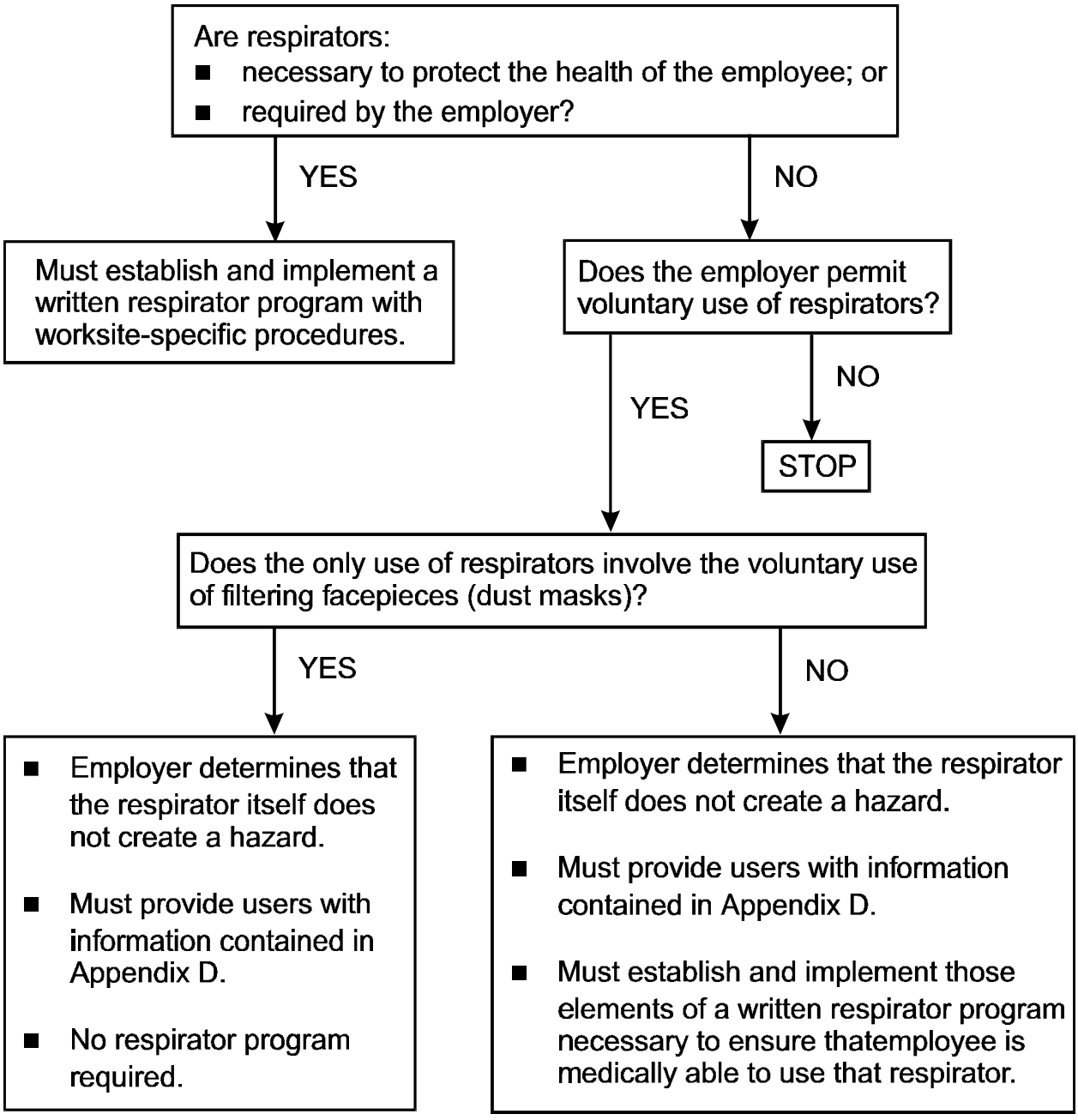
3. No se ponga el respirador dentro de atmósferas que contengan contaminantes para los que su respirador no haya sido concebido como protección, por ejemplo un respirador diseñado para filtrar partículas de polvo no puede brindar protección en contra de los gases, vapores, o partículas sólidas muy pequeñas de emisiones o humo.

4. Sepa donde está su respirador para así evitar de usar erróneamente el respirador de otra persona.

[63 FR 1152, 8 de enero de 1998; 63 FR 20098, 23 de abril de 1998]

Attachment 2

Respirator-Use Requirements Flow Chart
29 CFR 1910.134(c)



Attachment 3

STATE LICENSING BOARDS

Alabama Board of Nursing
RSA Plaza
Suite 250
220 Washington Street
Montgomery, AL 36130-3900
Tel: 205-242-4060

Alaska Board of Nursing
Department of Commerce
PO Box 110806
Division of Occupational Licensing
Juneau, AK 99811
Tel: 907-465-2544

Arizona Board of Nursing
1651 E. Morten Avenue
Suite 150
Phoenix, AZ 85020
Tel: 602-255-5092

Arkansas State Board of Nursing
University Tower Building
1123 S. University Avenue
Suite 800
Little Rock, AR 72204
Tel: 501-686-2700

California Board of Registered Nursing
400 "R" Street
Suite 4030
Sacramento, CA 95814
Tel: 916-322-3350

Colorado Board of Nursing
1560 Broadway, Suite 670
Denver, CO 80202
Tel: 303-894-2430

Connecticut Department of Health Services Nurse Licensure
150 Washington Street
Hartford, CT 06106
Tel: 203-566-1032/1036

Delaware Board of Nursing
Cannon Building
PO Box 1401
Dover, DE 19903
Tel: 302-739-4522

District of Columbia Nurses Examining Board
614 H St., NW
Room 904
Washington, DC 20001
Tel: 202-727-7454/7461

Florida Board of Nursing
111 E. Coastline Drive
Suite 516
Jacksonville, FL 32202
Tel: 904-359-6331

Georgia Board Of Nursing
166 Pryor Street,SW
Suite 400
Atlanta, Georgia 30303
Tel: 404-659-3943

Hawaii Board of Nursing
PO Box 3469
Honolulu, HI 96801
Tel: 808-586-3000

Idaho Board of Nursing
280 N. 8th Street
Suite 210
PO Box 83720
Boise, ID 83702
Tel: 208-334-3110

Illinois Department of Professional Regulation
320 W. Washington Street
Springfield, IL 62786
Tel: 217-785-0800

Indiana State Nurses Association
402 W. Washington Street
Room 041
Indianapolis, IN 46204
Tel: 317-232-2960

Iowa Board of Nursing
1223 East Court
Des Moines, IA 50319
Tel: 515-281-3255
Tel: 317-232-2960

Kansas State Board of Nursing
900 SW Jackson
Landon State Office Building
Suite 551 S
Topeka, KS 66612-1230
Tel: 913-296-4929

Kentucky Board of Nursing
312 Whittington Parkway
Suite 300
Louisville, KY 40222-5172
Tel: 502-329-7000

Louisiana Board of Nursing
912 Pere Marquette Building
150 Baronne Street
Room 912
New Orleans, LA 70112
Tel: 504-568-5464

Maine Board of Nursing
35 Anthony Avenue
State House Station 158
Augusta, ME 04333
Tel: 207-624-5275

Maryland Board of Nursing
4201 Patterson Avenue
Baltimore, MD 21215
Tel: 410-764-5124

Massachusetts Board of Registration in Nursing
100 Cambridge Street
Room 1519
Boston, MA 02202
Tel: 617-727-9961

Michigan Board of Nursing
PO Box 30018
Lansing, MI 48909
Tel: 517-373-1600

Minnesota Board of Nursing
2829 University Avenue SE
Suite 500
Minneapolis, MN 55414-3253
Tel: 612-617-2270

Mississippi Board of Nursing
239 N. Lamar
Suite 401
Jackson, MS 39201-1397
Tel: 601-359-6170

Missouri Board of Nursing
PO Box 656
3605 Missouri Boulevard
Jefferson City, MO 65102
Tel: 314-751-0681

Montana Board of Nursing
Arcade Building-Lower Level
111 N. Jackson
PO Box 200513
Helena, MT 59620-0513
Tel: 406-444-2071

Nebraska Board of Nursing
PO Box 95007
Lincoln, NE 68509
Tel: 402-471-2115

Nevada Board of Nursing
PO Box 46886
Las Vegas, NV 89114
Tel: 702-739-1575

New Hampshire Board of Nursing
Division of Public Health Services
6 Hazen Drive
Concord, NH 03301-6527
Tel: 603-271-2323

New Jersey Board of Nursing
PO Box 45010
Newark, NJ 07101
Tel: 201-504-6430

New Mexico Board of Nursing
Granada Square
4253 Montgomery N.E.
Suite 130
Albuquerque, New Mexico
87109-1100
Tel: 505-841-8340

North Carolina Board of Nursing
PO Box 2129
Raleigh, NC 27602
Tel: 919-782-3211

New York Board of Nursing
State Education Department
Cultural Education Center
Albany, NY 12230
Tel: 518-474-3843

North Dakota Board of Nursing
919 S. 7th Street
Suite 504
Bismarck, ND 58504-5881
Tel: 701-224-2974

Ohio Board of Nursing
77 South High Street
17th Floor
Columbus, OH 43266-0316
Tel: 614-466-3947

Oklahoma Board of Nursing
2915 Classen Boulevard
Suite 524
Oklahoma City, OK 73106
Tel: 405-525-2076

Oregon Board of Nursing
800 NE Oregon Street #25
Suite 465
Portland, OR 97232
Tel: 503-731-4745

Pennsylvania Board of Nursing
PO Box 2649
Harrisburg, PA 17105-2649
Tel: 717-783-7142

Rhode Island Board of Nursing Registration and Nursing Education
Three Capitol Hill
Cannon Building
Room 104
Providence, RI 02908
Tel: 401-277-2827

South Carolina Nurses Association Board of Nursing
220 Executive Center Drive
Suite 220
Columbia, SC 29210
Tel: 803-731-1648

South Dakota Board of Nursing
3307 South Lincoln
Sioux Falls, SD 57105-5224
Tel: 605-335-4973

Tennessee Board of Nursing
283 Plus Park boulevard
Nashville, TN 37247-1010
Tel: 615-367-6232

Texas Board of Nurse Examiners
Box 140466
Austin, TX 78714
Tel: 512-835-4880

Utah Board of Nursing Division of Professional Licensing
160 E. 300 South
PO Box 45805
Salt Lake City, UT 84145
Tel: 801-530-6628

Vermont Board of Nursing
109 State Street
Montpelier, VT 05609-1106
Tel: 802-828-2396

Virginia Board of Nursing
6606 W. Broad Street
4th Floor
Richmond, VA 23230-1717
Tel: 804-662-9909

Washington Nursing Commission
PO Box 1099
Olympia, WA 98507-1099
Tel: 360-753-2686

West Virginia Board of Examiners for RN's
101 Dee Drive
Charleston, WV 25311-1620
Tel: 304-558-3596

Wisconsin Board of Nursing
PO Box 8935
Madison, WI 53708
Tel: 608-266-0257

Wyoming Board of Nursing
Barrett Building
2nd Floor
2301 Central Avenue
Cheyenne, WY 82002
Tel: 307-777-7601

Attachment 4

Appendix C to 1910.134:OSHA Respirator Medical Evaluation Questionnaire (Mandatory)

To the employer: Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee:

Can you read (circle one): Yes No

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Part A. Section 1. (Mandatory) The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's date:_____

2. Your name:_____

3. Your age (to nearest year):_____

4. Sex (circle one): Male Female

5. Your height: _____ ft. _____ in.

6. Your weight: _____ lbs.

7. Your job title:_____

8. A phone number where you can be reached by the health care professional who reviews this questionnaire

(include the Area Code): _____

9. The best time to phone you at this number: _____

10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): . . . . . Yes No

11. Check the type of respirator you will use (you can check more than one category):
a. _____ N, R, or P disposable respirator (filter-mask, non-cartridge type only).
b. _____ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).

12. Have you worn a respirator (circle one): . . . . . Yes No

If "yes," what type(s):_____

_____ _____

Part A. Section 2. (Mandatory) Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month: . . . . . Yes No

2. Have you ever had any of the following conditions?
   a. Seizures (fits): . . . . . Yes No
   b. Diabetes (sugar disease): . . . . . Yes No
   c. Allergic reactions that interfere with your breathing: . . . . . Yes No
   d. Claustrophobia (fear of closed-in places): . . . . . Yes No
   e. Trouble smelling odors (except when you had a cold): . . . . . Yes No

3. Have you ever had any of the following pulmonary or lung problems?
   a. Asbestosis: . . . . . Yes No
   b. Asthma: . . . . . Yes No
   c. Chronic bronchitis: . . . . . Yes No
   d. Emphysema: . . . . . Yes No
   e. Pneumonia: . . . . . Yes No
   f. Tuberculosis: . . . . . Yes No
   g. Silicosis: . . . . . Yes No
   h. Pneumothorax (collapsed lung): . . . . . Yes No
   i. Lung cancer: . . . . . Yes No
   j. Broken ribs: . . . . . Yes No
   k. Any chest injuries or surgeries: . . . . . Yes No
   l. Any other lung problem that you've been told about: . . . . . Yes No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?
   a. Shortness of breath: . . . . . Yes No
   b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes No
   c. Shortness of breath when walking with other people at an ordinary pace on level ground: . . Yes No
   d. Have to stop for breath when walking at your own pace on level ground: . . . . . Yes No
   e. Shortness of breath when washing or dressing yourself: . . . . . Yes No
   f. Shortness of breath that interferes with your job: . . . . . Yes No
   g. Coughing that produces phlegm (thick sputum): . . . . . Yes No
   h. Coughing that wakes you early in the morning: . . . . . Yes No
   i. Coughing that occurs mostly when you are lying down: . . . . . Yes No
   j. Coughing up blood in the last month: . . . . . Yes No
   k. Wheezing: . . . . . Yes No
   l. Wheezing that interferes with your job: . . . . . Yes No
   m. Chest pain when you breathe deeply: . . . . . Yes No
   n. Any other symptoms that you think may be related to lung problems: . . . . . Yes No

5. Have you ever had any of the following cardiovascular or heart problems?
   a. Heart attack: . . . . . Yes No
   b. Stroke: . . . . . Yes No
   c. Angina: . . . . . Yes No
   d. Heart failure: . . . . . Yes No
   e. Swelling in your legs or feet (not caused by walking): . . . . . Yes No
   f. Heart arrhythmia (heart beating irregularly): . . . . . Yes No
   g. High blood pressure: . . . . . Yes No
   h. Any other heart problem that you've been told about: . . . . . Yes No

6. Have you ever had any of the following cardiovascular or heart symptoms?

a. Frequent pain or tightness in your chest: . . . . . Yes No
b. Pain or tightness in your chest during physical activity: . . . . . Yes No
c. Pain or tightness in your chest that interferes with your job: . . . . . Yes No
d. In the past two years, have you noticed your heart skipping or missing a beat: . . . . . Yes No
e. Heartburn or indigestion that is not related to eating: . . . . . Yes No
f. Any other symptoms that you think may be related to heart or circulation problems: . . . . . Yes No

7. Do you currently take medication for any of the following problems?

a. Breathing or lung problems: . . . . . Yes No
b. Heart trouble: . . . . . Yes No
c. Blood pressure: . . . . . Yes No
d. Seizures (fits): . . . . . Yes No

8. Has your wearing a respirator caused any of the following problems? (If you've never used a respirator, check the following space __ and go to question 9:)

a. Eye irritation: . . . . . Yes No
b. Skin allergies or rashes: . . . . . Yes No
c. Anxiety that occurs only when you use the respirator: . . . . . Yes No
d. Unusual weakness or fatigue: . . . . . Yes No
e. Any other problem that interferes with your use of a respirator: . . . . . Yes No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: . . . . . Yes No

Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): . . . . . Yes No

11. Do you currently have any of the following vision problems?

a. Wear contact lenses: . . . . . Yes No
b. Wear glasses: . . . . . Yes No
c. Color blind: . . . . . Yes No
d. Any other eye or vision problem: . . . . . Yes No

12. Have you ever had an injury to your ears, including a broken ear drum: . . . . . Yes No

13. Do you currently have any of the following hearing problems?

a. Difficulty hearing: . . . . . Yes No
b. Wear a hearing aid: . . . . . Yes No
c. Any other hearing or ear problem: . . . . . Yes No

14. Have you ever had a back injury: . . . . . Yes No

15. Do you currently have any of the following musculoskeletal problems?

a. Weakness in any of your arms, hands, legs, or feet: . . . . . Yes No
b. Back pain: . . . . . Yes No
c. Difficulty fully moving your arms and legs: . . . . . Yes No
d. Pain or stiffness when you lean forward or backward at the waist: . . . . . Yes No
e. Difficulty fully moving your head up or down: . . . . . Yes No
f. Difficulty fully moving your head side to side: . . . . . Yes No
g. Difficulty bending at your knees: . . . . . Yes No
h. Difficulty squatting to the ground: . . . . . Yes No

i. Difficulty climbing a flight of stairs or a ladder carrying more than 25 lbs: . . . . . Yes No
j. Any other muscle or skeletal problem that interferes with using a respirator: . . . . . Yes No

Part B Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: . . . . . Yes No
If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: . . . . . Yes No

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: . . . . . Yes No

If "yes," name the chemicals if you know them:_____

_____

_____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:
a. Asbestos: . . . . . Yes No
b. Silica (e.g., in sandblasting): . . . . . Yes No
c. Tungsten/cobalt (e.g., grinding or welding this material): . . . . . Yes No
d. Beryllium: . . . . . Yes No
e. Aluminum: . . . . . Yes No
f. Coal (for example, mining): . . . . . Yes No
g. Iron: . . . . . Yes No
h. Tin: . . . . . Yes No
i. Dusty environments: . . . . . Yes No
j. Any other hazardous exposures: . . . . . Yes No

If "yes," describe these exposures:_____

_____

_____

4. List any second jobs or side businesses you have:_____

_____

5. List your previous occupations:_____

_____

6. List your current and previous hobbies:_____

_____

7. Have you been in the military services? . . . . . Yes No
If "yes," were you exposed to biological or chemical agents (either in training or combat): . . . . . Yes No

8. Have you ever worked on a HAZMAT team? . . . . . Yes No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): . . . . . Yes No

If "yes," name the medications if you know them:_____

10. Will you be using any of the following items with your respirator(s)?

a. HEPA Filters: . . . . . Yes No
b. Canisters (for example, gas masks): . . . . . Yes No
c. Cartridges: . . . . . Yes No

11. How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you)?:

a. Escape only (no rescue): . . . . . Yes No
b. Emergency rescue only: . . . . . Yes No
c. Less than 5 hours per week: . . . . . Yes No
d. Less than 2 hours per day: . . . . . Yes No
e. 2 to 4 hours per day: . . . . . Yes No
f. Over 4 hours per day: . . . . . Yes No

12. During the period you are using the respirator(s), is your work effort:

a. Light (less than 200 kcal per hour): . . . . . Yes No

If "yes," how long does this period last during the average shift:_____hrs._____mins.
Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1-3 lbs.) or controlling machines.

b. Moderate (200 to 350 kcal per hour): . . . . . Yes No

If "yes," how long does this period last during the average shift:_____hrs._____mins.
Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.

c. Heavy (above 350 kcal per hour): . . . . . Yes No

If "yes," how long does this period last during the average shift:_____hrs._____mins.
Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and or equipment (other than the respirator) when you're using your respirator: . . . . . Yes No

If "yes," describe this protective clothing and or equipment:_____

_____

14. Will you be working under hot conditions (temperature exceeding 77 deg. F): . . . . . Yes No

15. Will you be working under humid conditions: . . . . . Yes No

16. Describe the work you'll be doing while you're using your respirator(s):

_____

_____ _____

17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases):

_____

_____ _____

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):
Name of the first toxic substance:_____

Estimated maximum exposure level per shift:_____

Duration of exposure per shift_____

Name of the second toxic substance:_____

Estimated maximum exposure level per shift:_____

Duration of exposure per shift:_____

Name of the third toxic substance:_____

Estimated maximum exposure level per shift:_____

Duration of exposure per shift:_____

The name of any other toxic substances that you'll be exposed to while using your respirator:

_____

_____

_____

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security):

_____

_____

Apéndice C de la sección 1910.134: Cuestionario OSHA de evaluación para respiradores médicos (Obligatorio)

Al empleador: Las respuestas a las preguntas de la sección 1, y a la pregunta 9 de la sección 2, Parte A, no requieren un examen médico.

Al empleado:

Puede usted leer (marque con un círculo la respuesta que corresponda): Sí/No

Su empleador debe permitirle rellenar este cuestionario durante las horas laborales normales o cuando y donde le sea conveniente a usted. Con el fin de proteger la confidencialidad, su empleador o supervisor no puede ni debe mirar o verificar sus respuestas, y su empleador debe decirle cómo entregar o enviar este cuestionario al profesional de la salud encargado/a de evaluarlo.

Parte A. Sección 1. (Obligatoria)
La siguiente información debe ser provista por cada empleado que haya sido seleccionado para utilizar cualquier tipo de respirador (se ruega escriba en letra de imprenta).

1. Fecha de hoy:_____

2. Su nombre:_____

3. Su edad (al año más próximo):_____

4. Sexo (marque la respuesta con un círculo): Hombre/Mujer

5. Su altura: _____ pies _____ pulgadas

6. Su peso: _____ libras

7. Su titulo en el trabajo:_____

8. Un número de teléfono al que le pueda llamar el profesional de la salud que evalúe este cuestionario (incluya el código de la zona): _____

9. La mejor hora para hablar con usted al número que ha indicado: _____

10. Le ha dicho su empleador cómo ponerse en contacto con el profesional de la salud que evaluará este cuestionario (marque la respuesta con un círculo): Sí/No

11. Marque el tipo de respirador que utilizará usted (puede marcar más de una categoría):
a. _____ Respirador desechable N, R, o P (únicamente tipo sin cartucho, mascarilla de filtro).
b. _____ Otro tipo (por ejemplo, tipo máscara completa o parcial, con purificador de aire motorizado, con suministro de aire, aparato de respiración autónomo).

12. ¿Se ha puesto un respirador (marque la respuesta con un círculo): Sí/No

Si "sí", ¿qué tipo(s)?:_____
_____

Parte A. Sección 2. (Obligatoria)
Las preguntas 1 a 9 siguientes deben ser contestadas por cada empleado que haya sido seleccionado para utilizar cualquier tipo de respirador (se ruega marque con un círculo "sí" o "no").

1. ¿Fuma usted ***actualmente*** tabaco, o ha fumado usted tabaco en el mes pasado?: Sí/No

2. ¿***Alguna vez*** ha tenido usted una de las siguientes condiciones?
   a. Convulsiones (ataques): Sí/No
   b. Diabetes (enfermedad del azúcar): Sí/No
   c. Reacciones alérgicas que interfieran con su respiración: Sí/No
   d. Claustrofobia (miedo a los espacios cerrados y estrechos): Sí/No
   e. Dificultades en oler: Sí/No

3. ¿***Alguna vez*** ha tenido usted cualquiera de los siguientes problemas pulmonares o del pulmón?
   a. Asbestosis: Sí/No
   b. Asma: Sí/No
   c. Bronquitis crónica: Sí/No
   d. Enfisema: Sí/No
   e. Pulmonía: Sí/No
   f. Tuberculosis: Sí/No
   g. Silicosis: Sí/No
   h. Neumotórax (colapso del pulmón): Sí/No
   i. Cáncer del pulmón: Sí/No
   j. Costillas rotas: Sí/No
   k. Cualquier lesión o cirugía al pecho: Sí/No
   l. Cualquier otro problema pulmonar que le hayan mencionado: Sí/No

4. ¿Tiene usted ***actualmente*** cualquier de los siguientes síntomas de enfermedad pulmonar o del pulmón?
   a. Falta de aliento (disnea): Sí/No
   b. Falta de aliento cuando camina rápido sobre terreno nivelado o una pendiente leve: Sí/No
   c. Falta de aliento cuando camina con otras personas a un ritmo normal sobre terreno nivelado: Sí/No
   d. Tiene que parar para respirar cuando camina a su propio ritmo sobre terreno nivelado: Sí/No
   e. Falta de aliento cuando se viste o se lava: Sí/No
   f. Falta de aliento que interfiere con su trabajo: Sí/No
   g. Tos que produce flema (esputo espeso): Sí/No
   h. Tos que lo/la despierta temprano por la mañana: Sí/No
   i. Tos que suele ocurrir sobre todo cuando esta acostado/a: Sí/No
   j. Tos con sangre en el pasado mes: Sí/No
   k. Respiración sibilante: Sí/No
   l. Respiración sibilante que interfiere con su trabajo: Sí/No
   m. Dolor en el pecho cuando respira hondo: Sí/No
   n. Cualquier otro síntoma que usted crea que esté relacionado con problemas del pulmón: Sí/No

5. ¿***Alguna vez*** ha tenido cualquiera de los siguientes problemas cardiovasculares o del corazón?
   a. Ataque cardíaco: Sí/No
   b. Derrame cerebral: Sí/No
   c. Angina de pecho: Sí/No
   d. Insuficiencia cardíaca: Sí/No
   e. Hinchazón en las piernas o pies (que no sea por caminar): Sí/No
   f. Arritmia del corazón (corazón que late irregularmente): Sí/No
   g. Presión sanguínea elevada: Sí/No
   h. Cualquier otro problema del corazón que se le haya mencionado: Sí/No

6. ¿***Alguna vez*** ha tenido cualquiera de los siguientes síntomas cardiovasculares o del corazón?
   a. Dolor u opresión en el pecho frecuente: Sí/No
   b. Dolor u opresión en el pecho durante actividades físicas: Sí/No
   c. Dolor u opresión en el pecho que interfiere con su trabajo: Sí/No
   d. ¿En los últimos dos años, ha notado que su corazón late en forma irregular?: Sí/No

e. Acidez de estomago o indigestión que no tenga que ver con la comida: Sí/No
f. Cualquier otro síntoma que usted piense que se relacione con problemas de corazón o de circulación: Sí/No

7. ¿Toma usted ***actualmente*** medicamentos para cualquiera de los siguientes problemas?
a. Problemas de respiración o del pulmón: Sí/No
b. Problemas de corazón: Sí/No
c. Presión sanguínea: Sí/No
d. Convulsiones (ataques): Sí/No

8. Si ha utilizado un respirador, ¿***alguna*** vez ha tenido cualquiera de los siguientes problemas? (Si nunca utilizó un respirador, marque el siguiente espacio y pase a la pregunta 9:)
a. Irritación de ojo: Sí/No
b. Alergias o erupciones de piel: Sí/No
c. Ansiedad: Sí/No
d. Cansancio o debilidad general: Sí/No
e. Cualquier otro problema que interfiere con el uso de un respirador: Sí/No

9. ¿Le gustaría hablar con el profesional de la salud que evaluará este cuestionario acerca de sus respuestas?: Sí/No

Las preguntas 10 a 15 a continuación deben ser contestadas por cada empleado que haya sido seleccionado para utilizar un respirador de máscara completa o un aparato de respiración autónomo (Self-Contained Breathing Apparatus, o SCBA por sus siglas en inglés). En cuanto a los empleados que han sido seleccionados para utilizar otro tipo de respiradores, las respuestas a estas preguntas son voluntarias.

10. ¿***Alguna*** vez ha ***perdido*** la visión en uno de los ojos (temporalmente o permanentemente)?: Sí/No

11. ¿Tiene ***actualmente*** cualquiera de los siguientes problemas de visión?
a. Lleva lentes de contacto: Sí/No
b. Lleva lentes o gafas: Sí/No
c. Daltonismo (no distingue colores): Sí/No
d. Cualquier otro problema de ojo o de visión: Sí/No

12. ¿***Alguna*** vez ha ***tenido*** lesiones de oído, inclusive un tímpano perforado?: Sí/No

13. ¿Tiene ***actualmente*** cualquiera de los siguientes problemas de oído?
a. Dificultades en oír: Sí/No
b. Tiene puesto un audífono: Sí/No
c. Cualquier otro problema de oído o de oreja: Sí/No

14. ¿***Alguna*** vez ha tenido lesiones de espalda?: Sí/No

15. ¿Tiene ***actualmente*** cualquiera de los siguientes problemas óseo-musculares?
a. Debilidad en cualquiera de los brazos, las manos, las piernas o los pies: Sí/No
b. Dolor de espalda: Sí/No
c. Dificultades en mover plenamente sus brazos y sus piernas: Sí/No
d. Dolor o rigidez cuando se inclina al frente o atrás desde la cintura: Sí/No
e. Dificultades en mover plenamente su cabeza hacia arriba o abajo: Sí/No
f. Dificultades en mover plenamente su cabeza de lado a lado: Sí/No
g. Dificultades en flexionar las rodillas: Sí/No
h. Dificultades en agacharse o acuclillarse: Sí/No
i. Subir de un piso a otro o escaleras cuando carga más de 25 libras: Sí/No
j. Cualquier otro problema muscular o esquelético que interfiere con el uso de un respirador: Sí/No

Parte B
Cualquiera de las siguientes preguntas, así como otras preguntas no enumeradas, pueden ser agregadas al cuestionario según lo determine el profesional de la salud que evaluará al presente cuestionario.

1. En su puesto de trabajo actual, ¿trabaja usted a grandes altitudes (más de 5,000 pies) o en un lugar cuya cantidad de oxígeno sea menor a la normal?: Sí/No

Si "sí", ¿siente usted mareo o vértigo, falta de aliento, palpitaciones de pecho u otro síntoma cuando trabaja bajo dichas condiciones?: Sí/No

2. En el trabajo o en casa, ¿alguna vez ha sido usted expuesto/a a solventes peligrosos, sustancias químicas peligrosas en el aire (por ejemplo, gases, humos o polvo), o ha tenido su piel contacto con sustancias químicas peligrosas?: Sí/No

Si "sí", indique el nombre de las sustancias químicas si los sabe: _____
_____
_____

3. ¿Alguna vez ha trabajado usted con cualquier de las sustancias, o en cualquiera de las condiciones, que se enumeran a continuación:

a. Asbestos: Sí/No
b. Silicio (***por ejemplo,*** en limpieza a chorro de arena): Sí/No
c. Tungsteno/cobalto (por ejemplo, molienda o soldadura de dicho material): Sí/No
d. Berilio: Sí/No
e. Aluminio: Sí/No
f. Carbón (por ejemplo, minería): Sí/No
g. Hierro: Sí/No
h. Estaño: Sí/No
i. Ambientes con polvo: Sí/No
j. Cualquier otra exposición peligrosa: Sí/No

Si "sí", describa dichas exposiciones: _____
_____
_____

4. Enumere cualquier otro segundo empleo o negocio adicional que usted tenga:_____
_____

5. Enumere sus ocupaciones anteriores:_____
_____

6. Enumere sus hobbies o pasatiempos actuales o anteriores:_____
_____

7. ¿Ha sido miembro del ejercito militar? Sí/No

Si "sí", ¿fue usted expuesto/a a sustancias biológicas o químicas (sea durante la formación o el combate)?: Sí/No

8. ¿Alguna vez trabajó usted en un equipo de sustancias peligrosas (HAZardous MATerials, o HAZMAT por sus siglas en inglés)? Sí/No

9. A diferencia de los medicamentos para los problemas de respiración y de pulmones, de corazón, de presión alta y de convulsiones que se mencionaron anteriormente en el presente cuestionario, ¿toma usted otros medicamentos por cualquier razón (inclusive medicamentos sin receta)?: Sí/No

Si "sí", enumere los medicamentos si los conoce:_____

10. ¿Utilizará usted cualquiera de los siguientes artículos con el o los respiradores?
    a. Filtros HEPA (ultra-filtrados): Sí/No
    b. Recipientes (por ejemplo, máscaras antigas): Sí/No
    c. Cartuchos: Sí/No

11. ¿Cuán a menudo se prevé que usted utilizará el o los respiradores (marque con un círculo "sí" o "no" para todas las respuestas que aplican en su caso)?:

    a. Evacuación únicamente (sin rescate): Sí/No
    b. Rescate de emergencia únicamente: Sí/No
    c. Menos de 5 horas ***por semana:*** Sí/No
    d. Menos de 2 horas ***al día:*** Sí/No
    e. 2 a 4 horas al día: Sí/No
    f. Más de 4 horas al día: Sí/No

12. Durante el periodo en que utilizará el o los respiradores, su esfuerzo laboral será:

    a. ***Leve*** (menos de 200 kcal por hora): Sí/No

Si "sí", ¿Cuánto tiempo dura este periodo de tiempo por turno corriente: _____horas _____minutos.

Ejemplos de un esfuerzo laboral leve son ***sentarse*** mientras se escribe a mano, a máquina, se dibuja, o se realiza trabajo de ensamblaje liviano; o ***estar de pie*** mientras se opera una perforadora (1-3 libras) o equipo de control.

    b. ***Moderado*** (200 a 350 kcal por hora): Sí/No

Si "sí", ¿cuánto tiempo dura este periodo durante un turno corriente?:_____horas _____minutos.

Ejemplos de esfuerzo laboral moderado son ***sentarse*** mientras se clava o lima; ***manejar*** un camión o autocar en tráfico urbano; ***estar de pie*** mientras se perfora, clava, realiza trabajo de ensamblaje o se transfiere una carga moderada (unas 35 libras) a nivel del tronco; ***caminar*** sobre un nivel plano a unas 2 millas por hora, o bajando una pendiente de 5 grados a unas 3 millas por hora; o ***empujar*** una carreta con una carga pesada (unas 100 libras) sobre un nivel plano.

    3. ***Pesado*** (más de 350 kcal por hora): Sí/No

Si "sí", ¿cuánto tiempo dura este periodo durante un turno corriente:_____horas _____minutos

Ejemplos de labor pesada son ***levantar*** una carga pesada (unas 50 libras) desde el suelo a nivel de la cintura o del hombro; trabajar en un muelle de carga; ***utilizar una pala; estar de pie*** mientras se realizan tareas de albañilería o se cincela/pica moldes; ***caminar*** subiendo una pendiente de 8 grados unas 2 millas por hora; subir escaleras con una carga pesada (unas 50 libras).

13. ¿Se pondrá usted ropa y/o equipo de protección (además del respirador) cuando utilice su respirador?: Sí/No

Si "sí", describa esta ropa y/o este equipo de protección:_____
_____

14. ¿Trabajará usted bajo condiciones calurosas (temperaturas en exceso de 77 grados F): Sí/No

15. ¿Trabajará usted bajo condiciones húmedas: Sí/No

16. Describa el trabajo que usted hará mientras utiliza su respirador(s):
_____
_____

17. Describa cualquier condición especial o peligrosa que pueda encontrar mientras utilice su o sus respiradores (por ejemplo, espacios limitados, gases mortales):
_____
_____

18. Provea la siguiente información, si la sabe, sobre cada sustancia tóxica a la que usted quedará expuesto/a mientras utilice su o sus respiradores:

Nombre de la primera sustancia tóxica:_____
Nivel de exposición máximo estimado por turno:_____
Duración de la exposición por turno:_____
Nombre de la segunda sustancia tóxica:_____
Nivel de exposición máximo estimado por turno:_____
Duración de la exposición por turno:_____
Nombre de la tercera sustancia tóxica:_____
Nivel de exposición máximo estimado por turno:_____
Duración de la exposición por turno:_____
El nombre de cualquier otra sustancia tóxica a la que usted quedará expuesto/a mientras utilice su respiradores:
_____
_____
_____

19. Describa cualquier responsabilidad especial que usted mantendrá mientras utilice su o sus respiradores que pueda afectar la seguridad y el bienestar de los demás (por ejemplo, rescate, seguridad):

_____

[63 FR 1152, 8 de enero de 1998; 63 FR 20098, 23 de abril de 1998]