

KANSAS STATE UNIVERSITY RESPIRATOR POLICY

I. PURPOSE

- A. Properly functioning and properly used respiratory protection is one of the most important components of a safety and health program for workers who must be protected from inhalation of hazardous atmospheres. Hazardous atmospheres include but is not limited to dusts, mists, vapors, and gases from asbestos, paint, grains, solvents, grinding operations, welding, etc.
- B. One purpose of the Kansas State University Respirator Policy is to provide a document that can be used to administer an effective respiratory protection program.
- C. This written standard operating procedure will be used to protect any worker who must wear a respirator during work assignments. Exemption of certain requirements of these guidelines for use of respirators during an emergency is subject to the discretion of the Campus Environmental Health and Safety Committee and the Department of Environmental Health and Safety.
- D. Respirators may be used only when good engineering or administrative controls are not in place or during an emergency. Every effort must be made to have good engineering or administrative control practices in place.

II. MEDICAL EXAMINATIONS

- A. Prior to assigning a face fitting respirator to a worker, a medical determination must be made to assure that the individual is healthy, physically able to perform the work, and capable of wearing equipment.
- B. An annual medical examination shall be administered by a medical professional and shall include a comprehensive history, a chest X-ray at the discretion of a physician, and a pulmonary function test (forced vital capacity and forced expiratory volume at 1 second).
- C. The worker's department will be responsible to pay for the initial and annual medical examination. Physicians of the Lafene Health Center may administer the examination. Departments who have off campus units may use other licensed medical agencies and their appropriate forms.
- D. Workers must use the attached Medical Questionnaire (Appendix A for initial exam and Appendix B for the subsequent annual exam) with the exception in C above.

III. RESPONSIBILITY

- A. Each Kansas State University department head is responsible for the establishment and maintenance of a respiratory program to cover respirator uses specific to the department.
- B. The Department of Environmental Health and Safety has overall University responsibility for the policy and has authority to make technical and administrative decisions as necessary.
- C. Each employee shall use only respirators issued or approved by the University in

accordance with the training received; the employee shall guard against damage to the respirators and to report any malfunction to their supervisors.

IV. SELECTION AND USE OF RESPIRATORS

- A. All respirators used on the University must be approved by the National Institute for Occupational Safety and Health (NIOSH).
- B. The employer is required to establish and implement procedures for the proper use of respirators. These requirements include prohibiting conditions that may result in face-piece seal leakage, preventing employees from removing respirators in hazardous environments, taking actions to ensure continued effective respirator operation throughout the work shift, and establishing procedures for the use of respirators in IDLH, (Immediate Danger to Life or Health) atmospheres.
 - 1. Appropriate surveillance must be maintained of work area conditions and degree of employee exposure or stress. When there is a change that may affect respirator effectiveness, the employer must reevaluate the continued effectiveness of the respirator.
 - 2. Employees must leave the respirator use area:
 - a. To wash their faces and respirator face-pieces, as necessary to prevent eye or skin irritation associated with respirator use; or
 - b. If they detect odors, changes in breathing resistance, or leakage of the face piece; or
 - c. To replace the respirator or the filter, cartridge, or canister elements.
- C. The selection of respirators depends upon the airborne concentration of the respirable contaminant. Protection provided by the respirator is based on the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) calculated as an 8-hour Time Weighted Average (TWA) for hazardous materials. The minimum levels of respiratory protection are given below:
 - 1. If using Qualitative Fit Test (QLFT), any respirator may be used up to a hazardous material concentration of 10 times the occupational exposure limit.
 - 2. If using Quantitative Fit Test (QNFT), any respirator, except $\frac{1}{4}$ or $\frac{1}{2}$ mask negative air purifying respirator, may be used as the fit test allows.
- D. Respirators meeting the above minimum protection requirements are required whenever the TLV is exceeded. Respirators with higher levels of protection may be used as necessary.

E. Canisters, Cartridges, and Filters.

1. Air-purifying respirators must be equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or
2. If no ESLI exists, the employer should implement a change schedule that will ensure that canisters and cartridges are changed before the end of their service lives. Respirator manufacturers can provide assistance in determining a reasonable change program. The change out would depend on the task involved. For some tasks weekly or monthly changes are reasonable. In other instances, end of task or end of shift is reasonable.
3. For protection against particulates, the employer shall provide:
 - a. An supplied air respirator; or
 - b. An air-purifying respirator equipped with a filter certified by NIOSH under 30 CFR part 11 as a high efficiency particulate air (HEPA) filter, or an air purifying respirator equipped with a filter certified for particulates by NIOSH under 42 CFR part 84; or
 - c. For contaminants consisting primarily of particles with mass median aerodynamic (MMAD) of at least 2 micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH.
 - d. When testing air-purifying respirators, the normal filter or cartridge element must be replaced with a high efficiency particulate air (HEPA) or P100 series filter supplied by the same manufacturer.
4. Filtering face-pieces (dust masks) means a negative pressure particulate respirator with filter as an integral part of the face-piece or with the entire face-piece composed of the filtering medium. Single strap masks are not considered a respirator and should not be used in situations that require a respirator.

F. Voluntary use. An employer may provide respirators at the request of employees or permit employees to use their own respirators, if the employer determines that such respirator use will not in itself create a hazard.

1. If the employer determines that any voluntary respirator use is permissible, the employer shall provide the respirator users the following information:
 - a. The employee must read and follow all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
 - b. Employees may not wear their respirator into atmospheres containing contaminants for which the respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect against gases, vapors, or very small solid particles of fumes or smoke.

- c. Employees must keep track of their respirator so that they do not mistakenly use someone else's respirator.
 2. In addition, the employer must establish and implement those elements of a written respiratory protection program necessary to ensure that any employee using a respirator voluntarily is medically able to use that respirator, and that the respirator is cleaned, stored, and maintained so that its use does not present a health hazard to the user.
 3. Exemption: Employers are not required to include in a written respiratory protection program those employees whose only use of respirators involves the voluntary use of filtering face pieces, (dust masks) if exposure is below the TLV.
- G. Procedures for wearing Respirators.
 1. Only a clean, sanitized, and inspected respirator may be worn.
 2. The respirator must be properly donned prior to entering the hazard area.
 3. A positive and negative pressure sealing check must be performed. If successful, any remaining clothing and equipment can be donned, and the worker can proceed to the duties. If not successful, the worker will contact the job supervisor. A QLFT may be required at any time.
 4. Each time the worker exits the work area, the respirator should be removed and washed.
 5. Facial Hair. Personnel subject to wearing air-purifying and supplied-air respiratory protection equipment that requires a seal between the face and respirator shall not have beards, side burns, or mustaches that interfere with the face-to-respirator seal. Facial hair shall be shaven in the area where the sealing surface of the face piece contacts the face, or where excess hair prevents the face piece from sealing on the face.

V. LIMITATIONS

- A. Air-purifying respirators are to be used only in atmospheres that are not oxygen-deficient, (oxygen<19.5%); atmospheres that are not immediately Dangerous to Life or Health (IDLH); or atmospheres that do not exceed the QLFT or QNFT factor.
- B. Air-purifying respirators may not be used beyond the life or concentration recommended by the manufacturer for the cartridge or canister.
- C. Airline respirators are to be used only in atmospheres that are not IDLH.
- D. To use an air purifying respirator, the user must be able to taste, smell or feel the contaminant as a signal for breakthrough.

VI. DONNING THE RESPIRATOR

- A. Air-Purifying Respirators:

1. Prior to donning the respirator, the wearer must:
 - a. Check to ensure that all required parts are present and intact;
 - b. Check to ensure that the device is clean.
 2. The respirator is donned by:
 - a. Placing the device over the face by first fitting the chin into the respirator and pulling the facepiece to the face;
 - b. Positioning the headbands around the crown of the head and the back of the neck;
 - c. Adjusting the headbands, beginning with the lowest ones, until a tight, but comfortable fit is obtained; and
 - d. Performing a positive and negative pressure check.
 - (1) Positive check. Place the palm of the hand or the thumb over the exhalation valve cover and press lightly. Exhale slightly to create a positive pressure inside the facepiece. If no air escapes, proceed to the negative check. If air escapes, readjust the respirator and re-check again.
 - (2) Negative check. Place the palms of the hands over each filter to seal off the inhalation valves. Inhale slightly to create a negative pressure inside the facepiece. If no air enters, proceed with the job duties. If air enters, readjust the respirator and check again
- B. Powered-Air Purifying Respirators:
1. Prior to donning the respirator, the wearer must:
 - a. Check to ensure that all required parts are present and intact;
 - b. Check to ensure that the device is clean;
 - c. Check charge on the battery; and
 - d. Check for air flow by manufacturer's method.
 2. The respirator is donned by:
 - a. Placing the device over the face by first fitting the chin into the respirator and pulling the facepiece to the face;

- b. Positioning the headbands around the crown of the head and the back of the neck;
- c. Adjusting the headbands, beginning with the lowest ones, until a tight, but comfortable fit is obtained; and
- d. Performing a negative pressure check. Each time the respirator is donned a negative pressure check is done by the wearer. The palm of the hand is placed over the end of the breathing tube or filter cartridge, and the wearer inhales slightly, creating a negative pressure inside the facepiece. If no air enters, proceed with the job duties. If air enters, readjust the respirator and check again.
- e. The breathing tube is then connected to a fully-charged battery pack, and the back is fastened to the small of the back.

C. Airline Respirators:

- 1. The facepiece is donned or the hood is placed over the head.
- 2. The airline is connected prior to entering the hazard area.

D. Helmet Type Respirators:

- 1. Prior to donning the respirator, the wearer must:
 - a. Check to ensure all required parts are present and intact.
 - b. Check to ensure the device is clean.
- 2. The respirator is donned by:
 - a. Fitting the filter unit and/or power pack around the waist.
 - b. After adjusting the helmet to fit snugly on the head, the helmet is placed on the head and the chin strap tightened under the chin.
 - c. The face shield is snapped down into position, with the chin protector fitting under the chin and covering any facial hair.
 - d. The power is turned on prior to entering the hazard area.

E. Self -Contained Breathing Apparatus (SCBA)

- 1. Self-Contained Breathing Apparatus shall be inspected monthly.
- 2. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% or less of the manufacturer's recommended pressure level
- 3. The employer shall determine that the regulator and warning devices function properly.

VII. FIT TESTING

- A. Fit testing must be conducted by the department for all face fitting respirators.
- B. The procedure is done at least once each year to a worker prior to issuing a respirator.
- C. QLFT Procedure:
 - 1. The worker dons the respirator (equipped with HEPA and acid/gas filters) and must successfully pass a negative or positive pressure check before proceeding
 - 2. The worker is allowed to wear the respirator for at least 10 minutes before beginning the test.
 - 3. The test procedure is reviewed with the worker.
 - 4. Irritant smoke, Bitrex, banana oil, or saccharin may be used according to the manufacturer's recommendation.
 - 5. Instruct the subject to stand inside an enclosure, (large plastic bag), and keep his or her eyes closed during the test.
 - 6. Direct the stream of smoke, or other chemicals, (see VII, C, 4. above), toward the face-to-facepiece seal, beginning 12 inches away and gradually moving to within one inch of the respirator.
 - 7. Perform the following exercises while the seal is being tested. Each exercise is performed for one minute:
 - a. Normal breathing;
 - b. Deep breathing (deep and regular);
 - c. Turning head from side-to-side, while inhaling;
 - d. Nodding head up-and-down, while inhaling;
 - e. Talking-Talk aloud and slowly for several minutes; counting to 100 or reading the Rainbow Passage is acceptable; "Rainbow Passage. When sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow."
 - f. Jogging in place; and
 - g. Normal breathing.
 - 8. If the irritant smoke produces an involuntary cough, or the material is noticeably observed, stop the test. In this case, the respirator is either rejected, readjusted and retested, or another respirator is selected and tested.

9. Each person who passes the test is given a sensitivity check of the smoke or other material from the same tube to determine if the material observed creates a reaction. Failure to evoke a response voids the fit test.

D. QNFT Procedure - as testing equipment manufacturer recommends.

E. QLFT and QNFT test results must be maintained in the employee's records until the next fit test is administered..

VIII. CLEANING, MAINTENANCE, AND STORAGE PROCEDURES

A. Cleaning:

1. The facepieces are removed from the receptacles and are disassembled.
2. All parts are washed in warm soapy water, and visible residue is removed with a brush.
3. The parts are rinsed in clean water and allowed to air-dry

B. Inspection:

1. All parts are inspected for dirt, residue, pliability of rubber, deterioration and cracks, tears, and holes.
2. The valves are checked for holes, warpage, cracks, and dirt.
3. Check hoods, helmets, and face shields for cracks, tears, abrasions, and distortions.
4. Check air supply for air quality, breaks or kinks in the supply hoses and detachable coupling attachments, tightness of connectors, and manufacturer's recommendations concerning the proper setting of regulators and valves.
5. Check that couplings are compatible with other couplings used on the site.
6. Check the air-purifying elements, carbon monoxide alarm, and high temperature shut-off.
7. Emergency respirators must be inspected once each month to ensure readiness. A tag must be affixed to the storage box, and each inspection recorded on the tag.

A. Storage:

1. All cleaned and inspected respirators should be stored in plastic bags, and than placed in a proper storage cabinet in a non-hazard area.
2. The devices should be stored in a normal position.

IX. SPECIAL PROCEDURES FOR AIRLINE RESPIRATORS

A. Air pumps are routinely used for airline respirators. The intake must be located in a clean, temperature controlled air source.

- A. Compressed breathing air should be tested weekly during use for:
 - 1. Oxygen, 19-23%
 - 2. Carbon Monoxide, less than 20 ppm
 - 3. Hydrocarbon, less than 5 mg/m³
 - 4. Carbon Dioxide, less than 1,000 ppm
- B. The individual performing the tests will be technically competent.
- C. The test results are recorded in a test log.
- D. To avoid freezing of parts in cold weather, the dew point of the air should be maintained no less than 10 F below the lowest recorded temperature.

X. TRAINING

Each year training will consist of the following:

- 1. Basic respiratory protection practices;
- 2. Selection and use of respirators for protection from air contaminants;
- 3. The nature and extent of the hazards to which workers are exposed;
- 4. The structure and operation of the entire respiratory protection program; and
- 5. The legal requirements pertinent to the use of respirators.
- 6. An accurate account of what may happen if the proper device is not worn correctly;
- 7. An explanation of why respirators are necessary;
- 8. A discussion of why these devices are the proper types for the job;
- 9. A discussion of the capabilities and limitations of the respirators;
- 10. Instruction and training in actual use and frequent supervision to assure that the devices continue to be used properly; and
- 11. An opportunity to:
 - 1. Handle the respirator;
 - 2. Have the respirator properly fitted;
 - 3. Test the face-to-face piece seal;
 - 4. Wear the device in normal air for a long familiarity period; and
 - 5. Wear the respirator in a test atmosphere.

XI. PROGRAM EVALUATION

- A. Regular inspections and evaluations are conducted by supervisors to determine the

continued effectiveness of the program.

- B. Frequent, random inspections are conducted by trained supervisors to ensure that respirators are properly selected, cleaned, issued, and maintained, in accordance with this written program.

APPENDIX A

INITIAL MEDICAL QUESTIONNAIRE

- 1. NAME _____
- 2. SSN _____
- 4. PRESENT JOB TITLE _____
- 5. DEPARTMENT _____
- 6 & 7. BUILDING _____
 Kansas State University
 Manhattan, Kansas 66506
- 8. PHONE (913) 532- _____
- 9. INTERVIEWER _____
- 10. DATE _____
- 11. Date of Birth (Month, Day, Year) _____
- 12. Place of Birth _____

OCCUPATIONAL HISTORY

17A. Have you ever worked full time (30 hours per week or more) for 6 months or more?

- 1. Yes ____ 2. No ____

IF YES TO 17A:

17B. Have you ever worked for a year or more in any dusty job?

- 1. Yes ____ 2. No ____ 3. Does not apply ____

Specify job/industry _____

Total Years Worked _____

Was dust exposure: 1. Mild ____ 2. Moderate ____ 3. Severe ____

17C. Have you ever been exposed to gas or chemical fumes in your work?

- 1. Yes ____ 2. No ____

Specify job/industry _____

Total years worked _____

Was exposure: 1. Mild ____ 2. Moderate ____ 3. Severe ____

17D. What has been your usual occupation or job--the one you have worked at the longest?

- 1. Job occupation _____
- 2. Number of years employed in this occupation _____
- 3. Position/job title _____
- 4. Business, field or industry _____

(Record on lines the years you have worked in any of these industries, e.g. 1960-1969)

17 E-J. Have you ever worked:

- E. In a mine? Yes ____ No ____

- F. In a quarry? Yes___ No___
G. In a foundry? Yes___ No___
H. In a pottery? Yes___ No___
I. In a cotton, flax or hemp mill? Yes___ No___
J. With asbestos? Yes___ No___

18. PAST MEDICAL HISTORY

18A. Do you consider yourself to be in good health? Yes___ No___

If "NO" state reason _____

18B. Have you any defect of vision? Yes___ No___

If "YES" state nature of defect _____

18C. Have you any hearing defect? Yes___ No___

If "YES" state nature of defect _____

18D. Are you suffering from or have you ever suffered from:

- a. Epilepsy (or fits, seizures, convulsions)? Yes___ No___
b. Rheumatic fever? Yes___ No___
c. Kidney disease? Yes___ No___
d. Bladder disease? Yes___ No___
e. Diabetes? Yes___ No___
f. Jaundice? Yes___ No___

19. CHEST COLDS AND CHEST ILLNESSES

19A. If you get a cold, does it usually go to your chest? (Usually means more than 1/2 the time)

1. Yes___ 2. No___ 3. Don't get colds___

20A. During the past 3 years, have you had any illnesses that have kept you off work, indoors at home, or in bed?

1. Yes___ 2. No___

IF YES TO 20A:

20B. Did you produce phlegm with any of these chest illnesses?

1. Yes___ 2. No___ 3. Does Not Apply___

20C. In the last 3 years, how many such illnesses with (increased) phlegm did you have which lasted a week or more?

Number of illnesses___ No such illnesses___

21. Did you have any lung trouble before the age of 16?

1. Yes___ 2. No___

22. Have you ever had any of the following?

1A. Attacks of bronchitis? Yes___ No___

IF YES TO 1A:

B. Was it confirmed by a doctor? Yes___ No___

C. At what age was your first attack?

Age in Years _____ Does not apply _____

2A. Pneumonia (include bronchopneumonia)? Yes___ No___

IF YES TO 2A:

B. Was it confirmed by a doctor? Yes___ No___ Does not apply ___

C. At what age did you first have it?

Age in years _____ Does not apply _____

3A. Hay Fever? Yes___ No___

IF YES TO 3A:

B. Was it confirmed by a doctor? Yes___ No___ Does not apply ___

C. At what age did it start?

Age in years _____ Does not apply _____

23A. Have you ever had chronic bronchitis? Yes___ No___

IF YES TO 23A:

B. Do you still have it? Yes___ No___ Does not apply ___

C. Was it confirmed by a doctor? Yes___ No___ Does not apply ___

D. At what age did it start?

Age in years _____ Does not apply _____

24A. Have you ever had emphysema? Yes___ No___

IF YES TO 24A:

B. Do you still have it? Yes___ No___ Does not apply ___

C. Was it confirmed by a doctor? Yes___ No___ Does not apply ___

D. At what age did it start?

Age in years _____ Does not apply _____

25A. Have you ever had asthma? Yes___ No___

IF YES TO 25A:

B. Do you still have it? Yes___ No___ Does not apply ___

C. Was it confirmed by a doctor? Yes___ No___ Does not apply ___

D. At what age did it start? Age in years _____ Does not apply _____

E. If you no longer have it, at what age did it stop?

Age stopped _____ Does not apply _____

26. Have you ever had:

A. Any other chest illness? Yes___ No___

If yes, please specify _____

B. Any chest operations? Yes___ No___

If yes, please specify _____

27A. Has a doctor ever told you that you had heart trouble? 1. Yes___ 2. No___

IF YES TO 27A:

B. Have you ever had treatment for heart trouble in the past 10 years?

1. Yes ___ 2. No ___

28A. Has a doctor ever told you that you had high blood pressure? 1. Yes ___ 2. No ___

IF YES TO 28A:

B. Have you had any treatment for high blood pressure (hypertension) in the past 10 years?

1. Yes___ 2. No___ Does not apply___

29. When did you last have your chest X-rayed? (year) _____

30. Where did you last have your chest X-rayed (if known)? _____

What was the outcome? _____

FAMILY HISTORY

31. Were either of your natural parents ever told by a doctor that they had a chronic lung condition such as (circle correct answer):

A. Chronic Bronchitis? 1. Yes___ 2. No___3. Don't Know (Father or Mother)

B. Emphysema? 1. Yes___ 2. No___3. Don't Know (Father or Mother)

C. Asthma? 1. Yes___ 2. No___3. Don't Know (Father or Mother)

D. Lung cancer? 1. Yes___ 2. No___3. Don't Know (Father or Mother)

E. Other chest conditions 1. Yes___ 2. No___3. Don't Know (Father or Mother)

F. Is parent currently alive? 1. Yes___ 2. No___3. Don't Know (Father or Mother)

G. Please Specify:

Father, age if living_____ Age at death_____ Don't know_____

Mother, age if living_____ Age at death_____ Don't know_____

H. Please specify cause of death

COUGH

32A. Do you usually have a cough? (Count a cough with first smoke or on first going out of doors. Exclude clearing of throat.) [If no, skip to question 32C.].

1. Yes ___ 2. No ___

B. Do you usually cough as much as 4 to 6 times a day 4 or more days out of the week?

1. Yes ___ 2. No ___

C. Do you usually cough at all on getting up or first thing in the morning? 1. Yes ___ 2. No ___

D. Do you usually cough at all during the rest of the day or at night? 1. Yes ___ 2. No ___

IF YES TO ANY OF ABOVE (32A, B, C, OR D) ANSWER THE FOLLOWING. IF NO TO ALL, CHECK DOES NOT APPLY AND SKIP TO 34A.

E. Do you usually cough like this on most days for 3 consecutive months or more during the year

1. Yes___ 2. No___ 3. Does not apply___

F. For how many years have you had the cough? Number of years _____ Does not apply _____

33A. Do you usually bring up phlegm from your chest?

(Count phlegm with the first smoke or on first going out of doors.) 1. Yes ___ 2. No ___

(Exclude phlegm from the nose. Count swallowed phlegm.) 1. Yes___ 2. No___ 3. Does not apply___

(If no skip to 33C)

B. Do you usually bring up phlegm like this 1. Yes ___ 2. No ___

as much as twice a day 4 or more days out of the week? 1. Yes___ 2. No___ 3. Does not apply___

C. Do you usually bring up phlegm at all on getting up or first thing in the morning?

1. Yes___ 2. No___ 3. Does not apply___

D. Do you usually bring up phlegm at all during the rest of the day or at night?

1. Yes___ 2. No___ 3. Does not apply___

IF YES TO ANY OF THE ABOVE (33A, B, C, OR D), ANSWER THE FOLLOWING;

IF NO TO ALL, CHECK DOES NOT APPLY AND SKIP TO 34A.

E. Do you bring up phlegm like this on most days for 3 consecutive months or more during the year?

1. Yes___ 2. No___ 3. Does not apply___

F. For how many years have you had trouble with phlegm?

Number of years _____ Does not apply _____

EPISODES OF COUGH AND PHLEGM

34A. Have you had periods or episodes of (increased*) cough and phlegm lasting for 3 weeks or more each year?

1. Yes ___ 2. No ___

*(For persons who usually have cough and/or phlegm)

IF YES TO 34A

B. For how long have you had at least 1 such episode per year? Number of years _____ Does not apply _____

WHEEZING

35A. Does your chest ever sound wheezy or whistling? 1. When you have a cold? 1. Yes ___ 2. No ___

2. Occasionally apart from colds? 1. Yes ___ 2. No ___

3. Most days or nights? 1. Yes ___ 2. No ___

IF YES TO 1, 2, OR 3 IN 35A

B. For how many years has this been present? Number of years _____ Does not apply _____

36A. Have you ever had an attack of wheezing that has made you feel short of breath?

1. Yes ___ 2. No ___

IF YES TO 36A

B. How old were you when you had your first such attack? Age in years _____ Does not apply _____

C. Have you had 2 or more such episodes? 1. Yes ___ 2. No ___ 3. Does not apply ___

D. Have you ever required medicine or treatment for the(se) attack(s)?

1. Yes ___ 2. No ___ 3. Does not apply ____

BREATHLESSNESS

37. If disabled from walking by any condition other than heart or lung disease, please describe and proceed to question 39A.

Nature of condition(s) _____

38A. Are you troubled by shortness of breath when hurrying on the level or walking up a short hill?

1. Yes ___ 2. No ___

B. Do you have to walk slower than people at your age on the level because of breathlessness?

1. Yes ___ 2. No ___ 3. Does not apply ____

C. Do you ever have to stop for breath when walking at your own pace on the level?

1. Yes ___ 2. No ___ 3. Does not apply ____

D. Do you ever have to stop for breath after walking about 100 yards (or after a few minutes) on the level?

1. Yes ___ 2. No ___ 3. Does not apply ____

E. Are you too breathless to leave the house or breathless on dressing or climbing one flight of stairs?

1. Yes ___ 2. No ___ 3. Does not apply ____

TOBACCO SMOKING

39A. Have you ever smoked cigarettes? (No means less than 20 packs of cigarettes or 12 oz. of tobacco in a lifetime or less than 1 cigarette a day for a year.)

1. Yes ___ 2. No ___

IF YES TO 39A

B. Do you now smoke cigarettes (as of one month ago)? 1. Yes ___ 2. No ___ 3. Does not apply ____

C. How old were you when you first started regular cigarette smoking?

1. Yes ___ 2. No ___ 3. Does not apply ____

D. If you have stopped smoking cigarettes completely, how old were you when you stopped?

Age stopped _____ Check if still smoking _____ Does not apply _____

E. How many cigarettes do you smoke per day now? Cigarettes per day _____ Does not apply _____

F. On the average of the entire time you smoked, how many cigarettes did you smoke per day?

Cigarettes per day _____ Does not apply _____

G. Do or did you inhale the cigarette smoke?

1. Does not apply ____

2. Not at all ____

3. Slightly ____

4. Moderately ____

5. Deeply ____

40A. Have you ever smoked a pipe regularly? (Yes means more than 12 oz. of tobacco in a lifetime.)

1. Yes ___ 2. No ___

IF YES TO 40A:

FOR PERSONS WHO HAVE EVER SMOKED A PIPE

B. 1. How old were you when you started to smoke a pipe regularly? Age _____

2. If you have stopped smoking a pipe completely, how old were you when you stopped? Age stopped _____

Check if still smoking pipe _____

Does not apply _____

C. On the average over the entire time you smoked a pipe, how much pipe tobacco did you smoke per week?

_____ oz. per week (a standard pouch of tobacco contains 1 1/2 oz.)

D. How much pipe tobacco are you smoking now? _____oz. per week Not currently smoking a pipe _____

E. Do you or did you inhale the pipe smoke?

1. Never smoked _____

2. Not at all _____

3. Slightly _____

4. Moderately _____

5. Deeply _____

41A. Have you ever smoked cigars regularly? (Yes means more than 1 cigar a week for a year)

1. Yes ___ 2. No ___

IF YES TO 41A:

FOR PERSONS WHO HAVE EVER SMOKED CIGARS

B. 1. How old were you when you started to smoke a cigar regularly? Age _____

2. If you have stopped smoking cigars completely, how old were you when you stopped?

Age stopped _____

Check if still smoking cigars _____

Does not apply _____

C. On the average over the entire time you smoked cigars, how many cigars did you smoke per week?

Cigars per week _____

Does not apply _____

D. How many cigars are you smoking per week now?

Cigars per week _____

Check if not smoking cigars currently _____

E. Do you or did you inhale the cigar smoke?

1. Never smoked _____

2. Not at all _____

3. Slightly _____

4. Moderately _____

5. Deeply _____

Signature _____ Date _____

Mandatory medical questionnaire as modified from the Federal Register/Vol. 51, No. 119/Friday, June 20, 1986/Rules and Regulations. Questions regarding sex, marital status, or race have been removed from the questionnaire.

Environmental Health & Safety, January, 2000

APPENDIX B

PERIODIC MEDICAL QUESTIONNAIRE

1. NAME _____

2. SSN _____

4. PRESENT JOB TITLE _____

5. DEPARTMENT _____

6 & 7. BUILDING _____

Kansas State University
Manhattan, Kansas 66506

8. PHONE (913) 532- _____

9. INTERVIEWER _____

10. DATE _____

12. OCCUPATIONAL HISTORY

12A. In the past year did you work full time (30 hours per week or more) for 6 months or more?

1. Yes___ 2. No___

IF YES TO 12A:

12B. In the past year, did you work in a dusty job? 1. Yes___ 2. No___ 3. Does not apply___

12C. Was dust exposure: 1. Mild___ 2. Moderate___ 3. Severe___

12D. In the past year, were you exposed to gas or chemical fumes in your work? 1. Yes___ 2. No___

12E. Was exposure: 1. Mild___ 2. Moderate___ 3. Severe___

12F. In the past year, what was your:

1. Job/occupation? _____

2. Position/job title? _____

13. RECENT MEDICAL HISTORY

13A. Do you consider yourself to be in good health? Yes___ No___

If NO, state reason _____

13B. In the past year, have you developed:

Epilepsy? Yes___ No___

Rheumatic fever? Yes___ No___

Kidney disease? Yes___ No___

Bladder disease? Yes___ No___

Diabetes? Yes___ No___

Jaundice? Yes___ No___

Cancer? Yes___ No___

14. CHEST COLDS AND CHEST ILLNESSES

14A. If you get a cold, does it usually go to your chest (usually means more than 1/2 the time)?

1. Yes___ 2. No___ 3. Don't get colds___

15A. During the past year, have you had any chest illnesses that have kept you off work, indoors at home, or in bed?

1. Yes___ 2. No___ 3. Does not apply___

IF YES TO 15A:

15B. Did you produce phlegm with any of these chest illnesses? 1. Yes___ 2. No___ 3. Does not apply___

15C. In the past year, how many such illnesses with (increased) phlegm did you have which lasted a week or more?

Number of illnesses ___ No such illnesses ___

16. RESPIRATORY SYSTEM

In the past year have you had (comment further on positive answers):

- a. Asthma Yes___ No___
- b. Bronchitis Yes___ No___
- c. Hay Fever Yes___ No___
- d. Other Allergies Yes___ No___
- e. Pneumonia Yes___ No___
- f. Tuberculosis Yes___ No___
- g. Chest Surgery Yes___ No___
- h. Other Lung Problems Yes___ No___
- i. Heart Disease Yes___ No___

Do you have (comment further on positive answers):

- k. Frequent Colds Yes___ No___
- l. Chronic Cough Yes___ No___
- m. Shortness of breath when walking or climbing one flight of stairs Yes___ No___

Do you (comment further on positive answers):

- n. Wheeze Yes___ No___
 - o. Cough up phlegm Yes___ No___
 - p. Smoke cigarettes Yes___ No___
- Packs per day ___ How many years ___

Comment Further on Positive Answers:

Date _____ Signature _____

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