Respiratory inlet covering means that portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a facepiece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.
Self-contained breathing apparatus (SCBA) means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.
Service life means the period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.
Supplied-air respirator (SAR) or airline respirator means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.
Tight-fitting facepiece means a respiratory inlet covering that forms a complete seal with the face.
User seal check means an action conducted by the respirator user to determine if the respirator is properly seated to the face.

4. General Program Management

Areas of Responsibility – Three areas of responsibility are central to the implementation of the Exposure Control Plan at Louisiana State University and they include:

a. Environmental Health and Safety (EHS) will manage and support the Respiratory Protection Program. This includes:
   i. coordinating implementation of the Respiratory Protection Program;
   ii. providing consultation for respirator selection;
   iii. revising, updating and improving the Respiratory Protection Program when necessary; and
   iv. conducting periodic program evaluations to make sure that the Respiratory Protection Program is properly implemented and that employees are using respirators properly

b. Deans, Directors, Department Chairs, Principal Investigators, Managers and Supervisors
   i. are responsible for compliance in their areas;
   ii. must have a written respirator program specific to the hazards in their area;
   iii. must identify and provide training and/or information to all employees who use respirators;
   iv. must maintain an up-to-date list of LSU personnel requiring training
   v. must maintain appropriate training records;
   vi. and must ensure that the respiratory protection program is followed.

c. Employees are responsible for followin[(E)-5(m)-4(pl)-4(oy)33(e)-5(e)-5(s)6(a)-5(re)-5(re)-5(s)6(pons)6(

iii. how to use respirator in emergency situations including when respirator malfunctions;
iv. how to inspect and use respirators and check respirator seals
v. how to maintain and store respirators
vi. which medical signs may limit effective use of respirator
vii. general regulatory requirements

5. Voluntary Use

Voluntary respirator use applies if the employees are not exposed to hazardous agents above the permissible exposure limits, they are not emergency responders, or they are not required by the organization. Voluntary use of respirators is encouraged by Louisiana State University to prevent inhalation of small amounts of potentially harmful agents that are not considered to be at hazardous levels as defined by OSHA. If the responsible person (see Sec. 4.b) decides that respirator use is permitted, that person must ensure that the voluntary user is given the

Health Center which contain key questions which must be answered prior to respirator use approval by the physician (see Appendix C of the attachment). The department supervisor must receive approval in writing from the physician prior to permitting the employee to use a respirator.

b. If employees are using dust masks voluntarily to prevent inhalation of nuisance dust, supervisors are required only to provide the employee with the information found in Appendix D of the attachment. A medical evaluation is not necessary.

8. Fit Testing

Before using a respirator an employee must be fit tested with the same make, model, style, and size of respirator that they will be wearing.

a. A qualitative fit test (QLFT) or quantitative fit test (QNFT) according to Appendix A of the attachment must be used.
b. Air supplied or powered air purifying (PAPR) respirators must also use the fit test techniques of Appendix A of the attachment by adapting the facepieces to negative air respirators or using an identical negative air respirator as a surrogate.

9. Use of Respirators

a. Respirators must be worn such that inhaled air does not leak at the facepiece seal during use.

i. This means that employees shall not have facial hair or any other condition which would prevent a good seal at the face and the employee shall not remove or adjust the facepiece during use so as to cause air to leak into the facepiece.
ii. Glasses shall not be worn in a manner that would interfere with the seal of the facepiece.
iii. Employees shall perform a user seal check each time that they put on the respirator according to Appendix B-1 of the attachment. (Not required for dust masks).

b. The person in charge of the operation/task must manage the respirator program to ensure continuing respirator effectiveness by:

i. Maintaining surveillance of the work area conditions and the degree of employee exposure or stress. When a change is noticed which may affect the respirator effectiveness management should contact OES to re-evaluate the work area respirator program.
ii. Ensuring that employees leave the respirator use area:
1) to wash their faces and respirator facepieces as necessary to prevent eye or skin irritation from respirator use; or
2) if the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece; or
3) to replace the respirator or filter, cartridge, or canister elements.

iii. Replacing or repairing defective respirators or respirator components if the employee detects gas breakthrough or other respirator problems mentioned above.

c. For respirator use in IDLH atmospheres the following rules must be followed:
Note: Entry into IDLH or suspected IDLH atmospheres is permitted only in situations where serious safety and environmental threats exist.

i. At least one employee must be located outside the IDLH atmosphere.
ii. The employee(s) inside and the employee(s) outside the IDLH atmosphere must maintain visual, voice, or signal line communication.
iii. The employee(s) outside the IDLH atmosphere are trained to provide effective emergency rescue.
iv. The University is notified when the employee(s) outside the IDLH atmosphere enter the IDLH atmosphere to provided emergency rescue.
v. The employer or designee provides necessary assistance to the situation once notified of the emergency rescue.
vi. The employee(s) outside the IDLH atmosphere are provided with
1) positive pressure or pressure demand SCBA or SAR.
2) a plan for retrieval must be developed and include appropriate retrieval equipment

10. Maintenance and Care of Respirators

a. The person in charge of the operation/task must provide for cleaning and disinfecting, storage, inspection, and repair of respirators. The procedures are covered in Appendix B-2 of the attachment. Cleaning and inspection shall be at the following intervals:

i. Respirators issued exclusively to one employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition;
ii. Respirators issued to more than one employee shall be cleaned and disinfected after each use; and
iii. Respirators for emergency use shall be checked and disinfected after each use; and
iv. Respirators used in fit testing and training shall be cleaned and disinfected after each use.

b. Respirators shall be stored as follows:

i. To protect from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals as well as to prevent deformation of the facreW2 02 792 rer6bf Tm/.064 Tc[(iii.)] TJETQ EMC yee;g.

iii. Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

11. Breathing Air Quality and Use

a. Compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration shall comply with the following specifications:

i. Compressed and liquid oxygen shall meet the United States Pharmacopoeia requirements for medical or breathing oxygen; and
ii. Compressed breathing air shall meet at least the requirements for Type 1-Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification

for Air, G- 7.1-1989, to include:
1) Oxygen content (v/v) of 19.5- 23.5%;
2) Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;
3) Carbon monoxide (CO) content of 10 ppm or less;
4) Carbon dioxide content of 1,000 ppm or less; and
5) Lack of noticeable odor.

iii. Cylinders used to supply breathing air to respirators shall meet the following requirements:

1) Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178);
2) Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Type 1–Grade D breathing air; and
3) The moisture content in the cylinder does not exceed a dew point of ´50 °F (´45.6 °C) at 1 atmosphere pressure.

iv. Compressors used to supply breathing air to respirators shall be constructed and situated so as to:

1) Prevent entry of contaminated air into the air-supply system;
2) Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 °C) below the ambient temperature;
3) Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer’s instructions.

4) Have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. The tag shall be maintained at the compressor.

v. For compressors that are not oil-lubricated, carbon monoxide levels in the breathing air shall not exceed 10 ppm.

vi. For oil-lubricated compressors, a high-temperature or carbon monoxide alarm, or both, shall be used to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.

vii. Breathing air couplings are to be incompatible with outlets for nonrespirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.

vii. Breathing gas containers marked in accordance with the NIOSH respirator certification standard, 42 CFR part 84, shall be used.

12. Identification of Filters, Cartridges, And Canisters

All filters, cartridges and canisters used in the workplace shall be labeled and color coded with the NIOSH approval label and that

vi. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and
vii. The general requirements of this section.

b. The employer shall provide the training prior to requiring the employee to use a respirator in the workplace.

c. An employer who is able to demonstrate that a new employee has received training within the last 12 months that addresses the elements specified in paragraph (a)(i) through (vii) above is not required to repeat such training provided that, as required by paragraph (a), the employee can demonstrate knowledge of those element(s). Previous training not repeated initially must be provided no later than 12 months from the date of the previous training.

d. Retraining shall be administered annually, and when the following situations occur:

i. Changes in the workplace or the type of respirator render previous training obsolete;
ii. Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
iii. Any other situation arises in which retraining appears necessary to ensure safe respirator use.

e. The basic advisory information on respirators, as presented in Appendix D of the

2) Type of fit test performed;
3) Specific make, model, style, and size of respirator tested;
4) Date of test; and
5) The pass/fail results for QLFTs or the fit factor and strip chart recording or other recording of the test results for QNFTs.

ii. Fit test records shall be retained for respirator users until the next fit test is administered.
iii. A written copy of the current respirator program shall be retained by the employer.
iv. Written materials required to be retained under this paragraph shall be made available upon request to affected employees and to the Assistant Secretary or designee for examination and copying.

Respirator Appendix A
Part I. OSHA-Accepted Fit Test Protocols

A. Fit Testing Procedures–General Requirements

The employer shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.
2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.
3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.
4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.
5. The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in the following item A.6. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:
   (a) Position of the mask on the nose
   (b) Room for eye protection
   (c) Room to talk
   (d) Position of mask on face and cheeks

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

   a) Chin properly placed;
   b) Adequate strap tension, not overly tightened;
   c) Fit across nose bridge;
   d) Respirator of proper size to span distance from nose to chin;
   e) Tendency of respirator to slip;
   f) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in Appendix B-1 of this section or those recommended by the respirator manufacturer which provide equivalent protection to the procedures in Appendix B-1. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and retested if the test subject fails the user seal check tests.
9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

exercise regimen is contained in the CNP protocol. The test subject shall perform exercises, in the test environment, in the following manner:

9) The mixtures used in the IAA odor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.
10) If the test subject is unable to correctly identify the jar containing the odor test solution, the IAA qualitative fit test shall not be performed.
11) If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

b) *Isoamyl Acetate Fit Test*

1) The fit test chamber shall be a clear 55- gallon drum liner suspended inverted over a 2-foot diameter frame so that the top of the chamber is about 6 inches above the test subject's head. If no drum liner is available, a similar chamber shall be constructed using plastic sheeting. The inside top center of the chamber shall have a small hook attached.
2) Each respirator used for the fitting and fit testing shall be equipped with organic vapor cartridges or offer protection against organic vapors.
3) After selecting, donning, and properly adjusting a respirator, the test subject shall wear it to the fit testing room. This room shall be separate from the room used for odor threshold screening and respirator selection, and shall be well-ventilated, as by an exhaust fan or lab hood, to prevent general room contamination.
4)

8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted. If the test subject reports tasting the sweet taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.
9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted. If the test subject reports tasting the sweet taste during the third set of ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes actually completed.
10) The test conductor will take note of the number of squeezes required to solicit a taste response.
11) If the saccharin is not tasted after 30 squeezes (step 10), the test subject is unable to taste saccharin and may not perform the saccharin fit test. Note to paragraph 3. (a): If the test subject eats or drinks something sweet before the screening test, he/she may be unable to taste the weak saccharin solution.
12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.
13) Correct use of the nebulizer means that approximately 1 ml of liquid is used at a time in the nebulizer body.
14) The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least each morning and afternoon or at least every four hours.

b) Saccharin solution aerosol fit test procedure.

1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.
2) 348.1 Tm0 nBT/F1 10.6 Tf1 0 0 1 90.025 467.32 Tm0 g0 G[(1)- 61Q88.625 597.55 452.95 439.35 1

5) The Threshold Check Solution is prepared by adding 13.5 milligrams of Bitrex to 100 ml of 5% salt (NaCl) solution in distilled water.
6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that the bulb collapses completely, and is then released and allowed to fully expand.

C. Quantitative Fit Test (QNFT) Protocols

The following quantitative fit testing procedures have been demonstrated to be acceptable: Quantitative fit testing using a non-hazardous test aerosol (such as corn oil, polyethylene glycol 400 [PEG 400], di-2-ethyl hexyl sebacate [DEHS], or sodium chloride) generated in a test chamber, and employing instrumentation to quantify the fit of the respirator; Quantitative fit testing using ambient aerosol as the test agent and appropriate instrumentation (condensation nuclei counter) to quantify the respirator fit; Quantitative fit testing using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a facepiece to quantify the respirator fit.

1. General

a) The employer shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

b) The employer shall ensure that QNFT equipment is kept clean, and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

2. Generated Aerosol Quantitative Fit Testing Protocol

(a) Apparatus.

1) Instrumentation. Aerosol generation, dilution, and measurement systems using particulates (corn oil, polyethylene glycol 400 [PEG 400], di-2-ethyl hexyl sebacate [DEHS] or sodium chloride) as test aerosols shall be used for

5) The combination of substitute air-purifying elements, test agent and test agent concentration shall be such that the test subject is not exposed in excess of an established exposure limit for the test agent at any time during the testing process, based upon the length of the exposure and the exposure limit duration.
6) The sampling port on the test specimen respirator shall be placed and constructed so that no leakage occurs around the port (e.g., where the respirator is probed), a free air flow is allowed into the sampling line at all times, and there is no interference with the fit or performance of the respirator. The in-mask sampling device (probe) shall be designed and used so that the air sample is drawn from the breathing zone of the test subject, midway between the nose and mouth and with the probe extending into the facepiece cavity at least 1/4 inch.
7) The test setup shall permit the person administering the test to observe the test subject inside the chamber during the test.
8) The equipment generating the test atmosphere shall maintain the concentration of test agent constant to within a 10 percent variation for the duration of the test.
9) The time lag (interval between an event and the recording of the event on the strip chart or computer or integrator) shall be kept to a minimum. There shall be a clear association between the occurrence of an event and its being recorded.
10) The sampling line tubing for the test chamber atmosphere and for the respirator sampling port shall be of equal diameter and of the same material. The length of the two lines shall be equal.
11) The exhaust flow from the test chamber shall pass through an appropriate filter (i.e., high efficiency particulate or P100 series filter) before release.
12) When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed 50 percent.
13) The limitations of instrument detection shall be taken into account when determining the fit factor.
14) Test respirators shall be maintained in proper working order and be inspected regularly for deficiencies such as cracks or missing valves and gaskets.

(b) Procedural Requirements.

1. When performing the initial user seal check using a positive or negative pressure check, the sampling line shall be crimped closed in order to avoid air pressure leakage during either of these pressure checks.
2. The use of an abbreviated screening QLFT test is optional. Such a test may be utilized in order to quickly identify poor fitting respirators that passed the positive [redacted]NFT time. The use of the

3. A reasonably stable test agent concentration shall be measured in the test chamber prior to testing. For canopy or shower curtain types of test units, the determination of the test agent's stability may be established after the test subject has entered the test environment.
4. Immediately after the subject enters

(C) Integration by calculation of the area under the individual peak for each exercise except the grimace exercise. This includes computerized integration.

(D) The calculation of the overall fit factor using individual exercise fit factors involves first converting the exercise fit factors to penetration values, determining the average, and then converting that result back to a fit factor. This procedure is described in the following equation:

Overall Fit Factor = Number of exercises / ($1/ff_1 + 1/ff_2 + 1/ff_3 + 1/ff_4 + 1/ff_5 + 1/ff_6 + 1/ff_7 + 1/ff_8$)
Where ff1, ff2, ff3, etc. are the fit factors for exercises 1, 2, 3, etc.

9. The test subject shall not be permitted to wear a half mask or quarter facepiece respirator unless a minimum fit factor of 100 is obtained, or a full facepiece respirator unless a minimum fit factor of 500 is obtained.
10. Filters used for quantitative fit testing shall be replaced whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media.

3. Ambient aerosol condensation nuclei counter (CNC) quantitative fit testing protocol.

The ambient aerosol condensation nuclei counter (CNC) quantitative fit testing (Portacount TM) protocol quantitatively fit tests respirators with the use of a probe. The probed respirator is only used for quantitative fit tests. A probed respirator has a special sampling device, installed on the respirator, that allows the probe to sample the air from inside the mask. A probed respirator is required for each make, style, model, and size that the employer uses and can be obtained from the respirator manufacturer or distributor. The CNC instrument manufacturer, TSI Inc., also provides probe attachments (TSI sampling adapters) that permit fit testing in an employee's own respirator. A minimum fit factor pass level of at least 100 is necessary for a half-mask respirator and a minimum fit factor pass level of at least 500 is required for a full facepiece negative pressure respirator. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Portacount Fit Test Requirements.

1) Check the respirator to make sure the respirator is fitted with a high-efficiency filter and that the sampling probe and line are properly attached to the facepiece.
2) Instruct the person to be tested to don the respirator for five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This individual shall already have been trained on how to wear the respirator properly.

3) Check the following conditions for the adequacy of the respirator fit: Chin properly placed; Adequate strap tension, not overly tightened; Fit across nose bridge; Respirator of proper size to span distance from nose to chin; Tendency of the respirator to slip; Self-observation in a mirror to evaluate fit and respirator position.
4) Have the person wearing the respirator do a user seal check. If leakage is detected, determine the cause. If leakage is from a poorly fitting facepiece, try another size of the same model respirator, or another model of respirator. Respirator Appendix A
5) Follow the manufacturer's instructions for operating the Portacount and proceed with the test.
6) The test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.
7) After the test exercises, the test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried.

(b) Portacount Test Instrument.

1) The Portacount will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Pass or Fail message will indicate whether or not the test was successful. If the test was a Pass, the fit test is over.
2) Since the pass or fail criterion of the Portacount is user programmable, the test operator shall ensure that the pass or fail criterion meet the requirements for minimum respirator performance in this Appendix.
3) A record of the test needs to be kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style, and size of respirator used; and date tested.

4. Controlled negative pressure (CNP) quantitative fit testing protocol.

The CNP protocol provides an alternative to aerosol fit test methods. The CNP fit test method technology is based on exhausting air from a temporarily sealed respirator facepiece to generate and then maintain a constant negative pressure inside the facepiece. The rate of air exhaust is controlled so that a constant negative pressure is maintained in the respirator during the fit test. The level of pressure is selected to replicate the mean inspiratory pressure that

the test subject failed to hold his or her breath. The test subject may be refitted and retested.

2) A record of the test shall be kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style and size of respirator used; and date tested.

Part II. New Fit Test Protocols

A. Any person may submit to OSHA an application for approval of a new fit test protocol. If the application meets the following criteria, OSHA will initiate a rulemaking proceeding under section 6(b)(7) of the OSH Act to determine whether to list

2. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43° C (110° F); or,
3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

E. Rinse components thoroughly in clean, warm (43° C [110° F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
F. Components should be hand-dried with a clean lint-free cloth or air-dried.
G. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.
H. Test the respirator to ensure that all components work properly.

Respirator Appendix C to § 1910.134:

OSHA Respirator Medical Evaluation Questionnaire (Mandatory)
To the employer: Answers to questions in [o4hn00912 0 612 792 reW*nBT/F1 12

xi. Check the type of respirator you will use (you can check more than one category):
a.

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.

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

Appendix C

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.