

APPENDIX B-1  
RESPIRATORY QUESTIONNAIRE

A. IDENTIFICATION DATA

PLANT \_\_\_\_\_ SOCIAL SECURITY NO. \_\_\_\_\_  
DAY MONTH YEAR  
(figures) (last 2 digits)

NAME \_\_\_\_\_ DATE OF INTERVIEW \_\_\_\_\_  
(Surname)  
 \_\_\_\_\_ DATE OF BIRTH \_\_\_\_\_  
(First Names) M F

ADDRESS \_\_\_\_\_ AGE \_\_\_\_\_ (8,9) SEX \_\_\_\_\_ (10)  
 \_\_\_\_\_ RAGE  W  N  IND.  OTHER (11)

INTERVIEWER: 1 2 3 4 5 6 7 8 (12)

WORK SHIFT: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ 3rd \_\_\_\_\_ (13) STANDING HEIGHT \_\_\_\_\_ (14, 15)

PRESENT WORK AREA \_\_\_\_\_ WEIGHT \_\_\_\_\_ (16, 18)

If working in more than one specified work area, X area where most of the work shift is spent. If "other," but spending 25% of the work shift in one of the specified work areas, classify in that work area. If carding department employee, check area within that department where most of the work shift is spent (if in doubt, check "throughout"). For work areas such as spinning and weaving where many work rooms may be involved, be sure to check the specific work room to which the employee is assigned - if he works in more than one work room within a department classify as 7 (all) for that department.

	Workroom Number	(19) Open	(20) Pick	Area	(21) Card #1	(22) #2	(23) Spin	(24) Wind	(25) Twist	(26) Spool	(27) Warp	(28) Slash	(29) Weave	(30) Other
AT RISK (cotton & cotton blend)	1			Cards										
	2			Draw										
	3			Comb										
	4			Rove										
	5			Thru Out										
	6													
	7 (all)													
Control (synthetic & wool)	8													
Ex-Worker (cotton)	9													

Use actual wording of each question. Put X in appropriate square after each question. When in doubt record 'No'.  
When no square, circle appropriate answer.

**B. COUGH**

(on getting up)†  
Do you usually cough first thing in the morning? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (31)  
(Count a cough with first smoke or on "first going out of doors."  
Exclude clearing throat or a single cough.)

Do you usually cough during the day or at night? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (32)  
(Ignore an occasional cough.)

If 'Yes' to either question (31-32):

Do you cough like this on most days for as much as three months a year? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (33)

Do you cough on any particular day of the week? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (34)

(1) (2) (3) (4) (5) (6) (7)

If 'Yes': Which day? Mon. Tues. Wed. Thur. Fri. Sat Sun. \_\_\_\_\_ (35)

**C. PHLEGM** or alternative word to suit local custom.

(on getting up)†  
Do you usually bring up any phlegm from your chest first thing in the morning? (Count phlegm with the first smoke or on "first going out of doors." Exclude phlegm from the nose. Count swallowed phlegm.) \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (36)

Do you usually bring up any phlegm from your chest during the day or at night? (Accept twice or more.) \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (37)

If 'Yes' to either question (36) or (37):

Do you bring up phlegm like this on most days for as much as three months each year? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (38)

If 'Yes' to question (33) or (38):

(cough)  
How long have you had this phlegm? \_\_\_\_\_ (1)  2 years or less \_\_\_\_\_ (39)  
(Write in number of years) \_\_\_\_\_ (2)  More than 2 years-9 years  
\_\_\_\_\_ (3)  10-19 years  
\_\_\_\_\_ (4)  20+ years

†These words are for subjects who work at night

**D. CHEST ILLNESSES**

In the past three years, have you had a period of (increased) cough and phlegm lasting for 3 weeks or more? \_\_\_\_\_ (1)  No \_\_\_\_\_ (40)  
\_\_\_\_\_ (2)  Yes, only one period  
\_\_\_\_\_ (3)  Yes, two or more periods

†For subjects who usually have phlegm

During the past 3 years have you had any chest illness which has kept you off work, indoors at home or in bed? (For as long as one week, flu?) \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (41)

If 'Yes' to (41): Did you bring up (more) phlegm than usual in any of these illnesses? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (42)

If 'Yes' to (42): During the past three years have you had: Only one such illness with increased phlegm? \_\_\_\_\_ (1)  \_\_\_\_\_ (43)

More than one such illness: \_\_\_\_\_ (2)  \_\_\_\_\_ (44)

Br. Grade \_\_\_\_\_

**E. TIGHTNESS**

Does your chest ever feel tight or your breathing become difficult? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (45)

Is your chest tight or your breathing difficult on any particular day of the week? (after a week or 10 days away from the mill) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (46)

If 'Yes': Which day? Mon. (1) (3) Tues. (2) (4) Wed. (5) Thur. (6) Fri. (7) Sat. (8) Sun. (47)  
Sometimes Always

If 'Yes' Monday: At what time on Monday does your chest feel tight or your breathing difficult? 1  Before entering the mill (48)  
2  After entering the mill

(Ask only if NO to Question (45))

In the past, has your chest ever been tight or your breathing difficult on any particular day of the week? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (49)

If 'Yes': Which day? Mon. (1) (3) Tues. (2) (4) Wed. (5) Thur. (6) Fri. (7) Sat. (8) Sun. (50)  
Sometimes Always

**F. BREATHLESSNESS**

If disabled from walking by any condition other than heart or lung disease put "X" here and leave questions (52-60) unasked.  (51)

Are you ever troubled by shortness of breath, when hurrying on the level or walking up a slight hill? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (52)

If 'No', grade is 1. If 'Yes', proceed to next question

Do you get short of breath walking with other people at an ordinary pace on the level? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (53)

If 'No', grade is 2. If 'Yes', proceed to next question

Do you have to stop for breath when walking at your own pace on the level? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (54)

If 'No', grade is 3. If 'Yes', proceed to next question

Are you short of breath on washing or dressing? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (55)

If 'No', grade is 4. If 'Yes', grade is 5.

Dyspnea Grd. \_\_\_\_\_ (56)

**ON MONDAYS:**

Are you ever troubled by shortness of breath, when hurrying on the level or walking up a slight hill? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (57)

If 'No', grade is 1. If 'Yes', proceed to next question

Do you get short of breath walking with other people at an ordinary pace on the level? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (58)

If 'No', grade is 2. If 'Yes', proceed to next question

Do you have to stop for breath when walking at your own pace on the level? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (59)

If 'No', grade is 3. If 'Yes', proceed to next question

Are you short of breath on washing or dressing? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (60)

If 'No', grade is 4. If 'Yes', grade is 5

B. Grd. \_\_\_\_\_ (61)

**G. OTHER ILLNESSES AND ALLERGY HISTORY**

Do you have a heart condition for which you are under a doctor's care? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (62)

Have you ever had asthma? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (63)

If 'Yes', did it begin: (1)  Before age 30

(2)  After age 30

If 'Yes' before 30: did you have asthma before ever going to work in a textile mill? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (64)

Have you ever had hay fever or other allergies (other than above)? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (65)

**H. TOBACCO SMOKING\***

Do you smoke?

Record 'Yes' if regular smoker up to one month ago. (Cigarettes, cigar or pipe) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (66)

If 'No' to (63).

Have you ever smoked? (Cigarettes, cigars, pipe. Record 'No' if subject has never smoked as much as one cigarette a day, or 1 oz. of tobacco a month, for as long as one year.) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (67)

If 'Yes' to (63) or (64); what have you smoked and for how many years? (Write in specific number of years in the appropriate square)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Years	(<5)	(5-9)	(10-14)	(15-19)	(20-24)	(25-29)	(30-34)	(35-39)	(>40)	
Cigarettes										(68)
Pipe										(69)
Cigars										(70)

If cigarettes, how many packs per day? (Write in number of cigarettes)

- (1)  less than 1/2 pack (71)  
 (2)  1/2 pack, but less than 1 pack  
 (3)  1 pack, but less than 1-1/2 packs  
 (4)  1-1/2 packs or more

Number of pack years: \_\_\_\_\_ (72,73)

If an ex-smoker (cigarettes, cigar or pipe), how long since you stopped? \_\_\_\_\_ (74)  
 (Write in number of years)

- (1)  0-1 year  
 (2)  1-4 years  
 (3)  5-9 years  
 (4)  10+ years

\*Have you changed your smoking habits since last interview? If yes, specify what changes.

**I. OCCUPATIONAL HISTORY\*\***

Have you ever worked in: A foundry? (As long as one year) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (75)

Stone or mineral mining, quarrying or processing? (As long as one year) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (76)

Asbestos milling or processing? (Ever) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (77)

Other dusts, fumes or smoke? If yes, specify: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ (78)

Type of exposure \_\_\_\_\_

Length of exposure \_\_\_\_\_

\*\* Ask only on first interview.

At what age did you first go to work in a textile mill? (Write in specific age in appropriate square).

(1)	(2)	(3)	(4)	(5)	(6)
<20	20-24	25-29	30-34	35-39	40+

When you first worked in a textile mill, did you work with (1)  Cotton or cotton blend (79)

(2)  Synthetic or wool (80)

Appendix B-II

Respiratory Questionnaire  
For  
Non-Textile Workers for the  
Cotton Industry

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Identification No.

Interviewer Code

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Location

Date of Interview

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**A. IDENTIFICATION**

<b>1. NAME</b> (Last) (First) (Middle Initial)	<b>3. PHONE NUMBER</b> AREA CODE ( ) NO.	<b>4. SOCIAL SECURITY #</b> (optional see below) <div style="border: 1px solid black; height: 15px; width: 100%;"></div>
<b>2. CURRENT ADDRESS</b> (Number, Street, or Rural Route, City or Town, County, State, Zip Code)	<b>5. BIRTHDATE</b> (Mo., Day, Yr.)	<b>6. AGE LAST BIRTHDAY</b>
	<b>7. SEX</b> 1 <input type="checkbox"/> Male    2 <input type="checkbox"/> Female	
	<b>8. ETHNIC GROUP OR ANCESTRY</b> 1. <input type="checkbox"/> White, not of Hispanic Origin 2. <input type="checkbox"/> Black, not of Hispanic Origin 3. <input type="checkbox"/> Hispanic 4. <input type="checkbox"/> American Indian or Alaskan Native 5. <input type="checkbox"/> Asian or Pacific Islander 6. <input type="checkbox"/> Other: _____	
<b>9. STANDING HEIGHT</b> _____ (cm)	<b>10. WEIGHT</b> _____	<b>11. WORK SHIFT</b> 1st <input type="checkbox"/> 2nd <input type="checkbox"/> 3rd <input type="checkbox"/>

**12. PRESENT WORK AREA**  
 Please indicate primary assigned work area and percent of time spent at that site. If at other locations, please indicate and note percent of time for each.

<b>PRIMARY WORK AREA</b>	
<b>SPECIFIC JOB</b>	

- 13. APPROPRIATE INDUSTRY**
- |  |   |  |
|--|---|--|
| 1 <input type="checkbox"/> Ginning             | 3 <input type="checkbox"/> Cotton Warehouse | 5 <input type="checkbox"/> Cotton Classification |
| 2 <input type="checkbox"/> Cottonseed Oil Mill | 4 <input type="checkbox"/> Utilization      | 6 <input type="checkbox"/> Cotton Ginning        |

**(Furnishing your Social Security number is voluntary. Your refusal to provide this number will not affect any right, benefit, or privilege to which you would be entitled if you did provide your Social Security number. Your Social Security number is being requested since it will permit use in future determinations in statistical research studies.)**



### C. SYMPTOMS

Use actual wording of each question. Put X in appropriate square after each question. When in doubt record "No".

#### COUGH

1. Do you usually cough first thing in the morning?  
(on getting up)\*  
(Count a cough with first smoke or on  
"first going out of doors". Exclude  
clearing throat or a single cough.) 1  Yes 2  No

2. Do you usually cough during the day or at night?  
(Ignore an occasional cough.) 1  Yes 2  No

If YES to either question 1 or 2:

3. Do you cough like this on most days for as much as  
three months a year? 1  Yes 2  No 9  NA

4. Do you cough on any particular day of the week? 1  Yes 2  No

If YES:

5. Which day? Mon. Tue. Wed. Thur. Fri. Sat. Sun. \_\_\_\_\_

#### PHLEGM

6. Do you usually bring up any phlegm from your  
chest first thing in the morning? (on getting  
up)\* (Count phlegm with the first smoke or on  
"first going out of doors." Exclude phlegm  
from the nose. Count swallowed phlegm.) 1  Yes 2  No

7. Do you usually bring up any phlegm from your  
chest during the day or at night?  
(Accept twice or more.) 1  Yes 2  No

If YES to either question 6 or 7:

8. Do you bring up phlegm like this on most days  
for as much as three months each year? 1  Yes 2  No

If YES to question 3 or 8:

9. How long have you had this phlegm? (cough)  
(Write in number of years) (1)  2 years or less  
(2)  More than 2 years - 9 years  
(3)  10-19 years  
(4)  20+ years

\*These words are for subjects who work at night



CHEST ILLNESS

10. In the past three years, have you had a period of (increased) cough and phlegm lasting for 3 weeks or more?

- (1)  No  
(2)  Yes, only one period  
(3)  Yes, two or more periods

For subjects who usually have phlegm:

11. During the past 3 years have you had any chest illness which has kept you off work, indoors at home or in bed? (For as long as one week, flu?)

- 1  Yes    2  No

If YES to 11:

12. Did you bring up (more) phlegm than usual in any of these illnesses?

- 1  Yes    2  No

If YES to 12: During the past three years have you had:

13. Only one such illness with increased phlegm?

- 1  Yes    2  No

14. More than one such illness:

- 1  Yes    2  No

Br. Brade \_\_\_\_\_

TIGHTNESS

15. Does your chest ever feel tight or your breathing become difficult?

- 1  Yes    2  No

16. Is your chest tight or your breathing difficult on any particular day of the week? (after a week or 10 days away from the mill)

- 1  Yes    2  No

17. If YES, Which day? Mon.    (3) Tues.    (4) Wed.    (5) Thur.    (6) Fri.    (7) Sat.    (8) Sun.  
(1) Sometimes    (2) Always

18. If YES Monday: At what time on Monday does your chest feel tight or your breathing difficult?

- Before entering mill  
 After entering mill

(ASK ONLY IF NO TO QUESTION 15)

19. In the past, has your chest ever been tight or your breathing difficult on any particular day of the week?

- 1  Yes    2  No

20. If YES, Which day? Mon.    (3) Tues.    (4) Wed.    (5) Thur.    (6) Fri.    (7) Sat.    (8) Sun.  
(1) Sometimes    (2) Always

**BREATHLESSNESS**

21. If disabled from walking by any condition other than heart or lung disease put "X" in the space and leave questions (22-30) unasked.
22. Are you ever troubled by shortness of breath, when hurrying on the level or walking up a slight hill? 1  Yes 2  No

If NO, grade is 1. If YES, proceed to next question

23. Do you get short of breath walking with other people at an ordinary pace on the level? 1  Yes 2  No

If NO, grade is 2. If YES, proceed to next question

24. Do you have to stop for breath when walking at your own pace on the level? 1  Yes 2  No

If NO, grade is 3. If YES, proceed to next question

25. Are you short of breath on washing or dressing? 1  Yes 2  No

If NO, grade is 4. If YES, grade is 5.

26. Dyspnea Grd. \_\_\_\_\_

**ON MONDAYS:**

27. Are you ever troubled by shortness of breath, when hurrying on the level or walking up a slight hill? 1  Yes 2  No

If NO, grade is 1. If YES, proceed to next question

28. Do you get short of breath walking with other people at an ordinary pace on the level? 1  Yes 2  No

If NO, grade is 2, If YES, proceed to next question

29. Do you have to stop for breath when walking at your own pace on the level? 1  Yes 2  No

If NO, grade is 3. If YES, proceed to next question

30. Are you short of breath on washing or dressing? 1  Yes 2  No

If NO, grade is 4. If YES, grade is 5

31. B. Grd. \_\_\_\_\_

**OTHER ILLNESSES AND ALLERGY HISTORY**

32. Do you have a heart condition for which you are under a doctor's care? 1  Yes 2  No

**OTHER ILLNESSES AND ALLERGY HISTORY CONTINUED:**

33. Have you ever had asthma? 1  Yes 2  No  
 If yes, did it begin: (1) Before age 30   
 (2) After age 30
34. If yes before 30: did you have asthma before ever going to work in a textile mill? 1  Yes 2  No
35. Have you ever had hay fever or other allergies (other than above)? 1  Yes 2  No

**TOBACCO SMOKING**

36. Do you smoke? 1  Yes 2  No  
 Record Yes if regular smoker up to one month ago. (Cigarettes, cigar or pipe)
- If NO to (33).
37. Have you ever smoked? (Cigarettes, cigars, pipe. Record NO if subject has never smoked as much as one cigarette a day, or 1 oz. of tobacco a month, for as long as one year.) 1  Yes 2  No

If Yes to (33) or (34): what have you smoked for how many years? (Write in specific number of years in the appropriate square)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Years	(<5)	(5-9)	(10-14)	(15-19)	(20-24)	(25-29)	(30-34)	(35-39)	(>40)
38. Cigarettes									
39. Pipe									
40. Cigars									

41. If cigarettes, how many packs per day? Write in number of cigarettes \_\_\_\_\_  
 Less than 1/2 pack  
 1/2 pack, but less than 1 pack  
 1 pack, but less than 1 1/2 packs  
 1-1/2 packs or more
42. Number of pack years: \_\_\_\_\_
43. If an ex-smoker (cigarettes, cigar or pipe), how long since you stopped? (Write in number of years.) \_\_\_\_\_  
 0-1 year  
 1-4 years  
 5-9 years  
 10+ years

OCCUPATIONAL HISTORY

Have you ever worked in:

44. A foundry? (As long as one year)                    1  Yes    2  No
45. Stone or mineral mining, quarrying or  
processing? (As long as one year)                    1  Yes    2  No
46. Asbestos milling or processing? (Ever)                    1  Yes    2  No
47. Cotton or cotton blend mill? (For controls only)                    1  Yes    2  No
48. Other dusts, fumes or smoke? If yes, specify.                    1  Yes    2  No

Type of exposure \_\_\_\_\_

Length of exposure \_\_\_\_\_

APPENDIX B-III  
RESPIRATORY QUESTIONNAIRE

A. IDENTIFICATION DATA

PLANT \_\_\_\_\_ SOCIAL SECURITY NO. \_\_\_\_\_  
DAY MONTH YEAR  
(figures) (last 2 digits)

NAME \_\_\_\_\_ DATE OF INTERVIEW \_\_\_\_\_  
(Surname)

\_\_\_\_\_  
(First Names) DATE OF BIRTH \_\_\_\_\_  
M F

ADDRESS \_\_\_\_\_ AGE \_\_\_\_\_ (8,9) SEX \_\_\_\_\_ (10)  
 \_\_\_\_\_ RAGE 

W	N	IND.	OTHER
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 (11)

INTERVIEWER: 1 2 3 4 5 6 7 8 (12)

WORK SHIFT: 1st \_\_\_\_\_ 2nd \_\_\_\_\_ 3rd \_\_\_\_\_ (13) STANDING HEIGHT \_\_\_\_\_ (14, 15)

PRESENT WORK AREA \_\_\_\_\_ WEIGHT \_\_\_\_\_ (16, 18)

If working in more than one specified work area, X area where most of the work shift is spent. If "other," but spending 25% of the work shift in one of the specified work areas, classify in that work area. If carding department employee, check area within that department where most of the work shift is spent (if in doubt, check "throughout"). For work areas such as spinning and weaving where many work rooms may be involved, be sure to check the specific work room to which the employee is assigned -- if he works in more than one work room within a department classify as 7 (all) for that department.

	Workroom Number	(19) Open	(20) Pick	Area	(21) Card #1	(22) #2	(23) Spin	(24) Wind	(25) Twist	(26) Spool	(27) Warp	(28) Slash	(29) Weave	(30) Other
AT RISK (cotton & cotton blend)	1			Cards										
	2			Draw										
	3			Comb										
	4			Rove										
	5			Thru Out										
	6													
	7 (all)													
Control (synthe- tic & wool)	8													
Ex-Work- er (cotton)	9													

Use actual wording of each question. Put X in appropriate square after each question. When in doubt record 'No'.  
When no square, circle appropriate answer.

**B. COUGH**

(on getting up)†  
Do you usually cough first thing in the morning? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (31)  
(Count a cough with first smoke or on "first going out of doors."  
Exclude clearing throat or a single cough.)

Do you usually cough during the day or at night? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (32)  
(Ignore an occasional cough.)

If 'Yes' to either question (31-32):

Do you cough like this on most days for as much as three months a year? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (33)

Do you cough on any particular day of the week? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (34)

(1) (2) (3) (4) (5) (6) (7)

If 'Yes': Which day? Mon. Tues. Wed. Thur. Fri. Sat Sun. \_\_\_\_\_ (35)

**C. PHLEGM** or alternative word to suit local custom.

(on getting up)†  
Do you usually bring up any phlegm from your chest first thing in the morning? (Count phlegm with the first smoke or on "first going out of doors." Exclude phlegm from the nose. Count swallowed phlegm.) \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (36)

Do you usually bring up any phlegm from your chest during the day or at night? (Accept twice or more.) \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (37)

If 'Yes' to either question (36) or (37):

Do you bring up phlegm like this on most days for as much as three months each year? \_\_\_\_\_ Yes \_\_\_ No \_\_\_\_\_ (38)

If 'Yes' to question (33) or (38):

(cough)  
How long have you had this phlegm? \_\_\_\_\_ (39)  
(Write in number of years)  
(1)  2 years or less  
(2)  More than 2 years-9 years  
(3)  10-19 years  
(4)  20+ years

†These words are for subjects who work at night

**D. CHEST ILLNESSES**

In the past three years, have you had a period of (increased) cough and phlegm lasting for 3 weeks or more? \_\_\_\_\_ (1)  No (40)  
\_\_\_\_\_ (2)  Yes, only one period  
\_\_\_\_\_ (3)  Yes, two or more periods

†For subjects who usually have phlegm

During the past 3 years have you had any chest illness which has kept you off work, indoors at home or in bed? (For as long as one week, flu?) Yes \_\_\_ No \_\_\_\_\_ (41)

If 'Yes' to (41): Did you bring up (more) phlegm than usual in any of these illnesses? Yes \_\_\_ No \_\_\_\_\_ (42)

If 'Yes' to (42): During the past three years have you had: Only one such illness with increased phlegm? (1)  (43)

More than one such illness: (2)  (44)

Br. Grade \_\_\_\_\_

APPENDIX C - SPIROMETRY PREDICTION TABLES FOR NORMAL MALES AND FEMALES

TABLE 1. PREDICTED FVC FOR Males (CHUDCOIL, ET AL; AM FEV RESPIR DIS. 1976, 113, 587.)

HT	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65
60.0	3.44	3.59	3.75	3.91	3.72	3.66	3.61	3.55	3.49	3.43	3.37	3.32	3.26	3.20	3.14	3.08	3.03	2.97	2.91	2.85	2.79	2.74	2.68	2.62	2.56
60.5	3.50	3.66	3.81	3.97	3.80	3.75	3.69	3.63	3.57	3.51	3.45	3.40	3.34	3.28	3.22	3.17	3.11	3.05	2.99	2.93	2.88	2.82	2.76	2.70	2.64
61.0	3.56	3.72	3.88	4.03	3.89	3.83	3.77	3.71	3.66	3.60	3.54	3.48	3.42	3.37	3.31	3.25	3.19	3.13	3.08	3.02	2.96	2.90	2.84	2.79	2.73
61.5	3.63	3.78	3.94	4.10	3.97	3.91	3.85	3.80	3.74	3.68	3.62	3.56	3.51	3.45	3.39	3.33	3.27	3.22	3.16	3.10	3.04	2.98	2.93	2.87	2.81
62.0	3.69	3.85	4.00	4.16	4.05	3.99	3.94	3.88	3.82	3.76	3.70	3.65	3.59	3.53	3.47	3.41	3.36	3.30	3.24	3.18	3.12	3.07	3.01	2.95	2.89
62.5	3.76	3.91	4.07	4.22	4.13	4.06	4.02	3.96	3.90	3.84	3.79	3.73	3.67	3.61	3.55	3.49	3.43	3.37	3.31	3.25	3.19	3.13	3.07	3.01	2.95
63.0	3.82	3.97	4.13	4.29	4.22	4.16	4.10	4.04	3.99	3.93	3.87	3.81	3.75	3.70	3.64	3.58	3.52	3.46	3.41	3.35	3.29	3.23	3.17	3.12	3.06
63.5	3.88	4.04	4.19	4.35	4.30	4.24	4.18	4.13	4.07	4.01	3.95	3.89	3.84	3.78	3.72	3.66	3.60	3.55	3.49	3.43	3.37	3.31	3.26	3.20	3.14
64.0	3.95	4.10	4.26	4.41	4.36	4.32	4.27	4.21	4.15	4.09	4.03	3.97	3.92	3.86	3.80	3.74	3.68	3.63	3.57	3.51	3.45	3.40	3.34	3.28	3.22
64.5	4.01	4.17	4.32	4.48	4.46	4.41	4.35	4.29	4.23	4.17	4.12	4.06	4.00	3.94	3.88	3.83	3.77	3.71	3.65	3.59	3.54	3.48	3.42	3.36	3.30
65.0	4.07	4.23	4.39	4.54	4.55	4.49	4.43	4.37	4.32	4.26	4.20	4.14	4.08	4.03	3.97	3.91	3.85	3.79	3.74	3.68	3.62	3.56	3.50	3.45	3.39
65.5	4.14	4.29	4.45	4.60	4.63	4.57	4.51	4.45	4.40	4.34	4.28	4.22	4.17	4.11	4.05	3.99	3.93	3.88	3.82	3.76	3.70	3.64	3.59	3.53	3.47
66.0	4.20	4.36	4.51	4.67	4.71	4.65	4.60	4.54	4.48	4.42	4.36	4.31	4.25	4.19	4.13	4.07	4.02	3.96	3.90	3.84	3.78	3.73	3.67	3.61	3.55
66.5	4.26	4.42	4.58	4.73	4.80	4.74	4.68	4.62	4.56	4.51	4.45	4.39	4.33	4.27	4.22	4.16	4.10	4.04	3.98	3.93	3.87	3.81	3.75	3.69	3.64
67.0	4.33	4.48	4.64	4.80	4.86	4.80	4.74	4.68	4.62	4.56	4.51	4.45	4.39	4.33	4.27	4.22	4.16	4.10	4.04	3.98	3.93	3.87	3.81	3.75	3.69
67.5	4.39	4.55	4.70	4.86	4.96	4.90	4.84	4.79	4.73	4.67	4.61	4.55	4.50	4.44	4.38	4.32	4.26	4.21	4.15	4.09	4.03	3.97	3.92	3.86	3.80
68.0	4.45	4.61	4.77	4.92	5.04	4.98	4.93	4.87	4.81	4.75	4.69	4.64	4.58	4.52	4.46	4.40	4.34	4.28	4.23	4.17	4.11	4.06	4.00	3.94	3.88
68.5	4.52	4.67	4.83	4.99	5.13	5.07	5.01	4.95	4.89	4.84	4.78	4.72	4.66	4.60	4.54	4.48	4.42	4.36	4.31	4.25	4.19	4.14	4.08	4.02	3.97
69.0	4.58	4.74	4.89	5.05	5.21	5.15	5.09	5.03	4.98	4.92	4.86	4.80	4.74	4.68	4.63	4.57	4.51	4.45	4.40	4.34	4.28	4.23	4.17	4.11	4.05
69.5	4.64	4.80	4.96	5.11	5.29	5.23	5.17	5.12	5.06	5.00	4.94	4.88	4.82	4.76	4.71	4.65	4.59	4.54	4.48	4.42	4.36	4.31	4.25	4.19	4.13
70.0	4.71	4.86	5.02	5.18	5.37	5.32	5.26	5.20	5.14	5.08	5.02	4.96	4.90	4.84	4.78	4.72	4.66	4.60	4.54	4.48	4.42	4.36	4.31	4.25	4.19
70.5	4.77	4.93	5.08	5.24	5.46	5.40	5.34	5.28	5.22	5.17	5.11	5.05	4.99	4.93	4.88	4.82	4.76	4.70	4.64	4.58	4.52	4.46	4.41	4.35	4.30
71.0	4.83	4.99	5.15	5.30	5.54	5.48	5.42	5.36	5.31	5.25	5.19	5.13	5.07	5.02	4.96	4.90	4.84	4.78	4.73	4.67	4.61	4.55	4.49	4.44	4.38
71.5	4.90	5.05	5.21	5.37	5.62	5.56	5.50	5.45	5.39	5.33	5.27	5.21	5.16	5.10	5.04	4.98	4.92	4.87	4.81	4.75	4.69	4.63	4.58	4.52	4.46
72.0	4.96	5.12	5.27	5.43	5.70	5.65	5.59	5.53	5.47	5.41	5.35	5.30	5.24	5.18	5.12	5.07	5.01	4.95	4.89	4.83	4.78	4.72	4.66	4.60	4.54
72.5	5.03	5.18	5.34	5.49	5.79	5.73	5.67	5.61	5.55	5.50	5.44	5.38	5.32	5.26	5.21	5.15	5.09	5.03	4.97	4.92	4.86	4.80	4.74	4.68	4.63
73.0	5.09	5.24	5.40	5.56	5.87	5.81	5.75	5.69	5.64	5.58	5.52	5.46	5.40	5.35	5.29	5.23	5.17	5.11	5.06	5.00	4.94	4.88	4.82	4.77	4.71
73.5	5.15	5.31	5.46	5.62	5.95	5.89	5.83	5.78	5.72	5.66	5.60	5.54	5.49	5.43	5.37	5.31	5.25	5.20	5.14	5.08	5.02	4.96	4.91	4.85	4.79
74.0	5.22	5.37	5.53	5.68	6.03	5.98	5.92	5.86	5.80	5.74	5.69	5.63	5.57	5.51	5.45	5.40	5.34	5.28	5.22	5.16	5.11	5.05	4.99	4.93	4.87
74.5	5.28	5.44	5.59	5.75	6.12	6.06	6.00	5.94	5.88	5.83	5.77	5.71	5.65	5.59	5.54	5.48	5.42	5.36	5.30	5.24	5.19	5.13	5.07	5.01	4.96
75.0	5.34	5.50	5.65	5.81	6.20	6.14	6.08	6.02	5.97	5.91	5.85	5.79	5.73	5.68	5.62	5.56	5.50	5.44	5.39	5.33	5.27	5.21	5.15	5.10	5.04
75.5	5.41	5.56	5.72	5.87	6.28	6.22	6.17	6.11	6.05	5.99	5.93	5.88	5.82	5.76	5.70	5.64	5.59	5.53	5.47	5.41	5.35	5.30	5.24	5.18	5.12
76.0	5.47	5.63	5.78	5.94	6.36	6.31	6.25	6.19	6.13	6.07	6.02	5.96	5.90	5.84	5.78	5.73	5.67	5.61	5.55	5.49	5.43	5.37	5.32	5.26	5.20
76.5	5.53	5.69	5.85	6.00	6.45	6.39	6.33	6.27	6.21	6.16	6.10	6.04	5.98	5.92	5.87	5.81	5.75	5.69	5.63	5.58	5.52	5.46	5.40	5.34	5.29
77.0	5.60	5.75	5.91	6.06	6.53	6.47	6.41	6.35	6.30	6.24	6.18	6.12	6.06	6.01	5.95	5.89	5.83	5.77	5.72	5.66	5.60	5.54	5.48	5.43	5.37
77.5	5.66	5.82	5.97	6.13	6.61	6.55	6.49	6.44	6.38	6.32	6.26	6.21	6.15	6.09	6.03	5.97	5.92	5.86	5.80	5.74	5.68	5.63	5.57	5.51	5.45
78.0	5.72	5.88	6.04	6.19	6.69	6.64	6.58	6.52	6.46	6.40	6.35	6.29	6.23	6.17	6.11	6.06	6.00	5.94	5.88	5.82	5.77	5.71	5.65	5.59	5.53
78.5	5.79	5.94	6.10	6.26	6.78	6.72	6.66	6.60	6.54	6.49	6.43	6.37	6.31	6.25	6.20	6.14	6.08	6.02	5.96	5.91	5.85	5.79	5.73	5.67	5.62
79.0	5.85	6.01	6.16	6.32	6.86	6.80	6.74	6.68	6.63	6.57	6.51	6.45	6.39	6.34	6.28	6.22	6.16	6.10	6.05	5.99	5.93	5.87	5.81	5.75	5.70
79.5	5.91	6.07	6.23	6.38	6.94	6.88	6.83	6.77	6.71	6.65	6.59	6.54	6.48	6.42	6.36	6.30	6.25	6.19	6.13	6.07	6.01	5.96	5.90	5.84	5.78
80.0	5.98	6.13	6.29	6.45	7.02	6.97	6.91	6.85	6.79	6.73	6.68	6.62	6.56	6.50	6.44	6.39	6.33	6.27	6.21	6.15	6.10	6.04	5.98	5.92	5.86
80.5	6.04	6.20	6.35	6.51	7.11	7.05	6.99	6.93	6.87	6.82	6.76	6.70	6.64	6.58	6.53	6.47	6.41	6.35	6.29	6.24	6.18	6.12	6.06	6.00	5.95
81.0	6.10	6.26	6.42	6.57	7.19	7.13	7.07	7.02	6.96	6.90	6.84	6.78	6.73	6.67	6.61	6.55	6.49	6.44	6.38	6.32	6.26	6.20	6.15	6.09	6.03
81.5	6.17	6.32	6.48	6.64	7.27	7.21	7.15	7.10	7.04	6.98	6.92	6.87	6.81	6.75	6.69	6.63	6.57	6.51	6.45	6.40	6.34	6.28	6.23	6.17	6.11
82.0	6.23	6.39	6.54	6.70	7.30	7.24	7.18	7.12	7.06	7.01	6.95	6.89	6.83	6.77	6.71	6.65	6.60	6.54	6.48	6.43	6.37	6.31			

TABLE 2. PREDICTED FEVI FOR MALES (HUDSON, ET AL.: AM REV RESPIR DIS, 1976, 113, 507.)

HT	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65
60.0	2.97	3.06	3.15	3.24	3.35	3.45	3.55	3.65	3.75	3.85	3.95	4.05	4.15	4.25	4.35	4.45	4.55	4.65	4.75	4.85	4.95	5.05	5.15	5.25	5.35
60.5	3.03	3.12	3.21	3.30	3.41	3.51	3.61	3.71	3.81	3.91	4.01	4.11	4.21	4.31	4.41	4.51	4.61	4.71	4.81	4.91	5.01	5.11	5.21	5.31	5.41
61.0	3.09	3.17	3.26	3.35	3.45	3.55	3.65	3.75	3.85	3.95	4.05	4.15	4.25	4.35	4.45	4.55	4.65	4.75	4.85	4.95	5.05	5.15	5.25	5.35	5.45
61.5	3.14	3.23	3.32	3.41	3.51	3.61	3.71	3.81	3.91	4.01	4.11	4.21	4.31	4.41	4.51	4.61	4.71	4.81	4.91	5.01	5.11	5.21	5.31	5.41	5.51
62.0	3.20	3.29	3.38	3.47	3.57	3.67	3.77	3.87	3.97	4.07	4.17	4.27	4.37	4.47	4.57	4.67	4.77	4.87	4.97	5.07	5.17	5.27	5.37	5.47	5.57
62.5	3.26	3.35	3.44	3.53	3.63	3.72	3.82	3.92	4.02	4.12	4.22	4.32	4.42	4.52	4.62	4.72	4.82	4.92	5.02	5.12	5.22	5.32	5.42	5.52	5.62
63.0	3.32	3.41	3.50	3.59	3.69	3.78	3.88	3.98	4.08	4.18	4.28	4.38	4.48	4.58	4.68	4.78	4.88	4.98	5.08	5.18	5.28	5.38	5.48	5.58	5.68
63.5	3.38	3.47	3.56	3.65	3.75	3.84	3.94	4.04	4.14	4.24	4.34	4.44	4.54	4.64	4.74	4.84	4.94	5.04	5.14	5.24	5.34	5.44	5.54	5.64	5.74
64.0	3.43	3.52	3.61	3.70	3.80	3.89	3.99	4.09	4.19	4.29	4.39	4.49	4.59	4.69	4.79	4.89	4.99	5.09	5.19	5.29	5.39	5.49	5.59	5.69	5.79
64.5	3.49	3.58	3.67	3.76	3.86	3.95	4.05	4.15	4.25	4.35	4.45	4.55	4.65	4.75	4.85	4.95	5.05	5.15	5.25	5.35	5.45	5.55	5.65	5.75	5.85
65.0	3.55	3.64	3.73	3.82	3.91	4.01	4.11	4.21	4.31	4.41	4.51	4.61	4.71	4.81	4.91	5.01	5.11	5.21	5.31	5.41	5.51	5.61	5.71	5.81	5.91
65.5	3.61	3.70	3.79	3.88	3.97	4.07	4.17	4.27	4.37	4.47	4.57	4.67	4.77	4.87	4.97	5.07	5.17	5.27	5.37	5.47	5.57	5.67	5.77	5.87	5.97
66.0	3.67	3.76	3.85	3.94	4.04	4.14	4.24	4.34	4.44	4.54	4.64	4.74	4.84	4.94	5.04	5.14	5.24	5.34	5.44	5.54	5.64	5.74	5.84	5.94	6.04
66.5	3.73	3.82	3.91	4.00	4.09	4.19	4.29	4.39	4.49	4.59	4.69	4.79	4.89	4.99	5.09	5.19	5.29	5.39	5.49	5.59	5.69	5.79	5.89	5.99	6.09
67.0	3.79	3.88	3.97	4.06	4.15	4.25	4.35	4.45	4.55	4.65	4.75	4.85	4.95	5.05	5.15	5.25	5.35	5.45	5.55	5.65	5.75	5.85	5.95	6.05	6.15
67.5	3.84	3.93	4.02	4.11	4.21	4.31	4.41	4.51	4.61	4.71	4.81	4.91	5.01	5.11	5.21	5.31	5.41	5.51	5.61	5.71	5.81	5.91	6.01	6.11	6.21
68.0	3.90	3.99	4.08	4.17	4.27	4.37	4.47	4.57	4.67	4.77	4.87	4.97	5.07	5.17	5.27	5.37	5.47	5.57	5.67	5.77	5.87	5.97	6.07	6.17	6.27
68.5	3.96	4.05	4.14	4.23	4.33	4.43	4.53	4.63	4.73	4.83	4.93	5.03	5.13	5.23	5.33	5.43	5.53	5.63	5.73	5.83	5.93	6.03	6.13	6.23	6.33
69.0	4.02	4.11	4.20	4.29	4.39	4.49	4.59	4.69	4.79	4.89	4.99	5.09	5.19	5.29	5.39	5.49	5.59	5.69	5.79	5.89	5.99	6.09	6.19	6.29	6.39
69.5	4.08	4.17	4.26	4.35	4.45	4.55	4.65	4.75	4.85	4.95	5.05	5.15	5.25	5.35	5.45	5.55	5.65	5.75	5.85	5.95	6.05	6.15	6.25	6.35	6.45
70.0	4.14	4.23	4.32	4.41	4.51	4.61	4.71	4.81	4.91	5.01	5.11	5.21	5.31	5.41	5.51	5.61	5.71	5.81	5.91	6.01	6.11	6.21	6.31	6.41	6.51
70.5	4.19	4.28	4.37	4.46	4.55	4.65	4.75	4.85	4.95	5.05	5.15	5.25	5.35	5.45	5.55	5.65	5.75	5.85	5.95	6.05	6.15	6.25	6.35	6.45	6.55
71.0	4.25	4.34	4.43	4.52	4.62	4.72	4.82	4.92	5.02	5.12	5.22	5.32	5.42	5.52	5.62	5.72	5.82	5.92	6.02	6.12	6.22	6.32	6.42	6.52	6.62
71.5	4.31	4.40	4.49	4.58	4.67	4.77	4.87	4.97	5.07	5.17	5.27	5.37	5.47	5.57	5.67	5.77	5.87	5.97	6.07	6.17	6.27	6.37	6.47	6.57	6.67
72.0	4.37	4.46	4.55	4.64	4.73	4.83	4.93	5.03	5.13	5.23	5.33	5.43	5.53	5.63	5.73	5.83	5.93	6.03	6.13	6.23	6.33	6.43	6.53	6.63	6.73
72.5	4.43	4.52	4.61	4.70	4.79	4.89	4.99	5.09	5.19	5.29	5.39	5.49	5.59	5.69	5.79	5.89	5.99	6.09	6.19	6.29	6.39	6.49	6.59	6.69	6.79
73.0	4.49	4.58	4.67	4.76	4.85	4.95	5.05	5.15	5.25	5.35	5.45	5.55	5.65	5.75	5.85	5.95	6.05	6.15	6.25	6.35	6.45	6.55	6.65	6.75	6.85
73.5	4.54	4.63	4.72	4.81	4.90	4.99	5.09	5.19	5.29	5.39	5.49	5.59	5.69	5.79	5.89	5.99	6.09	6.19	6.29	6.39	6.49	6.59	6.69	6.79	6.89
74.0	4.60	4.69	4.78	4.87	4.96	5.06	5.16	5.26	5.36	5.46	5.56	5.66	5.76	5.86	5.96	6.06	6.16	6.26	6.36	6.46	6.56	6.66	6.76	6.86	6.96
74.5	4.66	4.75	4.84	4.93	5.03	5.13	5.23	5.33	5.43	5.53	5.63	5.73	5.83	5.93	6.03	6.13	6.23	6.33	6.43	6.53	6.63	6.73	6.83	6.93	7.03
75.0	4.72	4.81	4.90	4.99	5.09	5.19	5.29	5.39	5.49	5.59	5.69	5.79	5.89	5.99	6.09	6.19	6.29	6.39	6.49	6.59	6.69	6.79	6.89	6.99	7.09
75.5	4.78	4.87	4.96	5.05	5.15	5.25	5.35	5.45	5.55	5.65	5.75	5.85	5.95	6.05	6.15	6.25	6.35	6.45	6.55	6.65	6.75	6.85	6.95	7.05	7.15
76.0	4.84	4.93	5.02	5.11	5.21	5.31	5.41	5.51	5.61	5.71	5.81	5.91	6.01	6.11	6.21	6.31	6.41	6.51	6.61	6.71	6.81	6.91	7.01	7.11	7.21
76.5	4.90	4.99	5.08	5.17	5.27	5.37	5.47	5.57	5.67	5.77	5.87	5.97	6.07	6.17	6.27	6.37	6.47	6.57	6.67	6.77	6.87	6.97	7.07	7.17	7.27
77.0	4.95	5.04	5.13	5.22	5.32	5.42	5.52	5.62	5.72	5.82	5.92	6.02	6.12	6.22	6.32	6.42	6.52	6.62	6.72	6.82	6.92	7.02	7.12	7.22	7.32
77.5	5.01	5.10	5.19	5.28	5.38	5.48	5.58	5.68	5.78	5.88	5.98	6.08	6.18	6.28	6.38	6.48	6.58	6.68	6.78	6.88	6.98	7.08	7.18	7.28	7.38
78.0	5.07	5.16	5.25	5.34	5.44	5.54	5.64	5.74	5.84	5.94	6.04	6.14	6.24	6.34	6.44	6.54	6.64	6.74	6.84	6.94	7.04	7.14	7.24	7.34	7.44
78.5	5.13	5.22	5.31	5.40	5.50	5.60	5.70	5.80	5.90	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	7.00	7.10	7.20	7.30	7.40	7.50
79.0	5.19	5.28	5.37	5.46	5.56	5.66	5.76	5.86	5.96	6.06	6.16	6.26	6.36	6.46	6.56	6.66	6.76	6.86	6.96	7.06	7.16	7.26	7.36	7.46	7.56
79.5	5.25	5.34	5.43	5.52	5.62	5.72	5.82	5.92	6.02	6.12	6.22	6.32	6.42	6.52	6.62	6.72	6.82	6.92	7.02	7.12	7.22	7.32	7.42	7.52	7.62
80.0	5.30	5.39	5.48	5.57	5.67	5.77	5.87	5.97	6.07	6.17	6.27	6.37	6.47	6.57	6.67	6.77	6.87	6.97	7.07	7.17	7.27	7.37	7.47	7.57	7.67
80.5	5.36	5.45	5.54	5.63	5.73	5.83	5.93	6.03	6.13	6.23	6.33	6.43	6.53	6.63	6.73	6.83	6.93	7.03	7.13	7.23	7.33	7.43	7.53	7.63	7.73
81.0	5.42	5.51	5.60	5.69	5.79	5.89	5.99	6.09	6.19	6.29	6.39	6.49	6.59	6.69	6.79	6.89	6.99	7.09	7.19	7.29	7.39	7.49	7.59	7.69	7.79
81.5	5.48	5.57	5.66	5.75	5.85	5.95	6.05	6.15	6.25	6.35	6.45	6.55	6.65	6.75	6.85	6.95	7.05	7.15	7.25	7.35	7.45	7.55	7.65	7.75	7.85
82.0	5.54	5.63	5.72	5.81	5.91	6.01	6.11	6.21	6.31	6.41	6.51	6.61	6.71	6.81	6.91	7.01	7.11	7.21	7.31	7.41	7.51	7.61	7.71	7.81	7.91
82.5	5.60	5.6																							



TABLE 3. PREDICTED PVC FOR FEMALES (HUDSON, ET AL.: MM PEV RESPIR DIS, 1976, 113, 587.)

HT	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	
52.0	2.45	2.64	2.65	2.52	2.47	2.43	2.39	2.34	2.30	2.25	2.21	2.17	2.12	2.08	2.04	1.99	1.95	1.90	1.86	1.81	1.77	1.73	1.68	1.63	1.58	1.53
52.5	2.50	2.68	2.70	2.65	2.61	2.57	2.52	2.48	2.43	2.39	2.35	2.30	2.26	2.21	2.17	2.13	2.08	2.04	1.99	1.95	1.91	1.86	1.81	1.77	1.73	1.68
53.0	2.51	2.72	2.74	2.70	2.66	2.61	2.57	2.52	2.48	2.44	2.39	2.35	2.30	2.26	2.22	2.17	2.13	2.08	2.04	1.99	1.95	1.91	1.86	1.81	1.77	1.73
53.5	2.58	2.76	2.79	2.75	2.70	2.66	2.62	2.57	2.53	2.48	2.44	2.40	2.35	2.31	2.26	2.22	2.18	2.13	2.09	2.04	2.00	1.96	1.91	1.87	1.82	1.78
54.0	2.62	2.81	2.84	2.79	2.75	2.71	2.66	2.62	2.57	2.53	2.48	2.44	2.40	2.35	2.31	2.27	2.22	2.18	2.13	2.09	2.05	2.00	1.96	1.91	1.87	1.82
54.5	2.65	2.85	2.89	2.84	2.80	2.75	2.71	2.67	2.62	2.58	2.53	2.49	2.45	2.40	2.36	2.32	2.28	2.24	2.19	2.15	2.11	2.06	2.01	1.96	1.92	1.87
55.0	2.71	2.89	2.93	2.89	2.85	2.80	2.76	2.71	2.67	2.62	2.58	2.54	2.49	2.45	2.40	2.36	2.32	2.28	2.24	2.19	2.15	2.10	2.05	2.01	1.96	1.92
55.5	2.75	2.93	2.96	2.94	2.89	2.85	2.80	2.76	2.72	2.67	2.63	2.58	2.54	2.50	2.45	2.41	2.36	2.32	2.28	2.24	2.19	2.14	2.10	2.05	2.01	1.96
56.0	2.79	2.97	3.03	2.99	2.94	2.89	2.85	2.81	2.76	2.72	2.67	2.63	2.59	2.55	2.50	2.46	2.41	2.37	2.32	2.28	2.24	2.19	2.15	2.10	2.06	2.01
56.5	2.83	3.01	3.07	3.03	2.99	2.94	2.90	2.85	2.81	2.77	2.72	2.68	2.63	2.59	2.55	2.50	2.46	2.41	2.37	2.32	2.28	2.24	2.19	2.15	2.10	2.06
57.0	2.87	3.06	3.12	3.08	3.03	2.99	2.94	2.90	2.86	2.81	2.77	2.72	2.68	2.64	2.59	2.55	2.50	2.46	2.42	2.37	2.33	2.28	2.24	2.20	2.15	2.11
57.5	2.91	3.10	3.17	3.13	3.08	3.04	2.99	2.95	2.90	2.86	2.82	2.77	2.73	2.68	2.64	2.59	2.55	2.51	2.46	2.42	2.38	2.33	2.29	2.24	2.20	2.15
58.0	2.96	3.14	3.21	3.17	3.13	3.08	3.04	2.99	2.95	2.91	2.86	2.82	2.77	2.73	2.69	2.65	2.60	2.55	2.51	2.46	2.42	2.38	2.33	2.29	2.24	2.20
58.5	3.00	3.18	3.26	3.22	3.17	3.13	3.09	3.04	3.00	2.95	2.91	2.87	2.82	2.78	2.73	2.69	2.65	2.60	2.56	2.51	2.47	2.42	2.38	2.33	2.29	2.25
59.0	3.04	3.23	3.31	3.27	3.22	3.18	3.14	3.09	3.05	3.00	2.96	2.91	2.87	2.82	2.78	2.74	2.69	2.65	2.60	2.56	2.52	2.47	2.43	2.38	2.34	2.30
59.5	3.08	3.27	3.36	3.31	3.27	3.23	3.18	3.14	3.09	3.05	3.00	2.96	2.92	2.87	2.83	2.78	2.74	2.70	2.65	2.61	2.56	2.52	2.47	2.43	2.38	2.34
60.0	3.12	3.31	3.40	3.36	3.31	3.27	3.23	3.18	3.14	3.09	3.05	3.01	2.96	2.92	2.87	2.83	2.79	2.74	2.70	2.65	2.61	2.57	2.52	2.48	2.43	2.39
60.5	3.17	3.35	3.45	3.41	3.36	3.32	3.27	3.23	3.18	3.14	3.09	3.05	3.01	2.96	2.92	2.87	2.83	2.79	2.74	2.70	2.65	2.61	2.57	2.52	2.48	2.43
61.0	3.21	3.39	3.50	3.45	3.41	3.36	3.32	3.28	3.23	3.19	3.14	3.10	3.05	3.01	2.97	2.92	2.88	2.83	2.79	2.75	2.70	2.66	2.61	2.57	2.53	2.48
61.5	3.25	3.43	3.54	3.50	3.46	3.41	3.37	3.32	3.28	3.24	3.19	3.15	3.10	3.06	3.02	2.97	2.93	2.88	2.84	2.80	2.75	2.71	2.66	2.62	2.57	2.53
62.0	3.29	3.47	3.59	3.55	3.50	3.46	3.41	3.37	3.32	3.28	3.24	3.19	3.15	3.10	3.06	3.02	2.97	2.93	2.88	2.84	2.80	2.75	2.71	2.66	2.62	2.58
62.5	3.33	3.52	3.64	3.59	3.55	3.51	3.46	3.42	3.37	3.33	3.29	3.24	3.20	3.15	3.11	3.07	3.02	2.98	2.93	2.89	2.85	2.80	2.76	2.72	2.67	2.62
63.0	3.38	3.56	3.68	3.64	3.60	3.56	3.51	3.46	3.42	3.38	3.33	3.29	3.24	3.20	3.16	3.11	3.07	3.02	2.98	2.93	2.89	2.85	2.80	2.76	2.72	2.67
63.5	3.42	3.60	3.73	3.69	3.64	3.60	3.56	3.51	3.47	3.43	3.38	3.34	3.30	3.26	3.22	3.17	3.12	3.08	3.04	2.99	2.95	2.90	2.86	2.82	2.77	2.72
64.0	3.46	3.64	3.78	3.73	3.69	3.65	3.60	3.56	3.51	3.47	3.43	3.38	3.34	3.30	3.26	3.22	3.17	3.12	3.08	3.04	2.99	2.95	2.90	2.86	2.82	2.77
64.5	3.50	3.69	3.83	3.78	3.74	3.69	3.65	3.61	3.56	3.52	3.47	3.43	3.39	3.34	3.30	3.25	3.21	3.17	3.12	3.08	3.03	2.99	2.95	2.90	2.86	2.82
65.0	3.54	3.73	3.87	3.83	3.78	3.74	3.70	3.65	3.61	3.56	3.52	3.48	3.43	3.39	3.34	3.30	3.26	3.22	3.17	3.12	3.08	3.03	2.99	2.95	2.90	2.86
65.5	3.59	3.77	3.92	3.88	3.83	3.79	3.74	3.70	3.66	3.61	3.57	3.52	3.48	3.43	3.39	3.35	3.31	3.26	3.22	3.17	3.13	3.08	3.04	2.99	2.95	2.90
66.0	3.63	3.81	3.97	3.92	3.88	3.83	3.79	3.75	3.70	3.66	3.61	3.57	3.53	3.48	3.44	3.39	3.35	3.31	3.26	3.22	3.17	3.13	3.09	3.04	2.99	2.95
66.5	3.67	3.85	4.01	3.97	3.93	3.88	3.84	3.79	3.75	3.70	3.66	3.61	3.57	3.53	3.48	3.44	3.39	3.35	3.31	3.26	3.22	3.17	3.13	3.09	3.04	2.99
67.0	3.71	3.89	4.06	4.02	3.97	3.93	3.88	3.84	3.80	3.75	3.71	3.66	3.62	3.58	3.53	3.49	3.44	3.40	3.36	3.32	3.27	3.23	3.18	3.14	3.09	3.05
67.5	3.75	3.94	4.11	4.06	4.02	3.98	3.93	3.89	3.84	3.80	3.76	3.71	3.67	3.62	3.58	3.54	3.49	3.45	3.40	3.36	3.32	3.27	3.23	3.18	3.14	3.09
68.0	3.79	3.98	4.15	4.11	4.07	4.02	3.98	3.93	3.89	3.85	3.80	3.76	3.71	3.67	3.63	3.58	3.54	3.49	3.45	3.40	3.36	3.32	3.27	3.23	3.18	3.14
68.5	3.84	4.02	4.20	4.16	4.12	4.08	4.03	3.99	3.94	3.90	3.86	3.81	3.76	3.72	3.67	3.63	3.59	3.54	3.50	3.45	3.41	3.37	3.32	3.28	3.23	3.19
69.0	3.88	4.06	4.25	4.20	4.16	4.12	4.07	4.03	3.98	3.94	3.90	3.85	3.81	3.76	3.72	3.68	3.63	3.59	3.54	3.50	3.45	3.41	3.37	3.32	3.28	3.23
69.5	3.92	4.10	4.30	4.25	4.21	4.17	4.12	4.08	4.03	3.99	3.94	3.90	3.86	3.81	3.77	3.72	3.68	3.63	3.59	3.54	3.50	3.45	3.41	3.37	3.32	3.28
70.0	3.96	4.15	4.34	4.30	4.25	4.21	4.17	4.12	4.08	4.03	3.99	3.94	3.90	3.86	3.81	3.77	3.72	3.68	3.63	3.59	3.55	3.51	3.46	3.42	3.37	3.33
70.5	4.00	4.19	4.39	4.35	4.30	4.26	4.21	4.17	4.12	4.08	4.03	3.99	3.95	3.91	3.86	3.82	3.77	3.73	3.69	3.64	3.60	3.55	3.51	3.46	3.42	3.37
71.0	4.05	4.23	4.44	4.39	4.35	4.30	4.26	4.22	4.17	4.13	4.08	4.04	4.00	3.95	3.91	3.86	3.82	3.77	3.73	3.69	3.64	3.60	3.55	3.51	3.47	3.42
71.5	4.09	4.27	4.48	4.44	4.40	4.35	4.31	4.26	4.22	4.18	4.13	4.09	4.04	4.00	3.96	3.91	3.87	3.82	3.78	3.73	3.69	3.64	3.60	3.56	3.51	3.47
72.0	4.13	4.31	4.53	4.49	4.44	4.40	4.35	4.31	4.27	4.22	4.18	4.13	4.09	4.05	4.00	3.96	3.91	3.87	3.82	3.78	3.74	3.69	3.65	3.60	3.56	3.52
72.5	4.17	4.36	4.58	4.53	4.49	4.45	4.40	4.36	4.31	4.27	4.23	4.18	4.14	4.10	4.05	4.01	3.96	3.92	3.88	3.83	3.79	3.74	3.70	3.65	3.61	3.56
73.0	4.21	4.40	4.62	4.58	4.54	4.49	4.45	4.40	4.36	4.32	4.27	4.23	4.18	4.14	4.10	4.05	4.01	3.96	3.92	3.88	3.83	3.79	3.74	3.70	3.65	3.61
73.5	4.26	4.44	4.67	4.63	4.58	4.54	4.49	4.45	4.41	4.36	4.32	4.28														

TABLE 4. PREDICTED FEVI FOR FEMALES (KHUDESCON, ET AL.; AM FEV RESPIR DIS. 1976; 113, 507.)

HT	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65
32.0	2.31	2.48	2.63	2.79	2.95	3.11	3.27	3.43	3.59	3.75	3.91	4.07	4.23	4.39	4.55	4.71	4.87	5.03	5.19	5.35	5.51	5.67	5.83	5.99	6.15
32.5	2.34	2.51	2.67	2.83	2.99	3.15	3.31	3.47	3.63	3.79	3.95	4.11	4.27	4.43	4.59	4.75	4.91	5.07	5.23	5.39	5.55	5.71	5.87	6.03	6.19
33.0	2.38	2.55	2.72	2.89	3.06	3.23	3.40	3.57	3.74	3.91	4.08	4.25	4.42	4.59	4.76	4.93	5.10	5.27	5.44	5.61	5.78	5.95	6.12	6.29	6.46
33.5	2.41	2.58	2.75	2.92	3.09	3.26	3.43	3.60	3.77	3.94	4.11	4.28	4.45	4.62	4.79	4.96	5.13	5.30	5.47	5.64	5.81	5.98	6.15	6.32	6.49
34.0	2.45	2.62	2.79	2.96	3.13	3.30	3.47	3.64	3.81	3.98	4.15	4.32	4.49	4.66	4.83	5.00	5.17	5.34	5.51	5.68	5.85	6.02	6.19	6.36	6.53
34.5	2.48	2.65	2.82	2.99	3.16	3.33	3.50	3.67	3.84	4.01	4.18	4.35	4.52	4.69	4.86	5.03	5.20	5.37	5.54	5.71	5.88	6.05	6.22	6.39	6.56
35.0	2.51	2.68	2.85	3.02	3.19	3.36	3.53	3.70	3.87	4.04	4.21	4.38	4.55	4.72	4.89	5.06	5.23	5.40	5.57	5.74	5.91	6.08	6.25	6.42	6.59
35.5	2.55	2.72	2.89	3.06	3.23	3.40	3.57	3.74	3.91	4.08	4.25	4.42	4.59	4.76	4.93	5.10	5.27	5.44	5.61	5.78	5.95	6.12	6.29	6.46	6.63
36.0	2.58	2.75	2.92	3.09	3.26	3.43	3.60	3.77	3.94	4.11	4.28	4.45	4.62	4.79	4.96	5.13	5.30	5.47	5.64	5.81	5.98	6.15	6.32	6.49	6.66
36.5	2.62	2.79	2.96	3.13	3.30	3.47	3.64	3.81	3.98	4.15	4.32	4.49	4.66	4.83	5.00	5.17	5.34	5.51	5.68	5.85	6.02	6.19	6.36	6.53	6.70
37.0	2.65	2.82	2.99	3.16	3.33	3.50	3.67	3.84	4.01	4.18	4.35	4.52	4.69	4.86	5.03	5.20	5.37	5.54	5.71	5.88	6.05	6.22	6.39	6.56	6.73
37.5	2.69	2.86	3.03	3.20	3.37	3.54	3.71	3.88	4.05	4.22	4.39	4.56	4.73	4.90	5.07	5.24	5.41	5.58	5.75	5.92	6.09	6.26	6.43	6.60	6.77
38.0	2.72	2.89	3.06	3.23	3.40	3.57	3.74	3.91	4.08	4.25	4.42	4.59	4.76	4.93	5.10	5.27	5.44	5.61	5.78	5.95	6.12	6.29	6.46	6.63	6.80
38.5	2.75	2.92	3.09	3.26	3.43	3.60	3.77	3.94	4.11	4.28	4.45	4.62	4.79	4.96	5.13	5.30	5.47	5.64	5.81	5.98	6.15	6.32	6.49	6.66	6.83
39.0	2.79	2.96	3.13	3.30	3.47	3.64	3.81	3.98	4.15	4.32	4.49	4.66	4.83	5.00	5.17	5.34	5.51	5.68	5.85	6.02	6.19	6.36	6.53	6.70	6.87
39.5	2.82	2.99	3.16	3.33	3.50	3.67	3.84	4.01	4.18	4.35	4.52	4.69	4.86	5.03	5.20	5.37	5.54	5.71	5.88	6.05	6.22	6.39	6.56	6.73	6.90
40.0	2.85	3.02	3.19	3.36	3.53	3.70	3.87	4.04	4.21	4.38	4.55	4.72	4.89	5.06	5.23	5.40	5.57	5.74	5.91	6.08	6.25	6.42	6.59	6.76	6.93
40.5	2.88	3.05	3.22	3.39	3.56	3.73	3.90	4.07	4.24	4.41	4.58	4.75	4.92	5.09	5.26	5.43	5.60	5.77	5.94	6.11	6.28	6.45	6.62	6.79	6.96
41.0	2.91	3.08	3.25	3.42	3.59	3.76	3.93	4.10	4.27	4.44	4.61	4.78	4.95	5.12	5.29	5.46	5.63	5.80	5.97	6.14	6.31	6.48	6.65	6.82	6.99
41.5	2.94	3.11	3.28	3.45	3.62	3.79	3.96	4.13	4.30	4.47	4.64	4.81	4.98	5.15	5.32	5.49	5.66	5.83	6.00	6.17	6.34	6.51	6.68	6.85	7.02
42.0	2.97	3.14	3.31	3.48	3.65	3.82	3.99	4.16	4.33	4.50	4.67	4.84	5.01	5.18	5.35	5.52	5.69	5.86	6.03	6.20	6.37	6.54	6.71	6.88	7.05
42.5	3.00	3.17	3.34	3.51	3.68	3.85	4.02	4.19	4.36	4.53	4.70	4.87	5.04	5.21	5.38	5.55	5.72	5.89	6.06	6.23	6.40	6.57	6.74	6.91	7.08
43.0	3.03	3.20	3.37	3.54	3.71	3.88	4.05	4.22	4.39	4.56	4.73	4.90	5.07	5.24	5.41	5.58	5.75	5.92	6.09	6.26	6.43	6.60	6.77	6.94	7.11
43.5	3.06	3.23	3.40	3.57	3.74	3.91	4.08	4.25	4.42	4.59	4.76	4.93	5.10	5.27	5.44	5.61	5.78	5.95	6.12	6.29	6.46	6.63	6.80	6.97	7.14
44.0	3.09	3.26	3.43	3.60	3.77	3.94	4.11	4.28	4.45	4.62	4.79	4.96	5.13	5.30	5.47	5.64	5.81	5.98	6.15	6.32	6.49	6.66	6.83	7.00	7.17
44.5	3.12	3.29	3.46	3.63	3.80	3.97	4.14	4.31	4.48	4.65	4.82	4.99	5.16	5.33	5.50	5.67	5.84	6.01	6.18	6.35	6.52	6.69	6.86	7.03	7.20
45.0	3.15	3.32	3.49	3.66	3.83	4.00	4.17	4.34	4.51	4.68	4.85	5.02	5.19	5.36	5.53	5.70	5.87	6.04	6.21	6.38	6.55	6.72	6.89	7.06	7.23
45.5	3.18	3.35	3.52	3.69	3.86	4.03	4.20	4.37	4.54	4.71	4.88	5.05	5.22	5.39	5.56	5.73	5.90	6.07	6.24	6.41	6.58	6.75	6.92	7.09	7.26
46.0	3.21	3.38	3.55	3.72	3.89	4.06	4.23	4.40	4.57	4.74	4.91	5.08	5.25	5.42	5.59	5.76	5.93	6.10	6.27	6.44	6.61	6.78	6.95	7.12	7.29
46.5	3.24	3.41	3.58	3.75	3.92	4.09	4.26	4.43	4.60	4.77	4.94	5.11	5.28	5.45	5.62	5.79	5.96	6.13	6.30	6.47	6.64	6.81	6.98	7.15	7.32
47.0	3.27	3.44	3.61	3.78	3.95	4.12	4.29	4.46	4.63	4.80	4.97	5.14	5.31	5.48	5.65	5.82	5.99	6.16	6.33	6.50	6.67	6.84	7.01	7.18	7.35
47.5	3.30	3.47	3.64	3.81	3.98	4.15	4.32	4.49	4.66	4.83	5.00	5.17	5.34	5.51	5.68	5.85	6.02	6.19	6.36	6.53	6.70	6.87	7.04	7.21	7.38
48.0	3.33	3.50	3.67	3.84	4.01	4.18	4.35	4.52	4.69	4.86	5.03	5.20	5.37	5.54	5.71	5.88	6.05	6.22	6.39	6.56	6.73	6.90	7.07	7.24	7.41
48.5	3.36	3.53	3.70	3.87	4.04	4.21	4.38	4.55	4.72	4.89	5.06	5.23	5.40	5.57	5.74	5.91	6.08	6.25	6.42	6.59	6.76	6.93	7.10	7.27	7.44
49.0	3.39	3.56	3.73	3.90	4.07	4.24	4.41	4.58	4.75	4.92	5.09	5.26	5.43	5.60	5.77	5.94	6.11	6.28	6.45	6.62	6.79	6.96	7.13	7.30	7.47
49.5	3.42	3.59	3.76	3.93	4.10	4.27	4.44	4.61	4.78	4.95	5.12	5.29	5.46	5.63	5.80	5.97	6.14	6.31	6.48	6.65	6.82	6.99	7.16	7.33	7.50
50.0	3.45	3.62	3.79	3.96	4.13	4.30	4.47	4.64	4.81	4.98	5.15	5.32	5.49	5.66	5.83	6.00	6.17	6.34	6.51	6.68	6.85	7.02	7.19	7.36	7.53
50.5	3.48	3.65	3.82	3.99	4.16	4.33	4.50	4.67	4.84	5.01	5.18	5.35	5.52	5.69	5.86	6.03	6.20	6.37	6.54	6.71	6.88	7.05	7.22	7.39	7.56
51.0	3.51	3.68	3.85	4.02	4.19	4.36	4.53	4.70	4.87	5.04	5.21	5.38	5.55	5.72	5.89	6.06	6.23	6.40	6.57	6.74	6.91	7.08	7.25	7.42	7.59
51.5	3.54	3.71	3.88	4.05	4.22	4.39	4.56	4.73	4.90	5.07	5.24	5.41	5.58	5.75	5.92	6.09	6.26	6.43	6.60	6.77	6.94	7.11	7.28	7.45	7.62
52.0	3.57	3.74	3.91	4.08	4.25	4.42	4.59	4.76	4.93	5.10	5.27	5.44	5.61	5.78	5.95	6.12	6.29	6.46	6.63	6.80	6.97	7.14	7.31	7.48	7.65
52.5	3.60	3.77	3.94	4.11	4.28	4.45	4.62	4.79	4.96	5.13	5.30	5.47	5.64	5.81	5.98	6.15	6.32	6.49	6.66	6.83	7.00	7.17	7.34	7.51	7.68
53.0	3.63	3.80	3.97	4.14	4.31	4.48	4.65	4.82	4.99	5.16	5.33	5.50	5.67	5.84	6.01	6.18	6.35	6.52	6.69	6.86	7.03	7.20	7.37	7.54	7.71
53.5	3.66	3.83	4.00	4.17	4.34	4.51	4.68	4.85	5.02	5.19	5.36	5.53	5.70	5.87	6.04	6.21	6.38	6.55	6.72	6.89	7.06	7.23	7.40	7.57	7.74
54.0	3.69	3.86	4.03	4.20	4.37	4.54	4.71	4.88	5.05	5.22	5.39	5.56	5.73	5.90	6.07	6.24	6.41	6.58	6.75	6.92	7.09	7.26	7.43	7.60	7.77
54.5	3.72	3.89	4.06	4.23	4.40	4.57	4.74	4.91	5.08	5.25	5.42	5.59	5.76	5.93	6.10	6.27	6.44	6.61	6.78	6.95	7.12	7.29	7.46	7.63	7.80
55.0	3.75	3.92	4.09	4.26	4.43	4.60	4.77	4.94	5.11	5.28	5.45	5.62	5.79	5.96	6.13	6.30	6.47	6.64	6.81	6.98	7.15	7.32	7.49	7.66	7.83
55.5	3.78	3.95	4.12	4.29	4.46	4.63	4.80	4.97	5.14	5.31	5.48	5.65	5.82	5.99	6.16	6.33	6.50	6.67	6.84	7.01	7.18	7.35	7.52	7.69	7.86
56.0	3.81	3.98	4.15	4.32	4.49	4.66	4.83	5.00	5.17	5.34	5.51	5.68	5.85	6.02	6.19	6.36	6.53	6.70	6.87	7.04	7.21	7.38	7.55	7.72	7.89
56.5	3.84	4.01	4.18	4.35	4.52	4.69	4.86	5.03	5.20	5.37	5.54	5.71	5.88	6.05	6.22	6.39	6.56	6.73	6.90	7.07	7.24	7.41	7.58	7.75	7.92
57.0	3.87	4.04	4.21	4.38	4.55	4.72	4.89	5.06	5.23</																