224 Va 24

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Form No. 5—7-21-77—20M

INDUSTRIAL COMMISSION OF VIRGINIA
P. O. Box 1794
Richmond, Virginia 23214

APPLICATION FOR HEARING

File No. _____

Employee EVELYN ADAMS SMITH, Route 1, Box 276, Bassett, VA 24055
(Address)

Employer Fieldcrest Mills, Inc., Fieldale, Virginia 24089
(Address)

Date of Accident N/A, 19____ Average Weekly Wage $170.00

Place Where Accident Occurred Fieldale, Henry County, Virginia
(City or County) (State)

Nature of Injury or Occupational Disease: Byssinosis

Date Disability Began: September 4, 19 79

Date of Return to Work: _____, 19____, and wage then earned $_____

The applicant requests a hearing before the Industrial Commission of Virginia on the grounds of:

(1) Accidental Injury ..... ( )

(2) Occupational Disease ..... (X)

(3) Death on _____, 19____, due to Accidental Injury ..... ( )

Occupational Disease ..... ( )

(4) Change in Condition ..... ( )

If application is based on a change in condition, state nature of change: _____

Compensation was last paid at the rate of $_____ per week through the _____ day of _____, 19_____.

COPY OF APPLICATION MUST BE SENT TO OTHER PARTY (SO INDICATE BY A CHECK) [x] YES

Signature of Applicant: _____

Address: ~~Route 1, Box 276~~
Bassett, VA 24055

Signed this 19th day of February, 1980.

Subpoenas for witnesses will be issued by the Industrial Commission on request or may be obtained at the Clerk's Office of the City or County where the hearing will be held (§65.1-21, Code of Va.). Medical reports are acceptable in lieu of physicians' personal appearances.

Edwin A. Gendron, Jr.
GENDRON, KIRBY & SMITH
P.O. Box 351
Martinsville, VA 24112

SHELBY MEDICAL ASSOCIATES, P.A.
809 SCHENCK STREET
SHELBY, NORTH CAROLINA 28150

INTERNAL MEDICINE
PULMONARY DISEASE
GASTROENTEROLOGY

C. M. McMURRAY, M.D.
T. REGINALD HARRIS, M.D.
JOEL F. SPRAGINS, M.D.
CHARLES P. LANGLEY, III, M.D.

C. D. HUSKINS
BUSINESS MANAGER

September 17, 1979

CONFIDENTIAL

Dale Gullett, M.D.
Medical Department
Stadium Drive
Eden, North Carolina 27288

RE: Evelyn Smith

Dear Dr. Gullett:

My report on the above individual is enclosed. She has significant obstructive lung disease which is most likely both byssinosis and emphysema. She wants to continue working and is most anxious to do so.

She should not work in any area of significant cotton dust exposure. I doubt she would tolerate a respirator which would remove all of the significant dust from her inspired air. Her best answer would be transfer to an area without cotton dust exposure if such is possible. Her pulmonary function studies are so poor that she might well qualify for retirement under Social Security, it this is desired. She does appear to be well motivated and wants to and needs to continue work. Her health is such that it seems likely that she will require early retirement. In the mean time, maximum efforts to protect her from further cotton dust exposure are to be encouraged.

Very truly yours,

Reggie

T. Reginald Harris, M.D.

TRH/fh
Enclosure

SEP
MEDICAL

MEDICAL REPORT

Evelyn Smith
Route 1, Box 276
Bassett, Virginia 24055

Date of Exam: 8-29-79

Referred by:
Dr. Dale Gullett
Corporate Medical Director
Medical Department
Stadium Drive
Eden, North Carolina 27288

T. Reginald Harris, M.D.
808 Schenck Street
Shelby, North Carolina 28150

* * * * *

MEDICAL REPORT

elyn Smith
Route 1, Box 276
Bassett, Virginia 24055

SS# 226-30-2417

Date of Exam: 8-29-79

This patient is referred by Fieldcrest Mills Incorporated for pulmonary evaluation. The patient is referred by Dr. Dale Gullett, Corporate Medical Director, Medical Department, Stadium Drive, Eden, North Carolina 27288.

Personal Profile:

This is a 51 year old white female born 6-7-28 in Henry County, Virginia. She was married for 32 years but has been a widow since July 1979. Of her two children, one 12 year old remains at home. The patient has a 10th grade education and is a textile worker. She has smoked cigarettes since age 18. She smoked 1-2 years but stopped for 22 years and then restarted at about age 40 and smoked until five years ago as much as two packs per day. She has now stopped smoking and has not smoked for 5 months. She does have a 20+ pack year history of cigarette smoking. She does not use alcohol.

Occupational History:

1) She worked about one year from 1945 to 1946 as a clerk.
2) From 1946 until the present time, she has worked for Fieldcrest Mills in Fieldale, Virginia.

Job Description: She works in the "yarn preparation" department which includes spinning and spooling. The fiber if 100% cotton and towels are prepared in this plant. Her particular job is a quiller tender and she runs fillings for weavers. In her particular plant, carding, spinning and yarn preparations departments are all in one big room. The carding is at one end of the room, spinning in the middle and her department is the opposite end of the room from the carding department. She seldom goes

Occupational History (continued):

through the carding department unless she is walking through to go to some other area. She worked second shift for about 25 years but for the past 8 years has been on the first shift and she works 5-6 days per week.

In describing her work area, she notes that the area is dusty and that the dust is much worse when the machines are "blown off". There has been less dust for the past year or so because the machines are blown off only when absolutely necessary. For the past year, there has been a piece of plastic placed between carding and spinning in an effort to eliminate some of the dust from the carding area getting into the other areas. The plant is also air conditioned.

The equipment she operates is blown off once a day and usually it takes about 30 minutes for this task. At this time, she makes an effort to take a break and be away from the dust. She has tried to wear a mask in the past 6 months but only wore it for a few hours. She could not tolerate the mask well because of a sensation of smothering. She just took off her mask because she feels she is unable to wear one.

Chief Complaint:

Shortness of breath.

Present Illness:

As far back as 1971, she remembers having some chest tightness on Monday. Over the years, she has become more short of breath and tires easier now than in the past. She can hardly make production now when formerly she had no difficulty making production. She notices more chest tightness on Mondays now after being off on the week-end than in the past. She also notices some additional symptoms of shortness of breath on days other than Monday. Mondays remain the worst day for chest tightness and fatiguability however. Some days are worse than others regardless of day of the week and she is not able to explain this. She does think dust makes her worse and thus avoids being in the area when "blowing off" is taking place.

20

Present Illness (continued):

She can walk at a normal pace on the level without difficulty. She believes she could climb one flight of stairs without stopping but would be tired when she reached the top. She does her housework at home but gets short of breath when mopping, sweeping or vacuuming. Generally, she tires easier at home than she did a few years ago.

When she was asked about her work, she indicates that her job is really rather easy and is one of the easiest jobs in the mill but she "gives out" just trying to make production. She likes her job and needs and wants to continue work.

In inquiring about other symptoms, she mentions that she rarely coughs and notes no particular changes in cough at home or work. There is a rare wheeze when she has a chest cold. She has never had asthma. In the past, she had some pleurisy in the winters but none for the past two winters. She sees her family physician only when needed and sees a dermatologist, Dr. Judith Sheliaki in Martinsville, Virginia for treatment of psoriasis. Her present medications are Vitamin C, Valium and an ointment for her psoriasis and stasis ulcers.

Past History:

Hospitalized for childbirth in 1955 and 1956. She had a breast lump removed in 1970.

Family History:

Parents and three siblings are living. There is no familial history of TB, cancer, diabetes, heart disease, lung disease or other familial diseases.

Systemic Review:

Systemic review reveals the following additional information: She has worn glasses for five years. She had a slight decrease in her hearing according to tests at the plant but is not aware of this problem. She does wear ear plugs at work and believes she does well. There is some nasal stuffiness. She has dentures. She has been nervous and upset for the past five years and has been worried and depressed about her husband's health. Nervousness was somewhat accentuated when he died in July.

Additional Clinical Information:

The above information was obtained from the patient. A respiratory questionnaire at work dated 7-13-71 indicates that she had difficulty with her chest sometimes on Monday. A questionnaire in 1975 indicated that shortness of breath started two hours after beginning work on Monday and lasts the rest of the day. Screening pulmonary function studies have been made at work and some copies were forwarded. These are reviewed and I am not certain of dates, technique, etc. They do suggest the presence of obstruction to air flow. If I identify correctly the before and after spirometry tracings, they suggest a reduction in FEV_1 and FVC following work exposure.

Physical Examination:

This is a somewhat thin white female who is cooperative but who does not appear in robust health.

Vital Signs:	Blood pressure 90/60, pulse 68, respirations 18, temperature 98.6, weight 105, height 65".
Head:	Normal size and shape without abnormalities.
Eyes:	Pupils equal and react to light and accommodation. Sclera clear, conjunctiva pink, funduscopic normal.
ENT:	Normal mucous membranes, dentures.
Neck:	Supple, no goiter.
Heart:	Normal sinus rhythm without murmurs. Cardiac examination is normal.
Breast:	Two inch well healed scar of the right breast but no other abnormalities.
Lungs:	The thoracic contour appears normal. The breath sounds are of normal quality on quiet respiration. With forced expiration, there is generalized wheezing. No dullness is present.
Abdomen:	Flat, no masses or tenderness.
Pelvic:	Good support, no abnormalities.
Rectal:	Good tone.
Extremities:	There are stasis ulcers of the left ankle which measure 2 inches by 1 inch on the outer aspect and 1 inch by 1 inch on the inner aspect. Both ulcers are indurated and ulcerated and contain a bloody discharge. There is 1+ pitting edema around the left ankle. The left leg seems somewhat cooler than the right but peripheral circulation seems adequate. There appears to be mild venous insufficiency of the left leg associated with stasis ulcers on the left. The skin otherwise appears normal except for patches of psoriasis on both elbows and the right knee.

Electrocardiogram:

Normal sinus rhythm, normal electrocardiogram.

Laboratory:

SMA-12 is normal with the following results: calcium 9.9, phosphorus 3.6, glucose 85, BUN 14, Cholesterol 220, protein 6.9, albumin 4.2, bilirubin 0.4, alkaline phosphatase 65, LDH 205, SGOT 29. Hemoglobin 14.5 grams, white count 8,200 with 5% eosinophils, 68% segs and 27% lymphocytes.

Urinalysis clear yellow urine with a specific gravity of 1.019 and negative for albumin, sugar, acetone, bile, blood or significant formed elements.

Chest x-ray:

X-rays were not made by me but x-rays brought by the patient labeled Fieldcrest Medical, Eden, North Carolina, 7-25-79 were reviewed. The x-rays suggest overall hyperinflation of the lungs with somewhat low but curved diaphragms which are at the 12th rib bilaterally. They appear low in the lateral view also but again are slightly domed. The retrosternal clear space is somewhat increased. Slight pleural capping is present bilaterally. Nipple shadows are seen bilaterally. The chest x-ray appears to be normal with the possible exception of an appearance suggesting emphysema based on hyperinflation and some increased radiolucency of the lung fields.

?

Pulmonary Function Studies:

See attached report.

Severe restrictive lung disease which is partially reversible by bronchodilator therapy. There is significant hyperinflation with increased total lung capacity. Arterial blood gases show severe arterial hypoxemia with significant decrease in hemoglobin saturation. The pulmonary function studies show severe obstructive lung disease with some reversibility by bronchodilator therapy. There is also hyperinflation and marked arterial hypoxemia. Although not diagnostic, the pulmonary function studies are suggestive of pulmonary emphysema.

Diagnosis:

1) Chronic obstructive pulmonary disease.
   Respiratory impairment class IV.
   (Estimately whole person impairment 60%).
   Emphysema.
   Byssinosis.
   Schilling Grade III.

Recommendations:

1) Remove from area of significant cotton dust exposure.
2) Avoid exposure to respiratory irritant, marked changes in humidity or temperature.
3) Prompt treatment of respiratory tract infection or respiratory tract symptoms and continued periodic pulmonary surveillance.

T. Reginald Harris

T. Reginald Harris, M.D.

TRH/fh

Evelyn Smith
Page 7--Medical Report
Date of Exam 8-29-79

PULMONARY FUNCTION LABORATORY REPORT

AGE 51 SEX F HEIGHT 65" WEIGHT 105

		BEFORE BRONCHODILATOR Measured	Normal	%Normal	AFTER BRONCHODILATOR Measured	%Normal
I:	LUNG VOLUMES					
	Forced Vital Capacity (L)	1.51	3.40	44.4	2.21	65.0
	Functional Residual Capacity (L)	4.69	2.85	164.6	----	----
	Residual Volume (L)	3.99	1.88	212.2	----	----
	Total Lung Capacity (L)	6.20	4.93	125.8	----	----
II:	FLOW RATES					
	FEV, 1.0 Second (L)	0.65	2.58	25.1	1.01	39.1
	FEF 25-75	0.36	2.92	12.3	0.51	17.4
	PEF	1.97	5.05	39.1	2.91	57.6
	Max. Vol. Vent. (L/Min)	21.00	98.59	21.3	36.00	36.5
	Knudson FVC	1.51	3.21*	47.0	2.21	68.8
	Knudson FEV_1	0.65	2.59*	25.1	1.01	39.0

III: COMPUTED VALUES

Residual Volume/Total Lung Capacity 38.1%
Forced Expiratory Volume, 1.0 Second/Forced Vital Capacity 43.0% 45.7 %

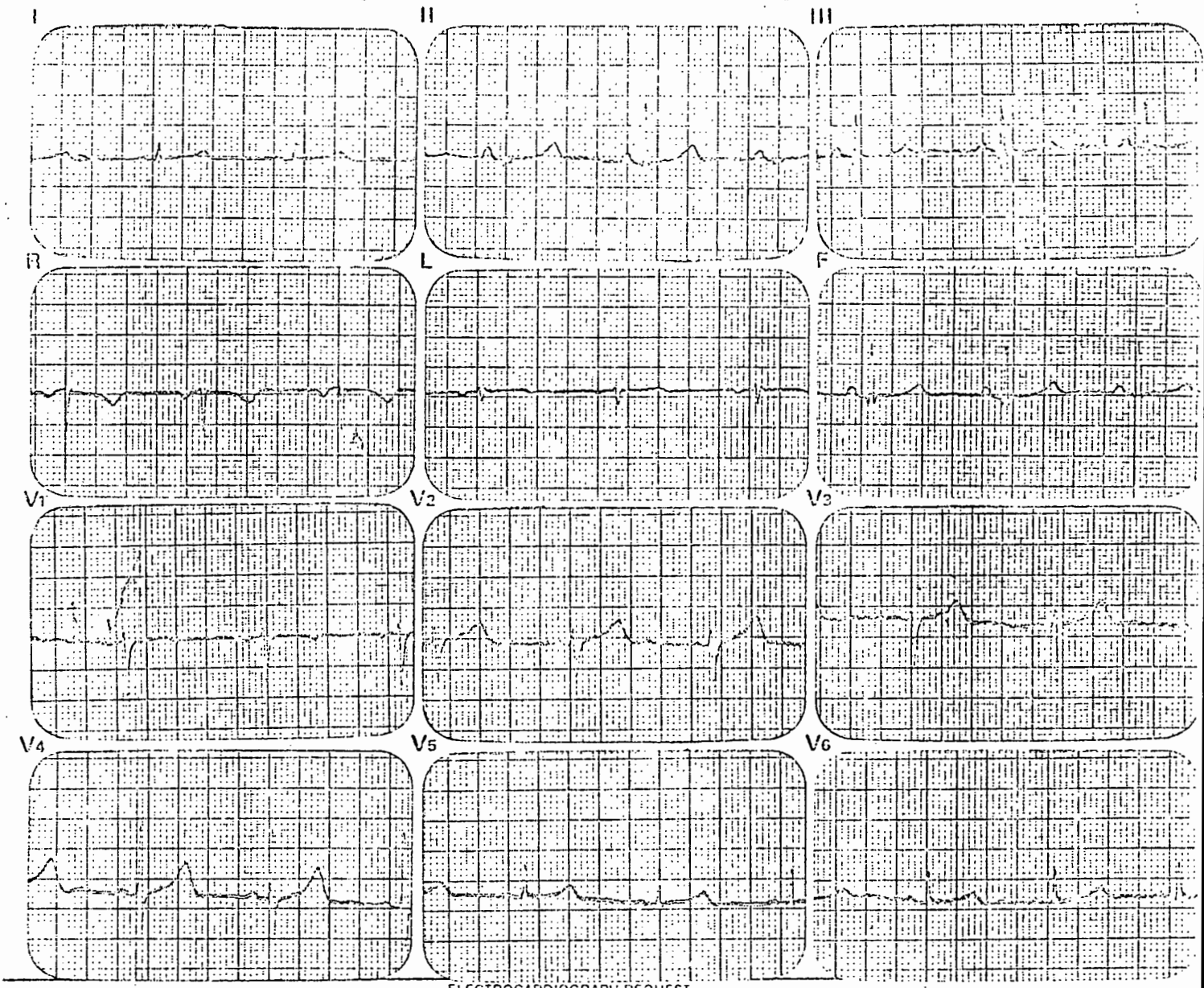
V:	ARTERIAL BLOOD	Rest
	pH	7.40
	Oxygen Tension (mm Hg)	58.0
	Carbon Dioxide Tension (mm Hg)	36.0
	Oxygen Saturation (% by Nomogram)	90.2
	Acid-Base (meg/L by Nomogram)	-2.0
	Bicarbonate	22.0

Interpretation: Severe restrictive lung disease which is partially reversible by bronchodilato therapy. There is significant hyperinlation with increased total lung capacity. Arterial blood gases show severe arterial hypoxemia with significant disease in hemoglobin saturation. The pulmonary function studies show severe obstructive lung disease with some reversibility by bronchodilator therapy. There is also hyperinflation and marked arterial hypoxemia. Although not diagnostic, the pulmonary function studies are suggestive of pulmonary emphysema.

T. Reginald Harris

T. Reginald Harris, M.D.

TRH/fh
*Normals from Knudson, R.J.



ELECTROCARDIOGRAPH REQUEST

PREV ECG YES ☐ NO ☐ AMB ☐ BED. ☐ EMERG ☐ DIG. ☐ QUIN ☐ AGE SEX B.P. DATE

CLIN DIAG ORDERED BY

M.D.

ELECTROCARDIOGRAPH REPORT

RHYTHM SINUS ☐ OTHER:

RATES		INTERVALS			AXIS
ATR	VENTR	P R	QRS	QTc	+ ° — °

DESCRIPTION	LIMB LEADS	PRECORDIAL LEADS
P		
QRS		
S-T		
T		

PATIENT IDENTIFICATION

Evelyn Smith
Route 1, Box 276
Bassett, Virginia 24055

INTERPRETATION

Normal sinus rhythm, normal electrocardiogram.

DATE 8-29-79 INTERPRETED BY T. Reginald Harris, M.D. M.D.

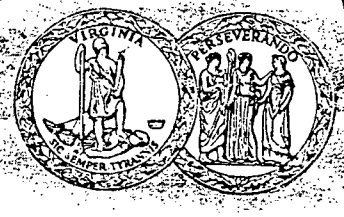
12

26

PP 1201 PRINTED IN U.S.A. 811

Stip.
$180.24

COMMONWEALTH OF VIRGINIA



(Refer to I.C. File No. in all correspondence about this injury.)

I.C. FILE NO. ~~[illegible]~~ 660-914

CARRIER'S NO.

DEPARTMENT OF WORKMEN'S COMPENSATION
INDUSTRIAL COMMISSION OF VIRGINIA
P. O. BOX 1794 RICHMOND, VIRGINIA 23214

Occupational Disease

DATE OF ACCIDENT Unkn.

NOTICE OF HEARING

Leave to recall sick to cross examine adverse Dr. - 30 days 8-29-79

Claiming S Stage 3 under 65.1-56(20)

Defense: No O.D. ~~Bronchitis~~ not stage 3 Other causation Ordinary disease of life

RE:
EVELYN ADAMS SMITH
v.
Fieldcrest Mills, Inc.

TO THE PARTIES ADDRESSED:

A hearing will be held at:

Council Chamber - Room 202
Municipal Building
55 West Church Street
MARTINSVILLE, Virginia

on September 10, 1980 at 9:00 a.m.

SUBJECT OF HEARING

Claimant's applicaiton, by counsel, filed with this Commission on March 27, 1980.

This hearing is part of a schedule. Postponement will cause inconvenience and extra expense. Continuance is entirely within the discretion of the Commission except as otherwise provided by law.

All medical reports are to be submitted to this Commission so they can be placed in the file prior to the date of hearing. Medical reports are acceptable in lieu of physicians personal appearances.

The parties must arrange to have all witnesses present to testify at the time and place designated. Failure of any party to appear at the time and place herein prescribed will result in action by the Commission as provided by law.

WILLIAM R. YATES, Deputy Commissioner

NOTICE TO

INDUSTRIAL COMMISSION OF VIRGINIA

Claimant

Evelyn Adams Smith
Rt. 1, Box 276
Bassett, VA 24055

Employer

Fieldcrest Mills, Inc.

Fold

Insurance Carrier

Self Insured
(notice to counsel)

Claimant's Counsel

Edwin A. Gendron, Jr., Esq.
P. O. Box 351
Martinsville, VA 24112

Defendant's Counsel

M. Kenneth Doss
Associate General Counsel
Fieldcrest Mills, Inc.
Eden, N. C. 27288

Pick Hom Martinsville, Va.

Date of this Notice 8/20/80 PB

27, 13

5

AUG 28 1980

REQUEST FOR ANSWERS
AND
SUPPLEMENTAL INTERROGATORIES

COMES NOW the claimant and says that she has hereinbefore on the 24th day of March, 1980 filed interrogatories and that the Employer has on the 27th day of May, 1980 responded, that certain responses are inadequate and that certain questions contained in the interrogatories have not been fully and completely answered and claimant therefore requests that said answers be supplied by the Employer forthwith:

2c The answer to the question is "see employee profile"--no profile is attached--the question remains unanswered.

2d The answer to the question is "see employee profile"--no profile is attached--the question remains unanswered.

4. Subsequent to 1965 describe the ventilation system in the area claimant worked if it consisted of anything other than an air conditioning system.

6. Was there a temporary installation of a device to measure air pollution or inhalants and if so, when was it installed and removed and will you attached a copy of all results recorded to these answers?

8. The answer to questions 8a-e is "see spirometry" and there is no attachment--The question remains unanswered.

9. The answer is "see medical report"--no report is attached and the question remains unanswered.

12. The substance of testimony has not been provided.

Therefore questions 2c; 2d; 4; 6; 8; 9; and 12 are essentially unanswered and claimant respectfully requests that each be answered fully under oath pursuant to §65.1-95 of the Code of Virginia.

IDRON, KIRBY
& SMITH
ORNEYS AT LAW
E. MAIN STREET
NSVILLE, VIRGINIA

These interrogatories should be considered as continuing.

EVELYN ADAMS SMITH

By _____
Counsel

SUPPLEMENTAL

INTERROGATORIES

1. Does the Employer have in its possession a letter from Dr. T. Reginald Harris stating that the claimant is not able to work and qualified for Social Security disability payments (letter probably received by Steve Culligan although not necessarily addressed to him) or any other document from Dr. T. Reginald Harris concerning the physical condition of the claimant.

These interrogatories should be considered as continuing.

EVELYN ADAMS SMITH

By _____
Counsel

Edwin A. Gendron, Jr.
GENDRON & KIRBY
6 E. Main Street
Martinsville, VA 24112

CERTIFICATE

This is to certify that a true and exact copy of the foregoing has this 26th day of August, 1980 been mailed to the employer, Fieldcrest Mills, Inc. at their plant in Fieldale, Virginia, 24089.

_____
Counsel for Claimant

Employee's

ANSWERS TO INTERROGATORIES

NOW COMES Defendant in the above-styled case and files Answers to Interrogatories propounded by the Plaintiff and answers as follows:

2.c. See Exhibit A.

2.d. See Exhibit A.

4. Subsequent to 1965, ventilation system was an air conditioning and air transfer system which filtered the air as well as conditioning the air.

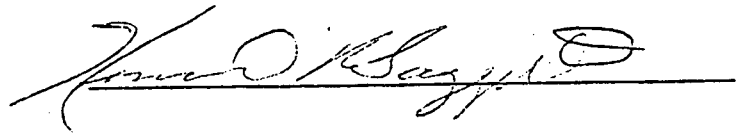
6. Vertical elutriators are used from time to time to measure dust levels. Results are attached as Exhibit B.

8. See Exhibit C.

9. See Exhibit D.

12. Dr. Harris' report plus interrogatories will be submitted. K. R. Baggett will testify as to dust measurements and dust levels in Plaintiff's work area plus tendering and placing Plaintiff in another job area in accordance with doctor's recommendation.

1. Yes (See Exhibit E).



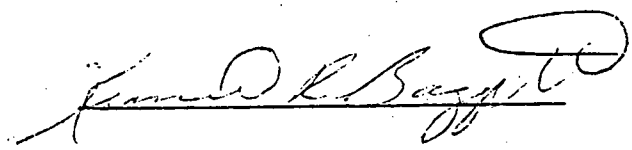
VERIFICATION

I, Kenneth R. Baggett, declare:

I am the Director of Safety of Fieldcrest Mills, Inc., a corporation, and that I have read the foregoing Answers to Interrogatories and believe the same to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed at Eden, North Carolina on September 4,1980.



STATE OF NORTH CAROLINA

COUNTY OF ROCKINGHAM

I, Corinda R. Thompson, a Notary Public for the jurisdiction aforesaid, certify that the above-named Kenneth R. Baggett, personally appeared before me and having been duly sworn made oath the foregoing Answer is true and correct to the best of his knowledge and belief.

Given under my hand this 4th day of September, 1980.

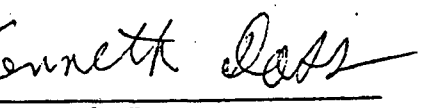
My Commission expires: July 27, 1982.

Notary Public

(NOTARIAL SEAL)

CERTIFICATE

The undersigned hereby certifies that the foregoing Answer was served upon the Plaintiff by mailing a copy thereof first-class mail, postage prepaid to the attorney for the Plaintiff, Edwin A. Gendron, Jr., Esq., Gendron, Kirby & Smith, 6 E. Main Street, P. O. Box 351, Martinsville, Virginia 24112.



M. Kenneth Doss

Exhibit A

FIELDCREST MILLS, INC.

EMPLOYEE PROFILE

AREA	ISSUE DA
02	10/09/7

EMPLOYEE NAME LAST	FIRST & MIDDLE INITIAL	EMPLOYEE NUMBER
SMITH	EVELYN A	81320

SOCIAL SECURITY NUMBER	DATE OF BIRTH	SEX RACE	U.S. CITIZEN	MARITAL STATUS	EMPLOYEE TELEPHONE NUMBER
226-30-2417	06/28/20	02	YES	MAR	703-673-1210

EMPLOYEE ADDRESS

STREET	CITY	STATE	ZIP CODE
ROUTE 1	BASSETT	VA	24055

SERVICE DATES CONTINUOUS	PENSION	MEDICAL CODES
07/22/46	01/01/46	

RETIREMENT PLAN; SAL.	INSURANCE BASE	MAJ. MED.	A & H	HT.	WT.	SEL. SER. CLASS	RESERVE/NATIONAL GUARD STATUS	COMPLETION DATE
	FDL	TWO	TWO	65	100			

EDUCATION

SCHOOL ATTENDED	MAJOR SUBJECT	NO. YRS.	LAST YR	DEGREE
HARDIN-REYNOLDS HIGH		10	45	

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EMERGENCY NOTIFICATION

NAME (MR./MRS./MISS)	TELEPHONE NUMBER	STREET	CITY	STATE	ZIP COD
MR THOMAS E SMITH	703-673-1210	ROUTE 1	BASSETT	VA	405

FIELDCREST JOB HISTORY

FROM	TO	TASK NO.	DESCRIPTION/JOB TITLE	SHIFT	MILL NAME	NO.	DEPARTMENT NAME	NO.	REHIRE	EMP. STATUS
10/15/70	08/31/79	01927	QUILLER TENDER	1	FIELDALE	07	QUILLING	19	YES	NO-OD
03/20/67	10/15/70	01927	QUILLER TENDER SCHWEITER	2	FIELDALE	07	QUILLING	19		TRANS
12/03/56	08/27/66	01927	QUILLER TENDER SCHWEITER	2	FIELDALE	07	QUILLING	19		PREG
03/12/56	12/03/56	01927	QUILLER TENDER OPERATOR	2	FIELDALE	07	QUILLING	19		TRANS
09/27/54	06/29/55	01927	QUILLER TENDER OPERATOR	2	FIELDALE	07	QUILLING	19	YES	PREG
01/26/54	09/27/54	01326	SPOOLER TENDER	2	FIELDALE	07	SPOOLING	13		TRANS
12/11/53	01/26/54	00000	QUILLER HAND	2	FIELDALE	07	SPOOLING	13		TRANS
05/18/53	12/11/53	04860	SET PACKER	2	FIELDALE	07	CUT & SEW	40		TRANS
04/23/51	05/18/53	01927	QUILLER TENDER SCHWEITER	2	FIELDALE	07	SPOOLING	13		TRANS
03/19/51	04/23/51	00000	QUILLER HAND	1	FIELDALE	07	SPOOLING	13		TRANS
08/29/49	03/19/51	00000	QUILLER HAND	2	FIELDALE	07	SPOOLING	13		TRANS
01/21/47	04/07/49	00000	QUILLER HAND	2	FIELDALE	07	SPOOLING	13	YES	NO-OD
11/26/46	01/21/47	00000	QUILLER HAND	3	FIELDALE	07	SPOOLING	13		NS
08/12/46	11/26/46	00000	QUILLER HAND	2	FIELDALE	07	SPOOLING	13		TRANS
07/22/46	08/12/46	00000	REWINDER	2	FIELDALE	07	SPOOLING	13		TRANS

18

Ex
Ex

Exhibit B

		QUIL-LING
	1	
	2	
	3	
	1	
16, 17	2	
7	3	
	1	
23	2	
	3	
3		
	1	
	2	
4	3	
	1	
	2	
3	3	
	1	
	2	
5	3	
	1	
	2	
3	3	
	1	
25	2	245
8	3	
	1	
9	2	361
	3	532
		393
	1	
	2	237
6	3	229
		287
	1	
9	2	
	3	
	1	
9	2	
	3	
	1	
9	2	
	3	

Data recorded in Micrograms)

34

19

34

FCR-113-1 (Revised Sept. 1978)

FIELDCREST MILLS, INC.
RESPIRATORY QUESTIONNAIRE

Exhibit C

RE-ENTRANCE

A. Identification Data

COMPANY Fieldcrest PLANT Fieldale NAME Evelyn A. Smith SS# 226-30-2417

SEX F RACE: W N I O DATE OF BIRTH 6/7/28 HEIGHT (IN) 65" WEIGHT 112 DATE OF TEST 1/21/80

COMMENTS

TECHNICIAN G. Haley, R.N.

B. Data Summary

GRADES: BRONCH I BYSSIN I DYSPNEA III ALLERGY II SMOKING I

PRE-EXPOSURE PULMONARY FUNCTION: FVC 1.85 FEV_1 0.9

POST-EXPOSURE PULMONARY FUNCTION: FVC 1.59 FEV_1 0.8

C. Work Area (Department)

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 area.

	OPEN	PICK	CARD	SPIN	WIND	TWIST	SPOOL	WARP	SLASH	WEAVE	OTHER
cotton & cotton blend	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)

D. Pulmonary Function Test Equipment

SPIROMETER MAKE: Vitalograph

MODEL: 122000

SERIAL #: 0277

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.

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)

If 'Yes': Which day? (35)

OCCUPATIONAL SAFETY & HEALTH STANDARD

29 CFR 1910
29 CFR 1910-1000
29 CFR 1910-1043 "Cotton Dust"

PHLEGM or alternative word to su... 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) (39)

How long have you had this phlegm? ..... Yrs.
(Write in number of years)

†These words are for subjects who work at night

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) ☑
Br. Grade ..... I ..... (44)

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 days ..... Mondays or first day back @ work ..... Sometimes ..... Always ✓ (47)

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

If after entering the mill:

How many hours after beginning of the shift does this begin? ..... 3 hours ..... hrs. (49)

How long does this tightness or breathing difficulty last? ..... 10 – 12 ..... hrs. (50)

Does it ever reoccur in the night? ..... Sometimes ..... Yes ✓ ..... No ✓ ..... (51)

If 'Yes': How many hours after initial exposure? ..... 10 – 12 hours ..... hrs. (52,53)

If 'Yes' Tuesday:

At what time on Tuesday does your chest feel tight or your breathing difficult? (1) ☐ Before entering the mill (54)
(2) ☐ After entering the mill

If after entering the mill:

How many hours after the beginning of the shift does this begin? ..... hrs. (55)

How long does this tightness or breathing difficulty last? ..... hrs. (56)

Does it ever reoccur in the night? ..... Yes ..... No ..... (57)

If 'Yes': How many hours after initial exposure? ..... hrs. (58,59)

36

(Ask only if NO to Question 3)

In the past, has your chest ever been tight or your breathing difficult on any particular day of the week? ..... Yes ..... No ..... (60)

If 'Yes': Which day? Sometimes ..... Always (61)

Bys. Grd. .....

BREATHLESSNESS

If disabled from walking by any condition other than heart or lung disease put "X" here and leave questions (63-71) unasked. ☐ (62)

Are you ever troubled by shortness of breath, when hurrying on the level or walking up a slight hill? ..... Yes ✓ No ..... (63)

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 ..... (64)

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 ✓ (65)

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

Are you short of breath on washing or dressing? ..... Yes ..... No ..... (66)

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

Dyspnea Grd. ..... III ..... (67)

OTHER ILLNESSES AND ALLERGY HISTORY

Do you have a heart condition for which you are under a doctor's care? ..... Yes ..... No ✓ (73)

Do you have an allergy or reaction to food or drugs? ..... Yes ..... No ✓ (74)

If 'Yes', specify the food or drug and ..... (75)

the reaction .....

Have you ever had asthma? ..... Yes ..... No ✓ (76)

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 ..... (77)

Have you ever had hay fever or other allergies (other than above)? hayfever ..... Yes ✓ No ..... (78)

If 'Yes', did you have hay fever or allergies before ever going to work in a textile mill? ..... Yes ✓ No ..... (79)

Have your parents, brothers, sisters or children had hay fever, asthma, a food or drug allergy, or other allergies? ..... Yes ..... No ✓ (80)

If 'Yes', to (80): Did those with these allergies work in a textile mill? ..... Yes ..... No ..... (81)

If 'Yes', to (81): Did any of these who have worked in a textile mill have these allergies before ever going to work in the mill? ..... Yes ..... No ..... (82)

A. Grd. ..... II ..... (83)

TOBACCO SMOKING

Do you smoke?
Record 'Yes' if regular smoker up to one month ago. (Cigarettes, cigar or pipe) ..... Yes ..... No ✓ (84)

If 'No' to (84):

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 ..... (85)

If 'Yes' to (84) or (85); what have you smoked and for how many years? (Write in specific number of years in the appropriate square)

	years
Cigarettes	10
Pipe	
Cigars	

If cigarettes, how many packs per day?
(Write in number of cigarettes) ..... 2pk/day ..... Cig.

Pack Years = numbers of packs smoked daily x number of years of smoking.

< 1 - Grade 0
1 to 10 - Grade 1
11 to 20 - Grade 2
21 to 30 - Grade 3
Over 31 - Grade 4

Smoking History Grade ..I.....

OCCUPATIONAL HISTORY

Have you ever worked in: A foundry? (As long as one year) ..... Yes ..... No ✓ (93)

Stone or mineral mining, quarrying or processing? (As long as one year) ..... Yes ..... No ✓ (94)

Asbestos milling or processing? (Ever) ..... Yes ..... No ✓ (95)

Cotton or cotton blend mill? (For controls only) ..... Yes ..... No ..... (96)

Other dusts, fumes or smoke? If yes, specify: ..... Yes ..... No ✓ (97)

Type of exposure .....

Length of exposure .....

At what age did you first go to work in a textile mill? ..... 18 ..... years (98)

When you first worked in a textile mill, did you work with (1) ☐ Cotton or cotton blend (99)
(2) ☐ Synthetic or wool

Within the first few days you first worked in a textile mill, do you remember becoming sick with fever, chills, cough or sickness of the stomach? (Accept any of the above signs or symptoms) ..... Yes ..... No ✓ (100)

If "no" to (93): Have you ever had such an illness after returning to the mill after a few days away from the mill? ..... Yes ..... No ✓ (101)

How many years have you worked in a textile mill? (Write in total number of years in appropriate square) 33

Processing:	years
Cotton or Cotton Blend	
All Synthetic or Wool	-

If cotton, how many years did you spend in each area? (Write in years in each area)

	(104) Open	(105) Pick.	(106) Card	(107) Spin	(108) Wind	(109) Twist	(110) Spool	(111) Warp	(112) Slash	(113) Weave	(114) Other
years											

V 3345

For those working in more than one area:

Did you move from a dusty work area to one that was not as dusty? ..... Yes ..... No ..... (115)

If yes, did you move because the dust bothered your breathing? ..... Yes ..... No ..... (116)

THE ABOVE INFORMATION WAS GIVEN BY ME AND IS CORRECT.

Evelyn A. Smith
Employee

G. Dalay, R.N.
Interviewer

38-

Vitalograph

Before work obs 0.9 35%
Pred. FEV1 = 0.59
6 hr obs FEV1 = 0.83 32%

~~[illegible]~~
Pred FVC 3.21
Before work obs 1.85 58%
6 hr obs 1.59 50%

LITRES WITH SUB-DIVISIONS (BTPS) @ 20°C (AMBIENT TEMP.)

Age 51
Ht 65"

Patients Name: Smith, Evelyn
Record No:
Date of Test: 1/21/80

0.75 1 2 SECONDS 3 4 5 6 8 10 12 14 Q
POINT (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

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39.

FIELDCREST MILLS, INC.
Medical Department
326 E. Stadium Drive
Eden, North Carolina 27288

FieldDate.
673-6500

AUTHORIZATION TO RELEASE MEDICAL INFORMATION

Date 10/1/79

I hereby authorize FieldCrest Mills Medical Dept.

to give complete information to M.D. Geoffrey W. Curwen

concerning the health of the undersigned in reference to Respiratory.

Consultant workup. By M.D.

T.R. Harris.

Signature [illegible]

Witness [illegible]

40-

FIELDCREST MILLS, INC.

EDEN, NORTH CAROLINA 27288

Received from Fieldcrest Mill, Inc., Medical Department,

a copy of consultant work-up and physician's written

opinion provided by M.D. T.R. HARRIS -

Date: 10/1/79

Signature : [illegible]

Witness : [illegible]

41

FIELDCREST MILLS, INC.
Medical Department
326 E. Stadium Drive
Eden, North Carolina 27288

AUTHORIZATION TO RELEASE MEDICAL INFORMATION

Date 8-28-79

I hereby authorize Fieldcrest, Mills, Medical Dept.

to give complete information to T. Reginald Harris, M.D.

concerning the health of the undersigned in reference to Evelyn A. Smith,

Respiratory, consultant workup.

Signature Evelyn A. Smith

Witness [illegible]

4V.

CR-72

FIELDCREST MILLS, INC.

Foreman _____

Mill _____

CASE RECORD

Department _____

Name: Last	First	Middle	Maiden	S.S. No.	Age	Sheet No.
Smith	Evelyn	A.				

Date & Time	NOTES	Treated by	Time Out
July 25, 1979	Pt. reports from Fieldale, Va as per appointment to be appraised of results of the screening pulmonary function tests and recommendations for further evaluation.		
	She is informed of reduction of screening ventilation tests, and recommend to have examination, opinion, and advice by Dr. Harris at Shelby, N.C.		
	She agrees to have the EOA and an appointment is made for Aug. 29, 1979.		
	She expresses a desire and need to continue work.	G Dale Dillon, RN	

43

FIELDCREST MILLS, INC.
Eden Medical Department

X-RAY FINDINGS

Patient's Name: Smith, Evelyn D. Age: 51 Mill/Department: Fieldale/Yarn Prep

Job Title: Fuller Tender X-Ray Number: 2016 Date: 7-25-74 Technician: [illegible]

Reason for Request: Per request Dr. D. Gullett

Region X-Rayed: Chest

X CHEST: Chest examination shows normal bones, smooth diaphragmatic surfaces, sharp angles, normal heart, and clear lungs.

___ EXTREMITY: There is no evidence of fracture, dislocation, or intrinsic bone disease in x-rays of the right/left _____

___ SKULL: Except for _____

_____, skull examination shows intact inner and outer tables, pneumatized paranasal and mastoid air cells, midline calcification of the pineal gland, normal sellar structures, normal petrous ridges and is considered otherwise normal.

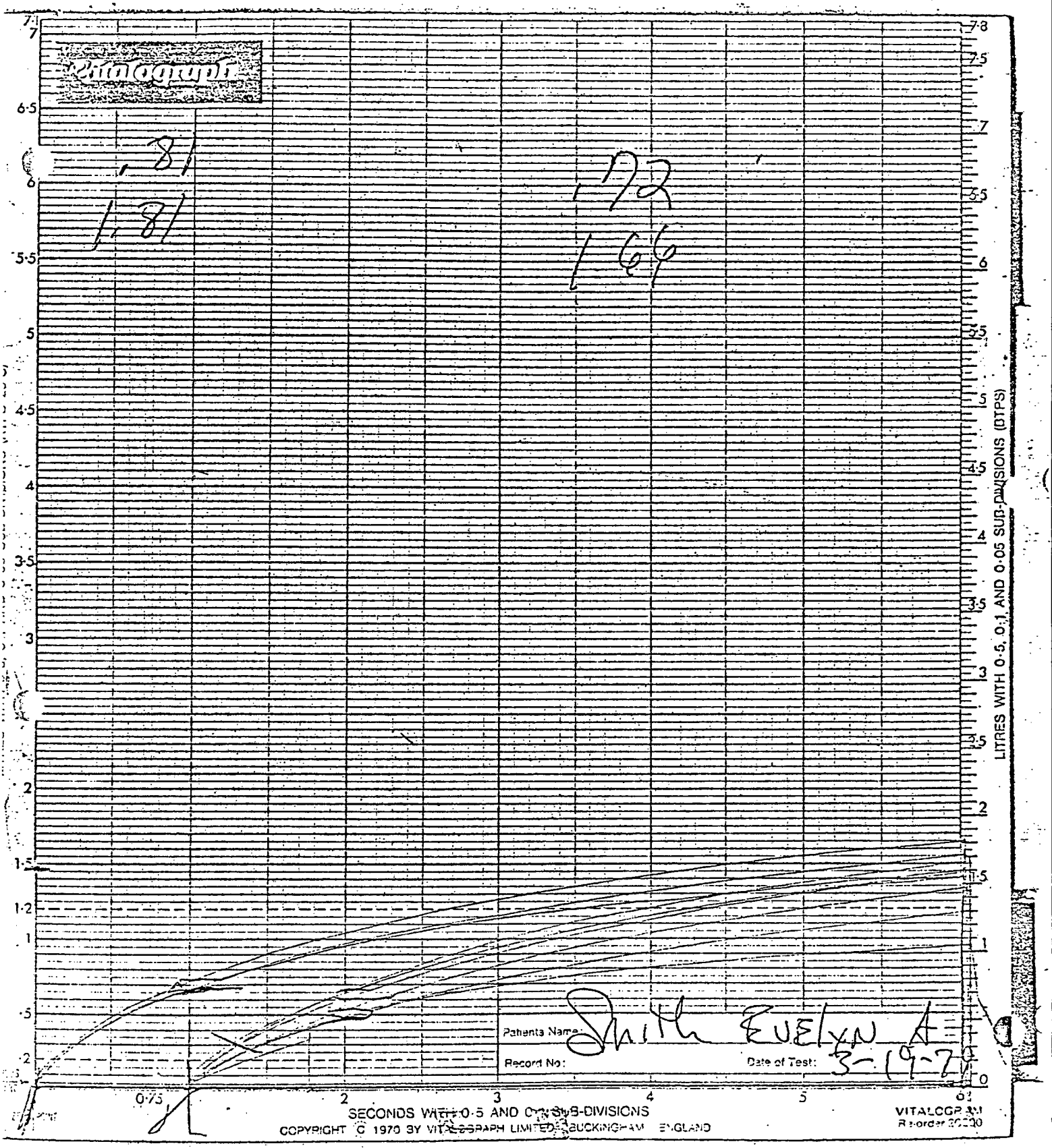
___ LUMBO-SACRAL SPINE: Except for _____

_____, x-rays of the lumbo-sacral spine show normal abdominal and pelvic viscera, bony architecture compatible with the patient's age, normal sacroiliac and hip joints, well maintained intervertebral spaces, and heights of the vertebral bodies, patent neural foramina, intact facets and normally aligned apophyseal joints. The lumbo-sacral angle is acceptable, the line of weight bearing is excellent, and is considered otherwise normal.

___ CERVICAL SPINE: Except for _____

_____, x-rays of the cervical spine shows normal bony architecture and curvature, intact vertebral bodies, spinous and lateral processes as well as preserved intervertebral spaces and is considered otherwise normal.

[illegible] Charles W. Mankins


Vitalograph
.81
1.81
.72
1.66
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (BTPS)
Patients Name: Smith Evelyn A
Record No:
Date of Test: 3-19-7
SECONDS WITH 0·5 AND 0·05 SUB-DIVISIONS
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VITALOGRAPH

45

Section A. Employee Identification: FCR-113A

Employee Name			Employee Number
EVELYN	A	Smith	8132
First	Middle	Last	(1-5)

Age	Height	Mill No.	Department No.	Task No.
50	65	07	19	27
	(6–8)	(9–10)	(11–12)	(13–17)

Section B. Pulmonary Function Test Results

Test Date	Test Day	Before Work Sample		6 Hour Sample		Since Last Test	* Positive History			
10 9 78	1	0.95	1.85	0.89	1.90	___ 1 Year (1) ___ 3 Mos. (3) ___ 6 Mos. (6) ___ 9 Mos. (9) ___ Special (0)				
MM DD YY		FEV1	FVC	FEV1	FVC		A	B	C	D
(18–23)	(24)	(25–27)	(28–30)	(31–33)	(34–36)	(37)	(38)	(39)	(40)	(41)

A. Do you experience chest tightness, shortness of breath or difficult breathing that is confined to or more severe on any particular day of the week?

Yes ___ No ✓

B. Are there any noticeable changes in your breathing when you return to work (Mondays) after being out over a weekend?

Yes ___ No ✓

C. Do you cough on any particular day of the week more so than on others?

Yes ___ No ✓

D. During the past year have you had any chest illness that required treatment by a physician?

Yes ___ No ✓

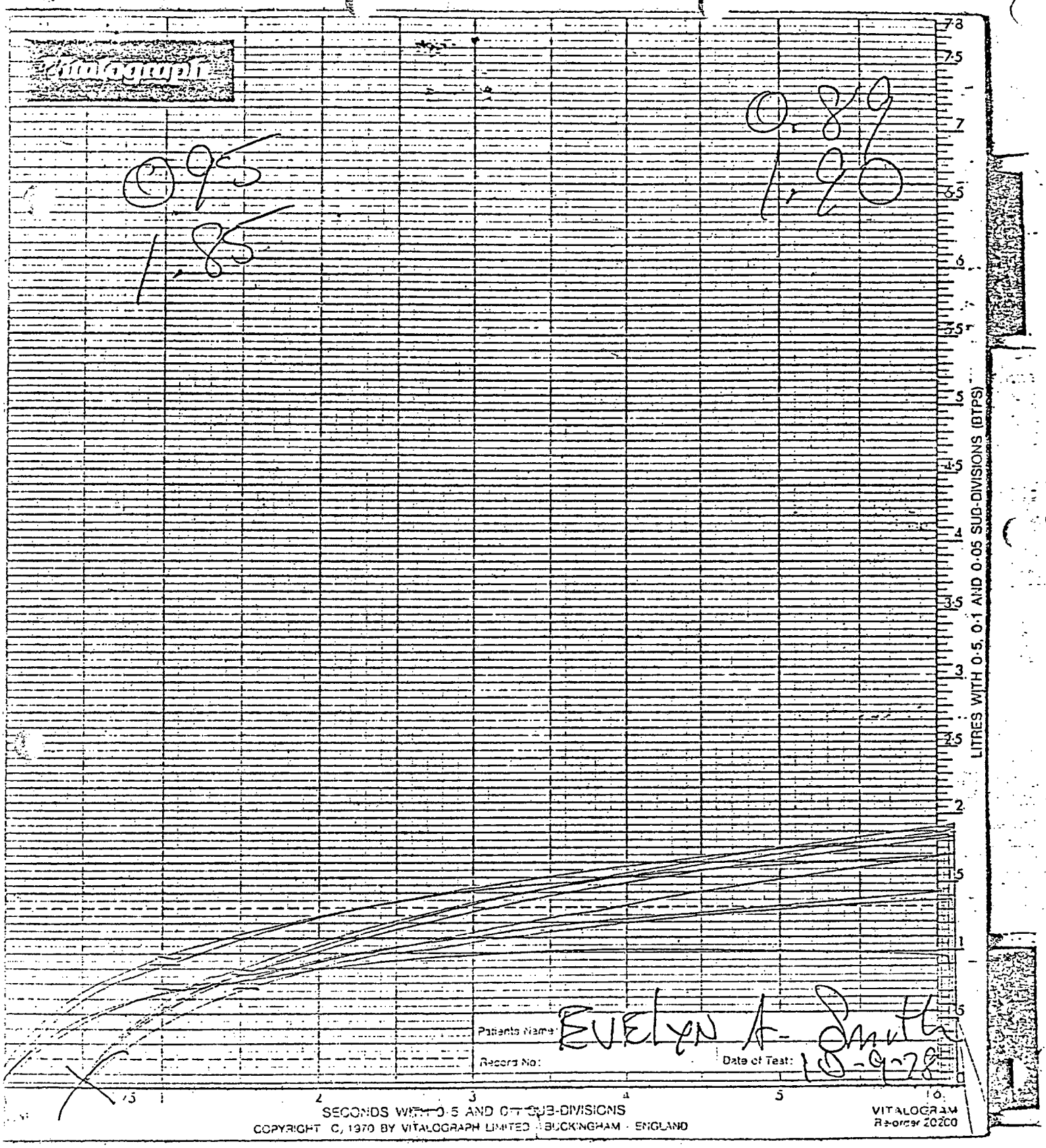
E. Do you smoke? (Record Yes if employee smokes cigarettes, cigars, or pipe)

Yes ✓ No ___

If Yes cigarette smoker, record number of cigarettes per day 40 8.

Interviewer Comments

46.


0.95
1.85
0.89
1.90
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (BTPS)
Patients Name: Evelyn A. Smith
Record No:
Date of Test: 10-9-78
SECONDS WITH 0·5 AND 0·1 SUB-DIVISIONS
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VITALOGRAM
Reorder 20200

47

Section A. Employee Identification:

Employee Name				Emolovee Number
First	EVELYN A SMITH	2 06-28-28		(1-5)
	226-30-2417	81320		
Age			ent No.	Task No.
50	1927 07 65	07-22-46		
	(6–8)	(9–10)	(11–12)	(13–17)

Section B. Pulmonary Function Test Results

Test Date	Test Day	Before Work Sample		6 Hour Sample		Since Last Test	* Positive History			
9:25:78	1					✓ 1 Year (1) 3 Mos. (3) 6 Mos. (6) 9 Mos. (9) Special (0)				
MM:DD:YY		FEV1	FVC	FEV1	FVC		A	B	C	D
(18–23)	(24)	(25–27)	(28–30)	(31–33)	(34–36)	(37)	(38)	(39)	(40)	(41)

A. Do you experience chest tightness, shortness of breath or difficult breathing that is confined to or more severe on any particular day of the week?

Yes _____ No ✓

B. Are there any noticeable changes in your breathing when you return to work (Mondays) after being out over a weekend? 1ST

Yes _____ No ✓

C. Do you cough on any particular day of the week more so than on others?

Yes _____ No ✓

D. During the past year have you had any chest illness that required treatment by a physician?

Yes _____ No ✓

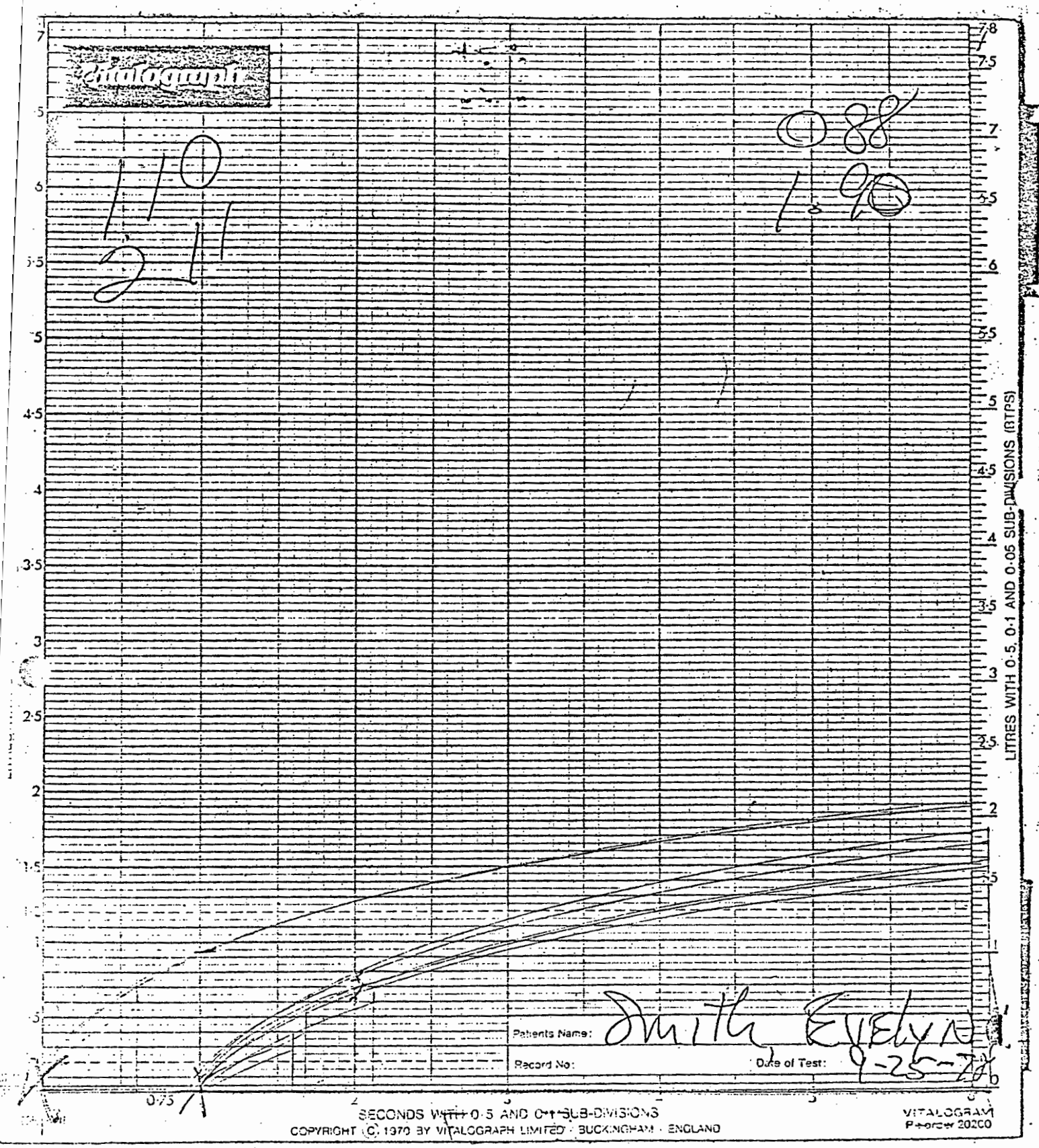
E. Do you smoke? (Record Yes if employee smokes cigarettes, cigars, or pipe)

Yes ✓ No _____

If Yes cigarette smoker, record number of cigarettes per day 40.

Interviewer Comments

48.


Patients Name: Smith Evelyn
Record No:
Date of Test: 9-25-78
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (BTPS)
SECONDS WITH 0·5 AND 0·1 SUB-DIVISIONS
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VITALOGRAM
Pneumo 20200

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Section A. Employee Identification: FCR-113A

Employee Name				Employee Number
	EVELYN A SMITH	2	06-28-28	
First	226-30-2417		81320	(1-5)
Age	1927 07 65		07-22-46	No. / Task No.
48				
	(6–8)	(9–10)	(11–12)	(13–17)

Section B. Pulmonary Function Test Results

Test Date	Test Day	Before Work Sample		6 Hour Sample		Since Last Test	Positive History			
10/10/77	1	1.64	2.04	1.60	2.48	✓ 1 Year (1)				
						3 Mos. (3)				
						6 Mos. (6)				
						9 Mos. (9)				
						Special (0)				
MM DD YY		FEV1	FVC	FEV1	FVC		A	B	C	D
(18–23)	(24)	(25–27)	(28–30)	(31–33)	(34–36)	(37)	(38)	(39)	(40)	(41)

A. Do you experience chest tightness, shortness of breath or difficult breathing that is confined to or more severe on any particular day of the week?

Yes _____ No ✓

B. Are there any noticeable changes in your breathing when you return to work (Mondays) after being out over a weekend? 1st

Yes _____ No ✓

C. Do you cough on any particular day of the week more so than on others?

Yes _____ No ✓

D. During the past year have you had any chest illness that required treatment by a physician?

Yes _____ No ✓

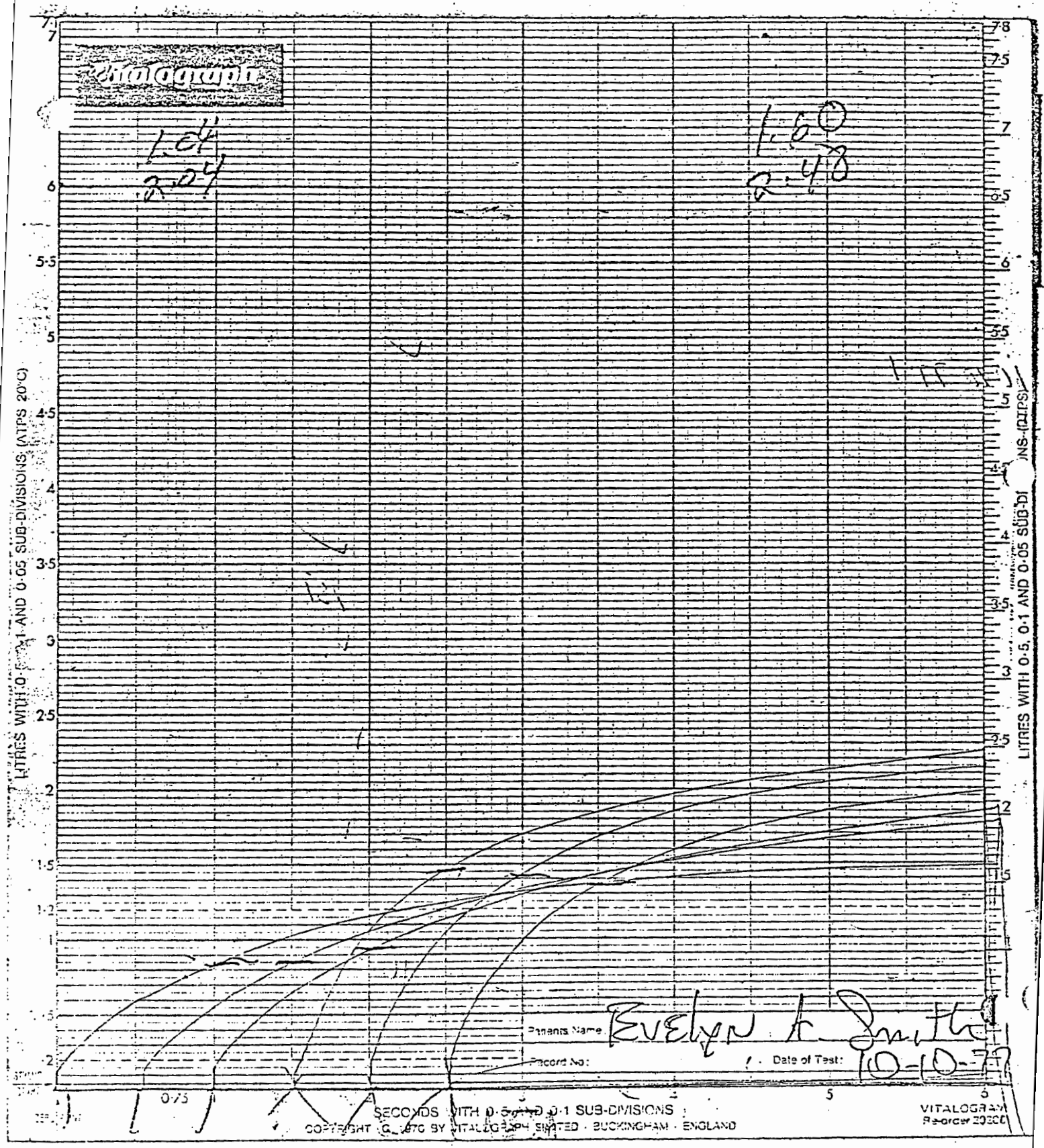
E. Do you smoke? (Record Yes if employee smokes cigarettes, cigars, or pipe)

Yes ✓ No _____

If Yes cigarette smoker, record number of cigarettes per day 20-40.

Interviewer Comments

50.


Vitalograph
1.04
2.04
1.60
2.48
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (ATPS 20°C)
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DI
Patients Name: Evelyn A. Smith
Record No:
Date of Test: 10-10-77
SECONDS WITH 0·5 AND 0·1 SUB-DIVISIONS
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VITALOGRAM
Reorder 20300

51.

Section A. Employee Identification: FCR-113A

Employee Name				Employee Number
First	EVELYN A SMITH	2 06-28-28		(1-5)
Age	226-30-2417	81320	ent No.	Task No.
48	1927 07 65	07-22-46		
	(6–8)	(9–10)	(11–12)	(13–17)

Section B. Pulmonary Function Test Results

Test Date	Test Day	Before Work Sample		6 Hour Sample		Since Last Test	• Positive History			
8.11.74	1	.78	1.52	.94	1.67	✓ 1 Year (1) 3 Mos. (3) 6 Mos. (6) 9 Mos. (9) Special (0)	X	X		
MM DD YY		FEV1	FVC	FEV1	FVC		A	B	C	D
(18–23)	(24)	(25–27)	(28–30)	(31–33)	(34–36)	(37)	(38)	(39)	(40)	(41)

A. Do you experience chest tightness, shortness of breath or difficult breathing that is confined to or more severe on any particular day of the week?

Yes ✓ No ~~✓~~

S.O.B ON MONDAYS.

B. Are there any noticeable changes in your breathing when you return to work (Mondays) after being out over a weekend?

Yes ✓ No ____

S.O.B. 4hrs into shift. LASTS RESTS OF DAY!

C. Do you cough on any particular day of the week more so than on others?

Yes ____ No X

D. During the past year have you had any chest illness that required treatment by a physician?

Yes ____ No X

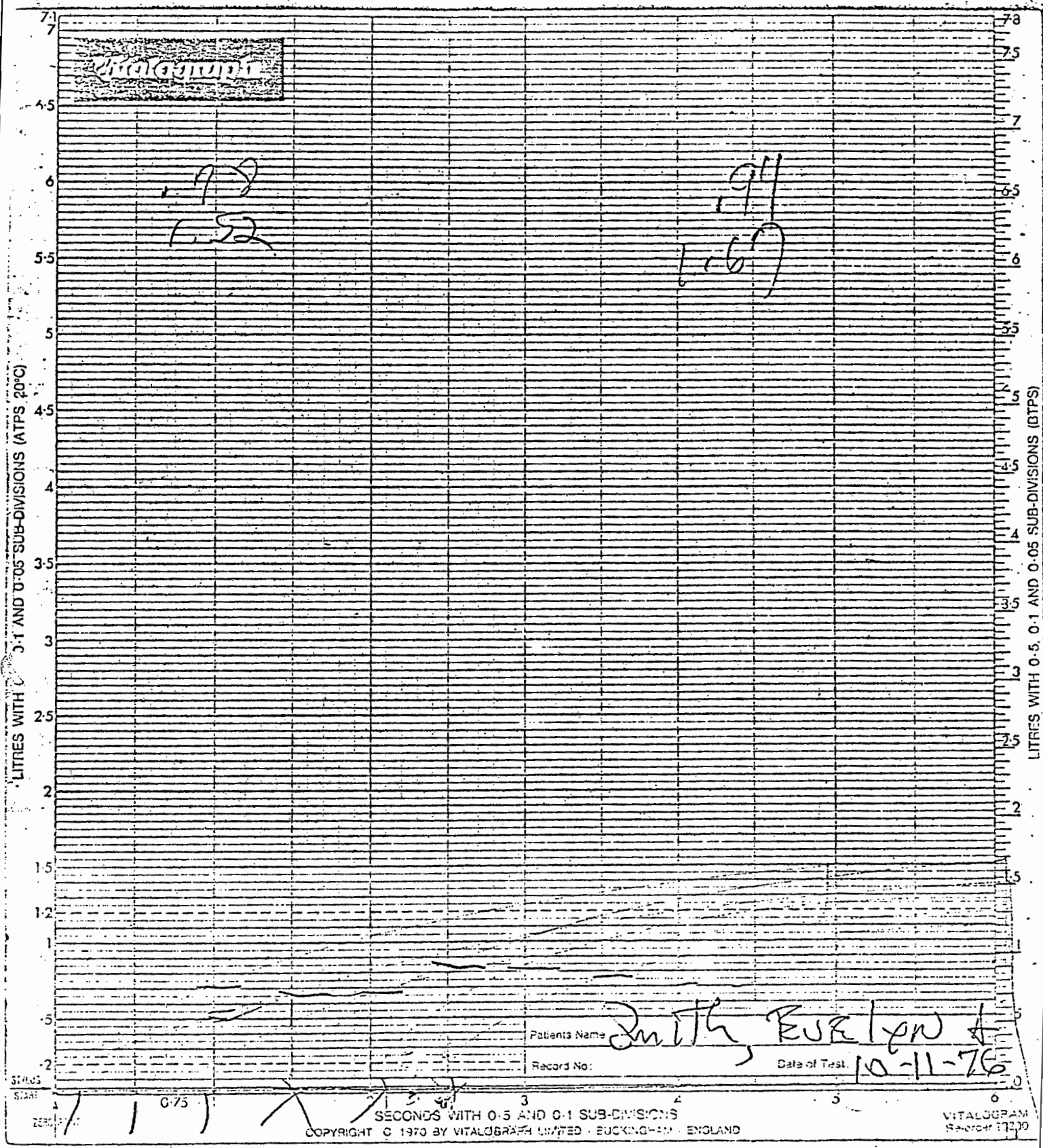
E. Do you smoke? (Record Yes if employee smokes cigarettes, cigars, or pipe)

Yes X No ____

If Yes cigarette smoker, record number of cigarettes per day 30.

Interviewer Comments

5r.


LITRES WITH 0·1 AND 0·05 SUB-DIVISIONS (ATPS 20°C)
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (BTPS)
.98
1.52
.91
1.60
Patients Name Smith, Eugenia A
Record No:
Date of Test. 10-11-76
SECONDS WITH 0·5 AND 0·1 SUB-DIVISIONS
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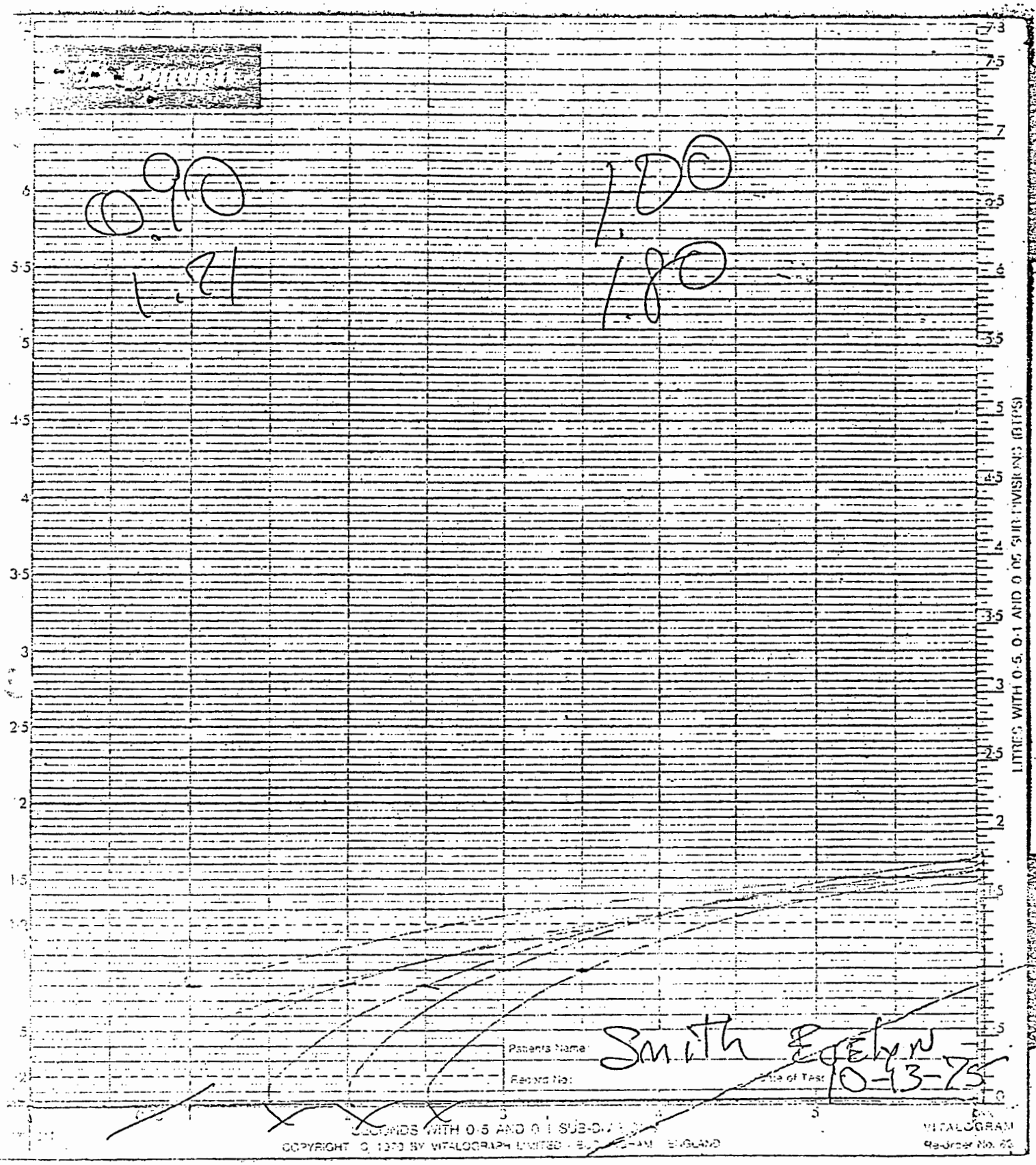
VITALOGRAM

53.


0.90
1.21
1.00
1.80
Patient's Name: Smith Evelyn
Record No:
Date of Test: 10-13-75
SECONDS WITH 0·5 AND 0·1 SUB-DIVISIONS
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VITALOGRAM
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (BTPS)

54

ECR–108

INTERVAL QUESTIONNAIRE

(RESPIRATORY)

A. INTERVIEW: Date 10-14-75. Interviewer's Employee No. _____

Employee SMITH, EVELYN A 2 06-28-28
226-30-2417 81320
Employee 1927 07 07-22-46

Age _____

B. Do you experience chest tightness, shortness of breath or difficult breathing that is confined to or more severe on any particular day of the week?

Yes ✓ No _____

Interviewer Comments
SOB ON MONDAY. STARTS AFTER 2 HRS. ON JOB. LASTS PAST OF DAY.

C. Are there any noticeable changes in your breathing when you return to work (Mondays) after being out over a weekend?

Yes ✓ No _____

Interviewer Comments
SEE ABOVE.

D. Do you cough on any particular day of the week more so than on others?

Yes _____ No ✓

Interviewer Comments

E. During the past year have you had any chest illness that required treatment by a physician?

Yes _____ No ✓

Interviewer Comments

F. Do you smoke? (Record Yes if employee smokes cigarettes, cigars, or pipe)

Yes ✓ No _____

If Yes cigarette smoker, record number of cigarettes per day 30.

55.

FCR-108

INTERVAL QUESTIONNAIRE

(RESPIRATORY)

64"

45-

A. INTERVIEW: Date 10·24·73 Interviewer's Employee No. _____

Employee Name EVELYN A SMITH 2 06-28-28 _____ Age 45

L 226-30-2417 81320

Employee Payroll No. 1927 07 07-22-46 t. No. _____

B. Do you experience chest tightness, shortness of breath or difficult breathing that is confined to or more severe on any particular day of the week?

Yes ✓ No _____

Interviewer Comments

CHEST TIGHTNESS ON MONDAY. LASTS DURATI OF SHIFT. (NOT EVERY MON.)

C. Are there any noticeable changes in your breathing when you return to work (Mondays) after being out over a weekend?

Yes _____ No X

Interviewer Comments

D. Do you cough on any particular day of the week more so than on others?

Yes _____ No X

Interviewer Comments

E. During the past year have you had any chest illness that required treatment by a physician?

Yes _____ No X

Interviewer Comments

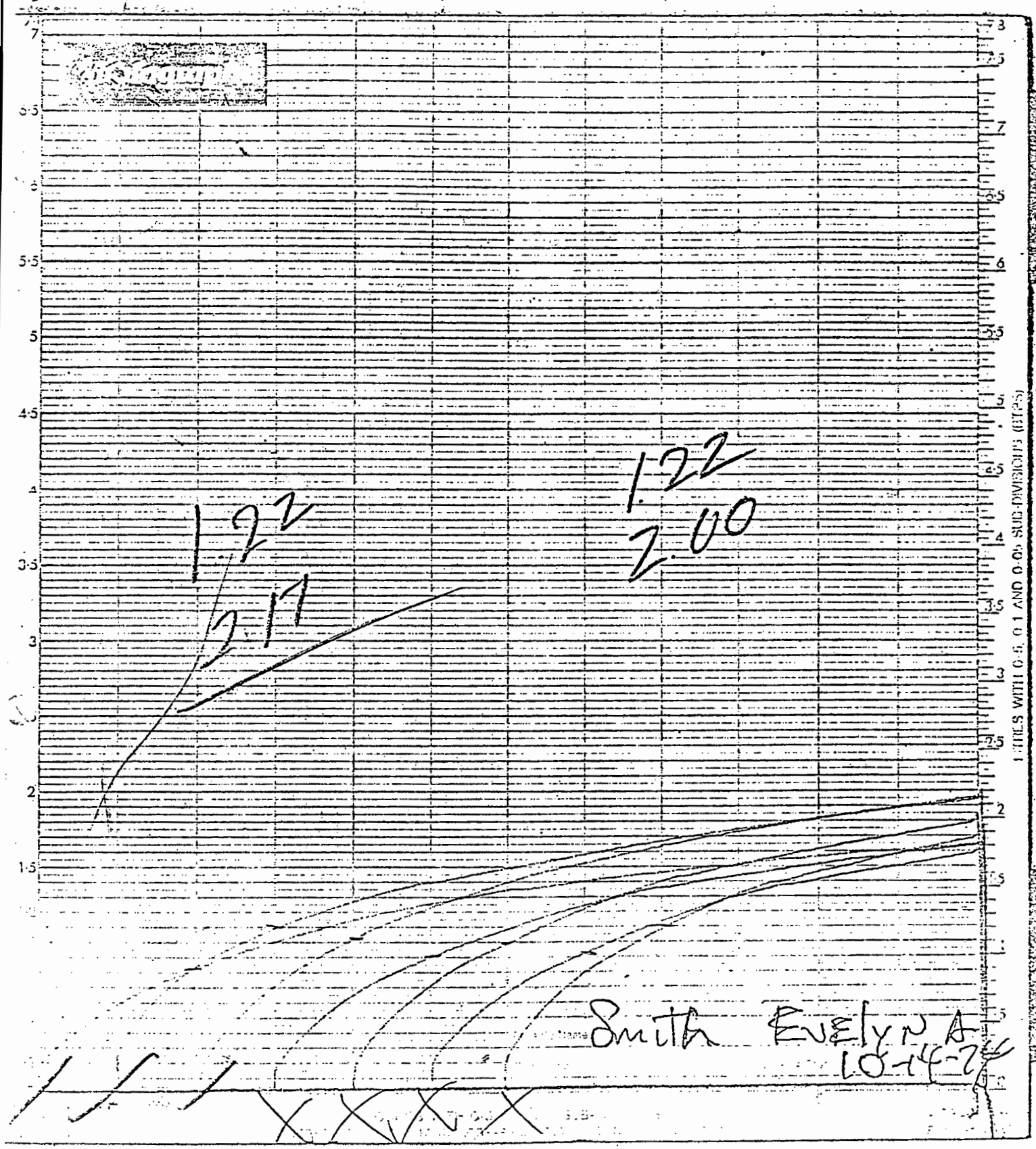
F. Do you smoke? (Record Yes if employee smokes cigarettes, cigars, or pipe)

Yes ✓ No _____

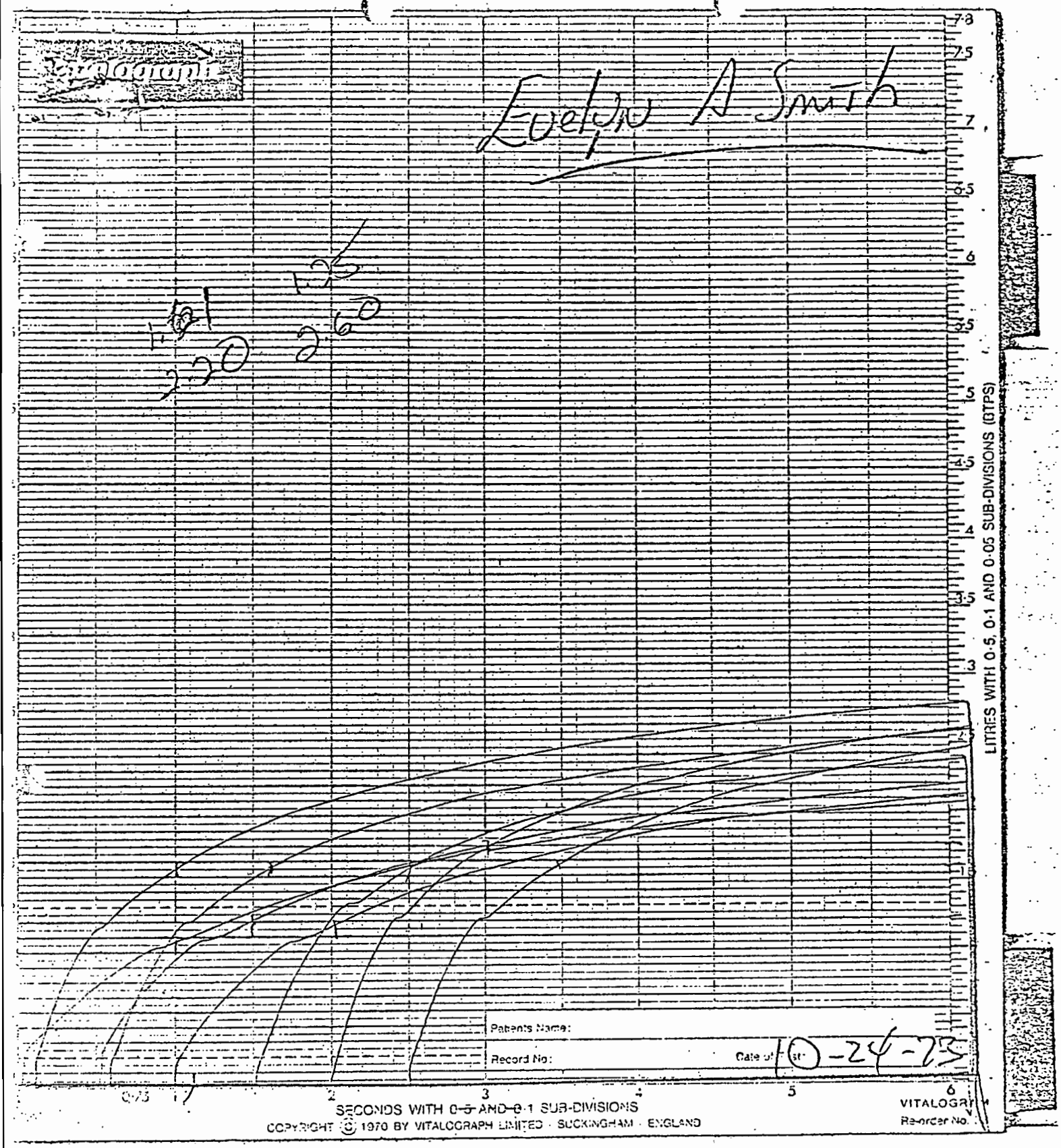
If Yes cigarette smoker, record number of cigarettes per day 20.

NO MASK

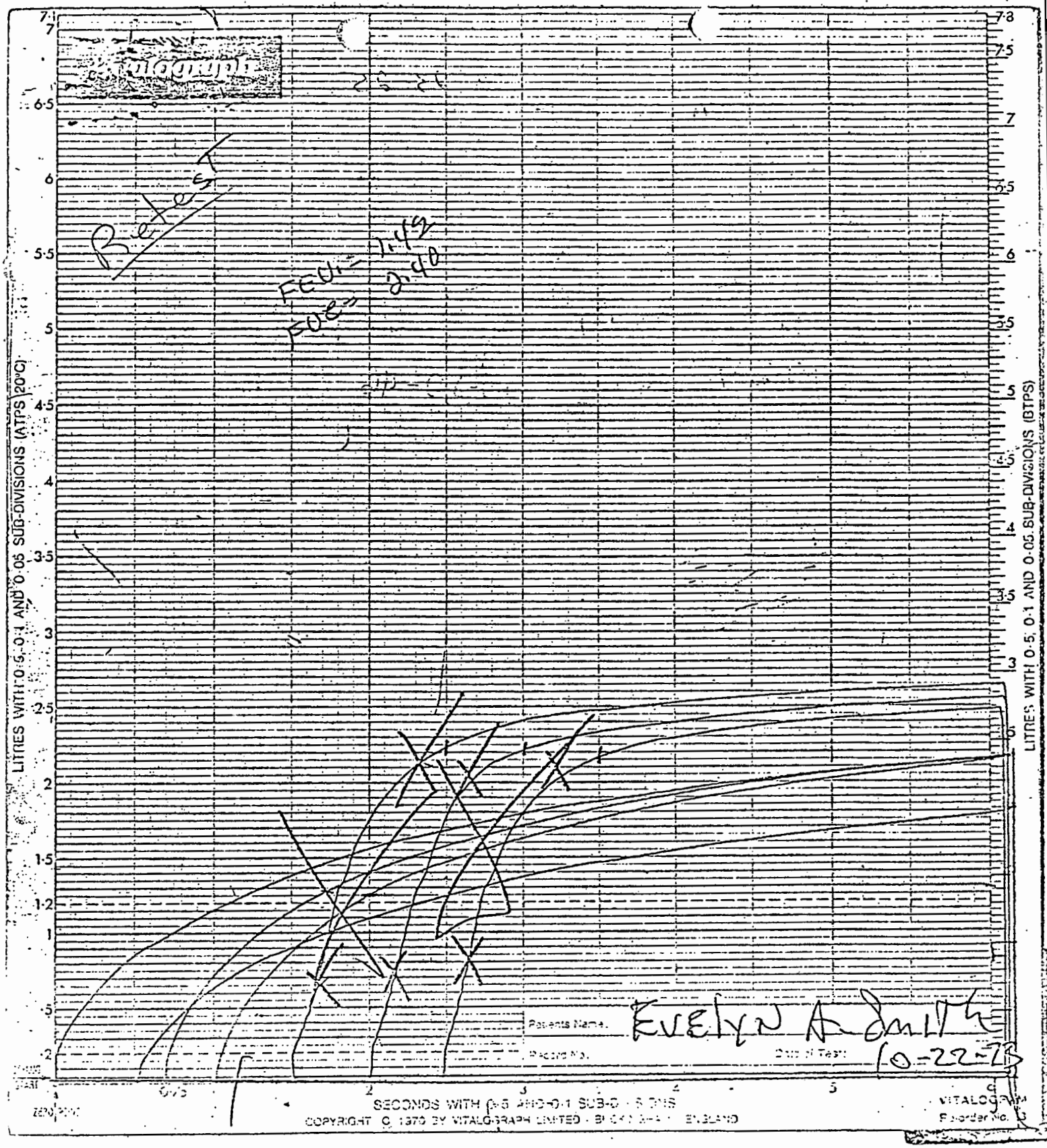
56.



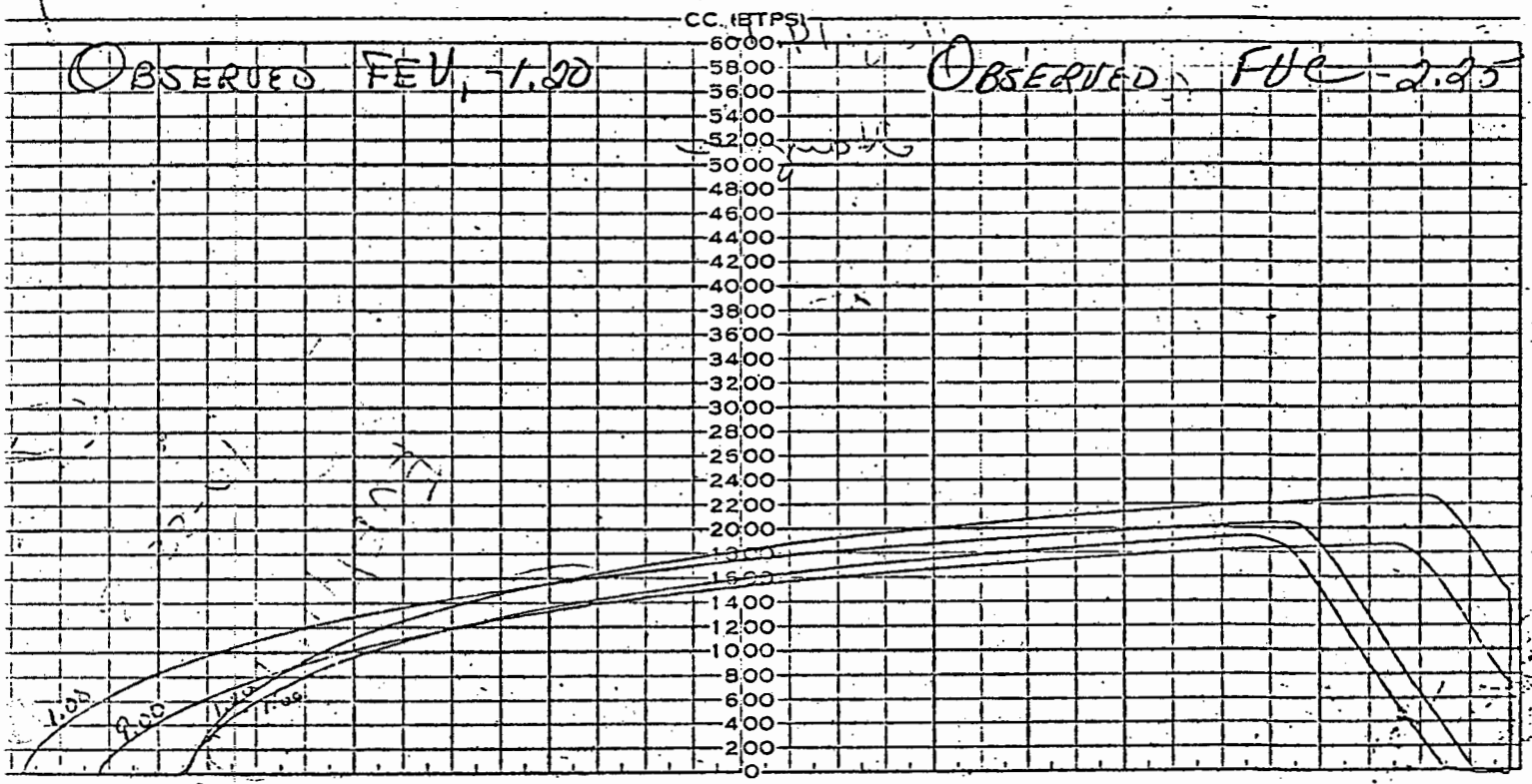
57


Evelyn A Smith
FEV1
220
260
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (BTPS)
Patients Name:
Record No:
Date of Test
10-24-73
SECONDS WITH 0·5 AND 0·1 SUB-DIVISIONS
COPYRIGHT © 1970 BY VITALOGRAPH LIMITED · BUCKINGHAM · ENGLAND
VITALOGRAPH
Re-order No.

58


LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (ATPS 20°C)
LITRES WITH 0·5, 0·1 AND 0·05 SUB-DIVISIONS (BTPS)
SECONDS WITH 0·5 AND 0·1 SUB-DIVISIONS
COPYRIGHT © 1970 BY VITALOGRAPH LIMITED
Patients Name
Record No.
Date of Test
Evelyn A Smith
10-22-73
VITALOGRAPH
Recorder No.

59.



Before Work

Smith Evelyn A

POSITION THIS EDGE NEAREST CABINET

Aug 14, 72

60.

FCR-108

INTERVAL QUESTIONNAIRE

(RESPIRATORY)

A. INTERVIEW: Date Aug. 14, 1972 Interviewer's Employee No. 38598

Employee Name Smith Evelyn A (Last / First / Middle) Date of Birth 6-28-28 Age 44

Employee Payroll No. 81320 Mill No. 07 Dept. No. 12

B. Do you experience chest tightness, shortness of breath or difficult breathing that is confined to or more severe on any particular day of the week?

Yes ✓ No ____

Interviewer Comments

Mondays -

C. Are there any noticeable changes in your breathing when you return to work (Mondays) after being out over a weekend?

Yes ✓ No ____

Interviewer Comments

D. Do you cough on any particular day of the week more so than on others?

Yes ____ No ✓

Interviewer Comments

E. During the past year have you had any chest illness that required treatment by a physician?

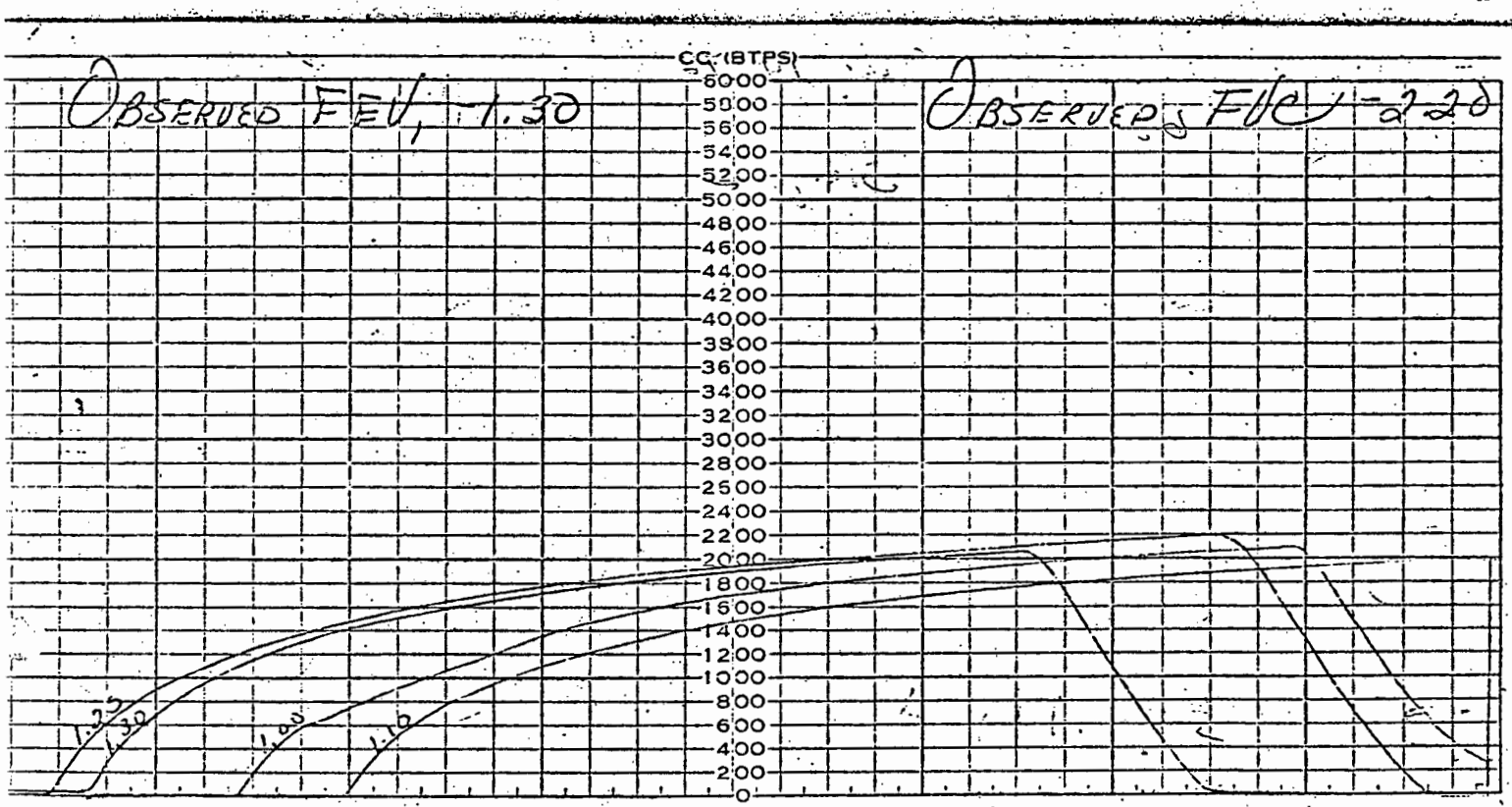
Yes ____ No ✓

Interviewer Comments

F. Do you smoke? (Record Yes if employee smokes cigarettes, cigars, or pipe)

Yes ✓ No ____

If Yes cigarette smoker, record number of cigarettes per day 20.



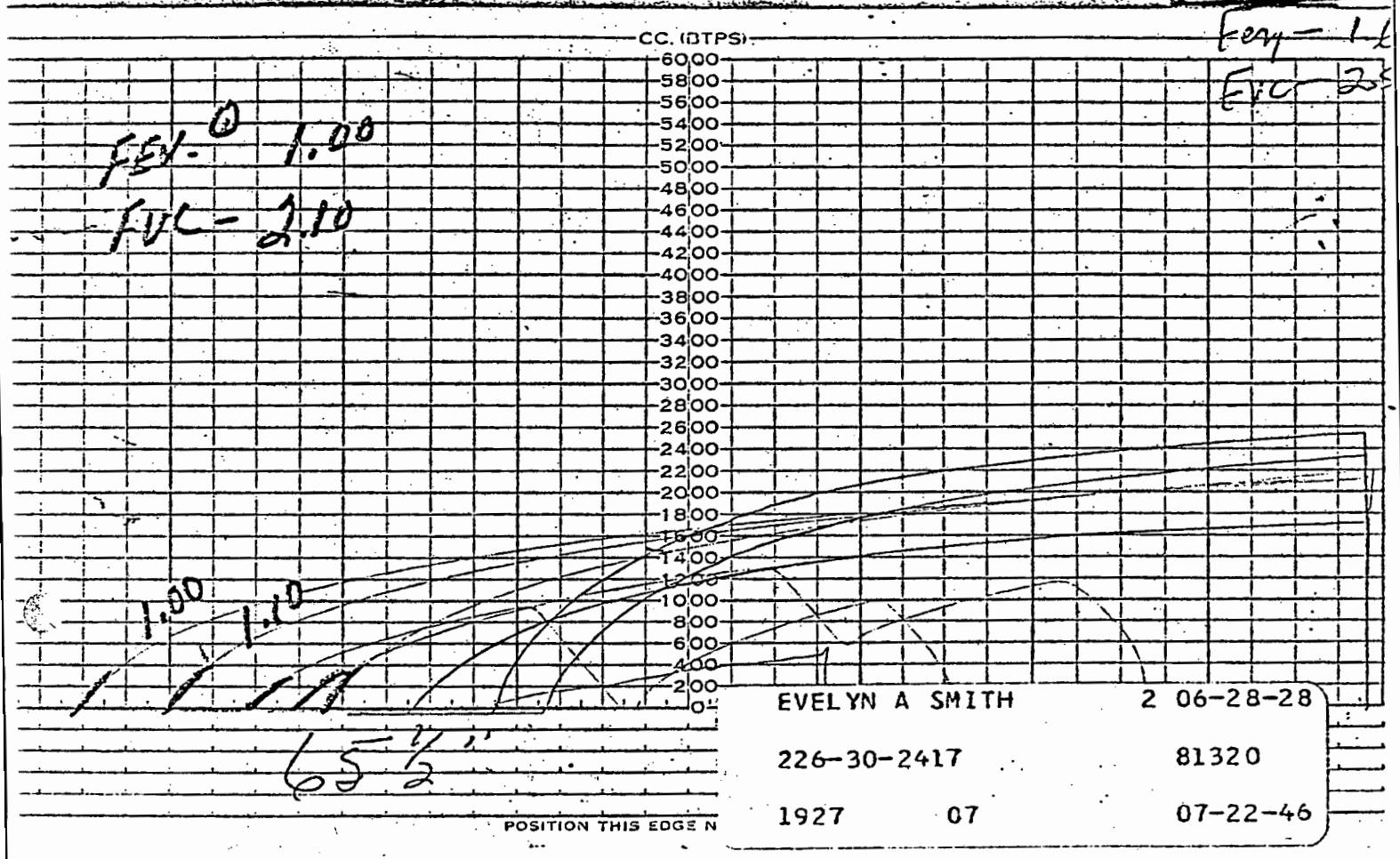
6 Hours

Smith, Evelyn A.

POSITION THIS EDGE NEAREST CABINET

14 Aug 72

62


CC. (BTPS)
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18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0
FEV-1 1.00
FVC- 2.10
1.00
1.10
65 1/2"
POSITION THIS EDGE N
EVELYN A SMITH 2 06-28-28
226-30-2417 81320
1927 07 07-22-46

63.

S1320 226-30-2417
EVELYN A SMITH 2
634 13JUL71
FIELDCREST MILLS

06-28-28 1927 0712 07-22-46
History: Asthma/Hay Fever- - - - - -[1]
Other Respiratory Diseases-[2]

(Type and date of occurance)

Diaphragm Height: PA(in)___ mm. PA(ex)___ mm.
Diaphragm Excursion Value: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
Screening Film Impression:

[1] No abnormalities noted
[2] Tuberculosis suspect
[3] Lungs questionable REPEAT
[4] Lungs abnormal, probably arrested
[5] Lungs abnormal, URGENT
[6] Heart disease suspect
[7] Skeletal abnormality:
[a] Ribs [b] Spine [c] Clavical [d] Other

[8] Emphysema [1] [2] [3] [4]
[9] Other conditions--recommend 14 x 17 film (impression:_____)
[10] Unsatisfactory film
Remarks on technique:_____

Radiologist:_____

64

E: 79 HEIGHT: 65½ Before FEV-1 1.00 Before FVC 2.10 6 Hour FEV-1 1.60 6 Hour FVC 2.55

% of Prdtd._____ % of Prdtd._____ % of Prdtd._____ % of Prdtd._____

FEV-1 % Change +_____ (-_____)

EVELYN A SMITH	2	06-28-28
226-30-2417		81320
1927	07	07-22-46

BYSSINOSIS FUNCTIONAL SEVERITY CODE:

F-0 (a)___ (b)___ (c)___

F-1 (a)___ (b)___ (c)___

F-2 (a)___ (b)___ (c)___

SMOKER:___ NON-SMOKER:___ DYSPNEA GRADE: 1 2 3 4 5 MONDAY BREATHLESSNESS: 1 2 3 4 5

CHRONIC BRONCHITIS GRADE: 1 2 3 4 ALLERGY GRADE: 0 I II III

BYSSINOSIS HISTORICAL GRADE: 0 (0) 1 (½) 2 (1) 3 (2) 4 (3) HEART CONDITION? YES___ NO___

CHEST X-RAY: NORMAL___ EMPHYSEMA GRADE: 0 1 2 3 4 OTHER (SPECIFY):_____

DIAPHRAGM EXCURSION VALUE:____

RECOMMENDED DISPOSITION:

_____NO CHANGE; ANNUAL FEV-1.

_____IF POSSIBLE, MOVE TO LOW RISK AREA; ANNUAL FEV-1.

_____WORK REQUIRING NO DUST EXPOSURE; DETAILED PULMONARY EXAM, THREE MONTH FEV-1.

_____MOVE TO LOW RISK AREA; THREE MONTH FEV-1.

SUMMARY SHEET

RESPIRATORY QUESTIONNAIRE

A. INTERVIEW: DATE 7.13.71 AGE 43 INTERVIEWER 1 2 3 4 5 6 7

PRESENT WORK AREA: 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.

(19) OPEN	(20) PICK	(21) CARD	(22) SPIN	(23) WIND	(24) TWIST	(25) SPOOL	(26) WARP	(27) SLASH	(28) WEAVE	(29) OTHER
						X				

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

Do you usually cough first thing (†on getting up) in the morning?... Yes___ No X (31)*
(Count a cough with first smoke or on "first going out of doors". Exclude clearing throat or a single cough.) (If no, go to question 36)

Do you usually cough during the day or at night?..... Yes X No___ (32)*
(Ignore an occasional cough.)

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

Do you cough like this on most days for as much as three months a year?..... Yes X No___ (33)

Do you cough on any particular day of the week?..... Yes___ No X (34)

If 'Yes': Which day? (1) Monday (2) Tuesday (3) Wednesday (4) Thursday (5) Friday (6) Saturday (7) Sunday (35)

C. PHLEGM

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

Do you usually bring up any phlegm from your chest during the day or at night? (Accept twice or more.)..... Yes___ No X (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):

How long have you had this phlegm? (1) [] 2 years or less, (2) [] more than 2 years to 9 years, (3) [] 10 to 19 years, (4) [] 20+ years. (39)

66.

† For subjects who work at night.

C. PHLEGM continued

In the past three years, have you had a period of (+ increased) cough and phlegm lasting for three weeks or more? (1) [] No; (2) [] Yes, only one period; (3) [] Yes, two or more periods. (41)*

+ For subjects who usually have phlegm.

D. CHEST ILLNESSES

During the past three years have you had any chest illness which has kept you off work, indoors, at home or in bed?..... Yes___ No X (42)*
(For as long as one week, flu?)

If 'Yes' to (42): Did you bring up (more) phlegm than usual in any of these illnesses? Yes___ No___ (43)*

If 'Yes' to (43): During the past three years have you had: (44)

(1) [] Only one such illness with increased phlegm?

(2) [] More than one such illness?

Bronchitis Grade: 0 _____ (0) (45)
1 _____ (1)
2 _____ (2)
3 _____ (3)

E. TIGHTNESS

Does your chest ever feel tight or your breathing become difficult? Yes X No___ (46)*
(If 'No', go to question (57).

Is your chest tight or your breathing difficult on any particular day of the week?...(after a week or ten days away from the mill).....Yes___ No___ (47)*

If 'Yes': Which day? (1) Monday, always (2) Monday, sometimes (3) Tuesday (48)
(4) Wednesday (5) Thursday (6) Friday (7) Saturday
(8) Sunday

If 'Yes' Monday: At what time on Monday does your chest feel tight or your breathing difficult? (49)

(1) [] Before entering the mill.

(2) [X] After entering the mill.

If after entering the mill:

How many hours after beginning of the shift does this begin? (hours) Approx. 3 hrs. _____ (50)

How long does this tightness or breathing difficulty last? (hours) approx. 5 hrs. _____ (51, 5

67

E. TIGHTNESS continued

If 'Yes' Tuesday:

At what time on Tuesday does your chest feel tight or your breathing difficult? (53)

(1) [] Before entering the mill.

(2) [] After entering the mill.

If after entering the mill:

How many hours after the beginning of the shift does this begin? (hours)____ (54)

How long does this tightness or breathing difficulty last? (hours)____ (55, 56

[Answer only if 'No' to question (46)]

In the past, has your chest ever been tight or your breathing difficult on any particular day of the week?..... Yes___ No___ (57)

If 'Yes': Which day? (1) Monday, always (2) Monday, sometimes (3) Tuesday (4) Wednesday (5) Thursday (6) Friday (7) Saturday (8) Sunday (58)

F. BREATHLESSNESS

If disabled from walking by any condition other than heart or lung disease put "X" here and go to question (70). [] (59)*

ON WEEKENDS:

Are you ever troubled by shortness of breath, when hurrying on the level or walking up a slight hill?..... Yes X No___ (60)*

If 'No', grade is 1 and go to question (70). If 'Yes', proceed to next question.

Do you get short of breath walking with other people at an ordinary pace on the level?..... Yes X No___ (61)

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 X (62)

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

Are you short of breath on washing or dressing? Yes___ No___ (63)

If 'No', grade is 4. If 'Yes', grade is 5, proceed to question (65).

Dyspnea Grade: _____ (64)

F. BREATHLESSNESS continued

On Mondays:

Are you ever troubled by shortness of breath, when hurrying on the level or walking up a slight hill?..... Yes X No___ (65)*

SAME.

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 X No___ (66)

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 X (67)

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

Are you short of breath on washing and dressing?..... Yes___ No___ (68)

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

Monday Breathlessness Grade 0 _____ (1) (69)
½ _____ (2)
1 _____ (3)
2 _____ (4)
3 _____ (5)

G. OTHER ILLNESSES AND ALLERGY HISTORY

Do you have a heart condition for which you are under a doctors care?Yes___ No X (70)*

Do you have an allergy or reaction to food or drugs?.....Yes___ No X (71)*

If 'Yes', specify the food or drug and _____

the reaction _____

Have you ever had asthma?..... Yes___ No X (72)*

If 'Yes', did it begin: (1) [] Before age 30. (2) [] After age 30. (73)

If 'Yes' before 30: did you have asthma before ever going to work in a cotton textile mill?..... Yes___ No___ (74)

Have you ever had hay fever or other allergies (other than above?... Yes X No___ (75)

If 'Yes', did you have hay fever or allergies before ever going to work in a cotton textile mill?..... Yes___ No X (76)

Have your parents, brothers, sisters or children had hay fever, asthma, a food or drug allergy, or other allergies?..... Yes___ No X (77)

G. OTHER ILLNESSES AND ALLERGY HISTORY continued

If 'Yes' to (77): Did those with these allergies work in a cotton textile mill?..... Yes___ No___ (78)

If 'Yes' to (78): Did any of these who have worked in a cotton textile mill have these allergies before ever going to work in the mill?.... Yes___ No___ (79)

Allergy Grade: 0 _____ (0) (80)
1 _____ (1)
2 _____ (2)
3 _____ (3)
4 _____ (4)

H. TOBACCO SMOKING

Do you smoke? Record 'Yes' if regular smoker up to one month ago. (Cigarettes, cigars or pipe)..... Yes X No___ (81)*

If 'No' to (81):

Have you ever smoked? (Cigarettes, cigars, pipe. Record 'No' if subject has never smoked as much as one cigarette a day, or 1 ounce of tobacco a month for as long as one year)..... Yes___ No___ (82)

If 'No' to (82), go to (94).

If 'Yes' to (81) or (82): What have you smoked and for how many years?

Cigarettes 26 yrs. (83, 84)

Pipe _____ (85, 86)

Cigars _____ (87, 88)

If cigarettes, how many cigarettes per day?..... 1½ p. (89, 90)

Number of pack years..... 39 p. yrs. (91, 92)

If an ex-smoker (cigarettes, cigars & pipe), how long since you stopped? (Write in number of years) (1) [] 0-1 years (2) [] 1-4 years (3) [] 5-9 years (4) [] 10 + years (93)

I. OCCUPATIONAL HISTORY

Have you ever worked in: A foundry (as long as one year?).....Yes___ No X (94)*

Stone or mineral mining, quarrying, or processing, (as long as one year?).....Yes___ No X (95)*

Asbestos milling or processing (ever?).....Yes___ No X (96)*

Cotton or cotton blend mill? (For controls only).....Yes___ No___ (97)

70.

I. OCCUPATIONAL HISTORY continued

Have you ever worked in: Other dusts, fumes or smoke? If yes, specify type of dust _____ Yes ___ No X (98)*

length of exposure _____

At what age did you first go to work in a textile mill? (Write in specific age.) 18 (99, 100)*

How many years have you worked in a textile mill? (Write in total number of years)
Cotton or Cotton Blend 15 (101, 102)*
All Synthetic or Wool ___ (103, 104)

If cotton, how many years did you spend in each area? (Write in years in each area)

?	(105) OPEN	(106) PICK	(107) CARD	(108) SPIN	(109) WIND	(110) TWIST	(111) SPOOL	(112) WARP	(113) SLASH	(114) WEAVE	(115) OTHER	
< 1												(1)
- 4												(2)
- 9												(3)
0-14												(4)
5-19												(5)
0-24												(6)
5-29							X					(7)
30+												(8)

* Key questions

Exhibit D

Mailed 10-8

October 8, 1979

Dr. G. W. Curwen
Fieldale, Virginia 24089

Re: Evelyn Smith
Rt. 1, Box 276
Bassett, VA 24055

Dear Dr. Curwen:

Enclosed is a medical report on Mrs. Smith.

For several years the Company has conducted a respiratory disease surveillance program on employees exposed to cotton dust. The proposed OSHA Standard on Cotton Dust stipulates a medical examination on those whose FEV-1.0 is less than 60 percent of predicted, and an examination by T. R. Harris, M. D., of Shelby, North Carolina, was arranged for Mrs. Smith.

The Company intends to take timely action in respect to the work environment.

Sincerely,

A. Dale Gullett, M.D.

ADG/jf

Enclosure

72

EVELYN ADAMS SMITH, CLAIMANT

V. Claim No. 660-914

FIELDCREST MILLS, INCORPORATED, Employer
SELF INSURED

Edwin A. Gendron, Jr., Esq.
P. O. Box 351
Martinsville, Virginia 24112
For the Claimant

M. Kenneth Doss
Associate General Counsel
326 E. Stadium Drive
Fieldcrest Mills, Incorporated
Eden, North Carolina 27288
For the Defendants

Hearing before Deputy Commissioner YATES at Martinsville, Virginia, on September 10, 1980.

All witnesses having been duly sworn, the following testimony was taken:

DEPUTY COMMISSIONER YATES:

An agreed wage of $180.24. The defense is no occupational disease. Secondly, even if it should be true, this lady has byssinosis that it is not stageable under the Virginia Act. If it is not stageable, it is not compensable. And another defense is there is other causation that has intervened to cause the difficulty. Was there something else, Mr. Doss, as to your grounds of defense?

MR. DOSS: Yes, I think, if she would show up with any disability would be just as likely the result of byssinosis.

DEPUTY COMMISSIONER YATES:

Right.

MR. DOSS:

And if there is any disease, it is a disease common to the general public.

DEPUTY COMMISSIONER YATES:

Right. And the date of communication was furnished by Mr. Gendron and is indicated to be August 29, 1979 and that has become by statute, the accident date. I have granted defense counsel the right to cross-examine any doctors propounded by the claimant. I have granted Mr. Gendron the right to cross-examine the doctor who is reportedly submitted by the employer to whom the plaintiff was sent by the employer. Apparently in furtherance of OSHA regulations but nevertheless, you gentlemen can go under Section 95 and I think that will do it. Go right ahead, Mr. Gendron.

EVELYN ADAMS SMITH, CLAIMANT

BY MR. GENDRON:

Q State your full name for the record, please?

A Evelyn Adams Smith.

Q Ms. Smith, where are you currently employed?

A Fieldcrest Mills.

Q Where is that located?

A Field Dale, Virginia.

Q Field Dale, Virginia?

A Yes.

Q How long have you been employed there?

A Thirty-four years.

Q Do you remember what year it was that you went to work there?

A July 22, 1946.

[End of Tape 7]

Q Okay, have you held any job other than the job at Fieldcrest Mills since 1946?

A No sir, other than when I was about sixteen or seventeen, I worked in the five and ten-cent store.

Q Was that before you went to Fieldcrest?

A Yes.

Q And then you went straight to Fieldcrest?

A Yes.

Q And you have worked there ever since?

A Yes.

Q Okay. When you first went to work at Fieldcrest, which department did you work in?

A In the yarn preparation.

Q Yarn preparation?

A Yes.

85.

Q Can you describe, if you know, when cotton comes into the Fieldcrest Plant and what happens to it before it get to the yarn preparation department?

A Well, at that time, it started, you know, from the card room and then it was spinned, you know, and then it would come into the yarn preparation.

Q Now, at the Mill where you work, are these three rooms separated?

A No, sir.

Q So the Card Room, Spinning Room, and Yarn Preparation are all together?

A Yes.

Q What do they do in the card room?

A Well they roll cotton, you know, make rolls of cotton that they use in the spinning room.

Q Where does the cotton come from in the card room?

A I don't know where it comes from.

Q Well, I don't mean what field does it come from but I mean does it come into the plant, into the card room, or does it come from another department or what?

A No, it comes into the card room.

Q It is delivered directly to the card room, so that is the raw material?

A As far as I know, you know, it is, yes.

Q And then from the card room they do what with it there?

A They make the yarn that they spin with.

Q And then they send it to the spinning department?

A Yes.

Q Then what does spinning do with it?

A Well, they make bobbins, you know, that they use in the yarn preparation.

Q When you say that they make bobbins, can you describe it a little bit?

A Well you just run off the yarn, you know, on these spinners that makes the yarn, for the spools and all like that to run in the yarn preparation.

Q How does it come out of the card room, what does it look like?

A Well, just as long as I have been down there, I don't know whether I can explain it or not. But it seems round, ah, you know, round cones like, big large cones, and it sits in the spinning room that rolls off into bobbins.

Q Okay, so when it comes out of the card room it is on cones?

A Uh Ah.

Q What kind of cones are they?

A Well, down there in the spinning room, they are on wooden cones.

Q They come out of the card room and the cotton is wrapped around wooden cones?

A Yes.

Q And then in the spinning room they take this cotton on the wooden cones and what do they do with it there?

A It is run on, well, some of them are run on keys that are used on the spoolers and other are run on cones, you know, that is what we run on our job.

Q The spinning room puts it on different type cones?

A The spinning room don't, the yarn preparation does.

Q Well, I am still in the spinning room, then, okay.

A Oh yes, I'm sorry.

Q We moved from card over to spinning, when it comes out of card it is on the wooden spools?

A Yes.

Q Or the wooden cone?

A Thats right.

Q And in the spinning room, what do they do with it?

A Well, they make, you know, ah, in the spinning room all they do is make yarn on the bobbins.

Q Okay, well you indicated earlier it comes out of the card room as yarn on a cone?

A Yes.

Q Does the spinning room refine that yarn somehow, do they make it into better thread, or what?

A Well, I guess they do. They make into, you know, into thread that they use in the spools that they spool with.

Q Okay. Then when it comes into yarn preparation, which is your department,

A Yes.

Q How does it look?

A It is made on cones now that we run. It is off on big round large cones.

Q How big are they?

A I really don't know but I think they use the, will last, will run about forty-five minutes, if they don't have any breaks.

Q Well, I mean what size altogether?

A. Oh, its about like this.

Q May be a foot and a half or two feet around?

A Yes, I guess, I don't know how

Q How high?

A Oh they are about like that, they are just a round, you know, just a round sheet, cone rather.

DEPUTY COMMISSIONER YATES: She is showing about a foot high.

Q And the cotton is wrapped around that cone?

A Yes, it is made into yarn then.

Q Can you tell us some kind of comparison about the condition of the cotton when it reaches your department, does it look more like a cotton ball in a medical kit or more like a piece of cloth on your shirt or what?

A Well, it's wrapped around a cone and it's, you know, it's just a hard, it is hard, you know, and wrapped around there hard I mean and then we put it on our job and run it off to make bobbins.

Q What is your job called?

A Quill attender.

Q What does that involve, Quill attender?

A It makes yarn for the weave room.

Q So you are further refining the yarn, then.

A Yes.

Q You are making it into better yarn with every process?

A Yes.

Q And you are making it into yarn that goes to the weave room?

A Yes.

Q Now, what does your machine do and what do you do with it?

A Well, it was eight, I run eight machines and as I run, you know, fill it for the weave room. Run it off of cones

into bobbins.

Q What is it now, is it a cone or a bobbin?

A Well, a bobbin is just a small little bobbin that they use in the weave room that we prepare. And a cone is a, well, it is different sizes in cones. They could use the large cones in our department that we ran.

Q I see, in other words you are running it from some kind of a bulk package into a smaller package

A Yes.

Q That is used for sewing?

A Yes.

Q Okay and what does your machine do other than change the container for the cotton, does it change the condition of the cotton as well?

A Ah, well, it naturally, it runs it, you know, it is running all the time, for eight hours, or if it is not stopped off.

Q Well I mean while it is running what is it doing to the cotton?

A Well, I guess you can, it probably sturs up some dust and ah-

Q Let me see if I can ask it this way, is it changing the condition of the cotton any?

A No, I wouldn't think so.

Q Okay.

Q So it comes off of the cones and goes on to the bobbins in the same condition?

A Yes, I would think it would, yes.

Q Looks the same when it is transfered to the bobbins?

A Yes.

Q Okay, so primarily then your job as a quill attender was to get this cotton from the cone onto smaller bobbins?

A Yes.

Q And you ran eight machines a day?

A Yes.

Q How many hours a day did you work?

A It was eight.

Q Eight hours a day?

A Yes.

Q And what did you do, what was your actual job?

A Well, you quilled your yarn on and run it off into bobbins, you watch for breaks, you tied them up when the yarn broke, and it was, you know, all through the years they made changes. It wasn't near like when I went out, like it was when I went there.

Q Ah Uh.

A And they have changed in the years to come in the difference in the bobbins, the difference in the size, the difference in the cones, and a lot of difference from the card room down through the spinning room, down through the yarn

preparation. And it is just hard to remember, you know, just when and how that they have made the changes.

Q Okay, well, say in the last ten years, what basically was your job?

A Same, quill attender.

Q Alright, when you say, you quill, what does that mean?

A Well, it means I quill yarn on and then tie it on to a bobbin.

Q So you just put the cone on the machine?

A Yes. Like, you know, like I put it on, like this.

Q Uh.

A And then you run it through, and thread it, and tie it on to a quill, and that makes yarn. Ah, on a bobbin, makes yarn on the bobbin.

Q Okay. And then you have to watch it to make sure that there are no breaks or

A Yes.

Q Nothing that stops?

A Yes.

Q And you were responsible for eight machines?

A Yes.

Q How many machines, quilling machines were in that room?

A Sixteen.

Q And what was in the spinning department?

A Well, I don't know how much, you know, I didn't work in the spinning department. It was all the way across, you know, the building. But I don't know how many spinning frames they had there.

Q Can you give us a reasonable estimate?

A Well, it would be hard to say.

Q Well, if you can't, that's okay. Now, in the carding room, do they have machines in the card room?

A Yes.

Q What do they do with those machines?

A They made cotton, I reckon, or rolled the cotton off in the spools, you know, that they used in the spinning room.

Q And all of these departments were in the same big room?

A Well, it is the card room, and the spinning room, and the yarn preparation. It's just, you know, all one big building. Only, you know, we don't, it's a lot of space in between the card room and where we worked at.

Q Were there walls between it for every room?

A No, there wasn't no walls but I mean it just, you know, just space. It is a great big room.

Q Okay. then every department is in the same room?

A Yes.

Q And normally you worked an eight-hour day?

A Yes.

Q How many days a week did you work?

A Well, five days. We worked a lot of overtime, we did, one time worked a lot of overtime.

Q When was that?

A Well, I haven't worked too much, ah, overtime I would say its been close to two years. It run around forty hours until just recently we have worked shorter time.

Q What shift were you working?

A I worked second for twenty-five years and then I am working first now.

Q Can you describe the air in your room around the area where you worked?

A Well, ah, it was, as I stated, they have made a lot of changes in the years to come but when I first went there to work, they would do the blowing, you know, overhead and cleaning up, you know, the whole mill. Overhead they would blow down and it would, you know, settle on your machines and then they would

Q What settled on your machines?

A The cotton, and the dust, and all, you know. And so then they would have to stop your job and blow off, the job off, you know, and then they would, you know, would sweep

the floors and get all the dust and all up. And then after years to come, they stopped, you know, blowing overhead and cleaning up like that and they would take a shift that the mill was stopped off.

Q Well, we will come back to that in a minute. When you said, blowing overhead, they were blowing cotton?

A Yes.

Q Where was the cotton that they were blowing?

A Well, it was the cotton that settles overhead, you know, on the pipes and on these heating pipes, and overhead, and it would just settle on the machines and it would just settle all in the mill, you know.

Q How did they get it off?

A They would blow it, they blowed it down with a blow pipe.

Q With a blow pipe?

A Yes.

Q Is that while you were working?

A Yes, uh ah.

Q What did the air look like when they did that?

A Well, it was real, real, dusty. Now you would usually have to get out, you know, when they were right over your head blowing you would have to leave for a little while. And it would just be, you know, just full of dust and lint and just like any place with cotton would be like.

Q How long did you stay gone if you left?

A Well, we didn't, you know, couldn't stay too long. But sometimes we would stay ah, may-be thirty minutes and then come back or sometimes we wouldn't be gone that long. It would just be, kind of, according to how they were rushing us on our fillings.

Q What did the air look like when you returned?

A Well, you know, it was still dusty.

Q How long did it stay dusty?

A Well, I'm just guessing, you know, at the best that I can, would think but I guess it would be around an hour before all of it, right in our part, would, you know, kind of settle down.

Q Okay. And I was talking about blowing off the accumulated dust over head?

A Yes, that would be cleaning up.

Q And you mentioned also blowing off the machines?

A Yes, that was when I left yarn preparations they were still blowing machines.

Q I am talking about years back/before they made their changes.

A Oh, yes.

Q Say fifteen or twenty years ago, how did they blow off the machines then?

A Well, they would just use the blow pipe and just blow them. Just, you know, blow them all off.

Q What time of day would they do that?

A Well, they had different times, you know, they started down through the years. They used to stop them off at eleven and now they stop them off at twelve.

Q What you were working eight machines at that time, twenty years ago?

A Yes.

Q Did they blow off all eight machines every day?

A Yes.

Q Okay, and what did that entail?

DEPUTY COMMISSIONER YATES: Shouldn't we be hearing what they've done in the last five years?

MR. GENDRON: No Sir, I don't think so, I believe the medical evidence will indicate byssinosis is something that can cause very early on--and be irrepairable within a few years.

DEPUTY COMMISSIONER YATES: Is that one of the exceptions that allows exposure to go back to an unlimited time. Is byssinosis in that category like ~~mesothelioma~~ ?

MR. GENDRON: I would say so.

DEPUTY COMMISSIONER YATES: Is it in the Statute that way?

MR. GENDRON: I don't know.

DEPUTY COMMISSIONER YATES: --exposure of course, but there is no statutory limitation going back, like radium, asbestos, and there are several more that are specifically listed and I am just wondering if you are saying cotton is one of them?

MR. GENDRON: Well, the Statute of Limitations of course for filing the claim is two years from date of discovery and five years from last employment and we filed it within two years of date of discovery.

DEPUTY COMMISSIONER YATES: Last employment or last injurious exposure?

MR. GENDRON: Last of injurious exposure, I'm sorry. And we complied with that Statute and now we are establishing how she got the exposure and it may well be that the most injurious portion of her exposure was twenty-five or thirty years ago. And it could have become irreversible at that time.

Q Ms. Smith, we were talking about blowing off your particular machine twenty-some years ago and you indicated that they blew off your machine once a day, did they do them all at the same time or one at a time?

A Well, at that particular time, they were doing them all at one time and we were kind of in the middle of ah, you know, where they were doing all the blowing. They were blowing from the spool room down in our part and the winders that was down below us at that time and we were right in the middle. So we were where, you know, we would always get the most of the cotton and the dust and the dirt and all that, you know.

Q So you were continuing to work during the time that the machines were being cleaned?

A Well, we had to some.

Q How long did it take to clean the machines?

A It would usually, and all together, of course, one would finish may-be a little sooner than the other, but altogether it would take around an hour.

Q Any process involved in cleaning the machines was simply blowing the cotton off, was it?

A Yes.

Q Well what did the air look like when they blew the cotton off the machines?

A Real dusty, dirty looking.

Q How long did that last?

A Back years ago, I think it would take them around an hour, I think, to get all the cleaning and all they did, done.

Q Can you describe the air in the room at the times that they weren't blowing cotton dust off?

A Well, you really couldn't, you know, you couldn't really see anything, without it was somebody doing some blowing or something like that, you know, you couldn't really, you know, see nothing in the air. But it was, you know, it was a lot of lint and all because you could tell by the way it would get on your clothes and in your hair, and all of that.

Q At the end of the shift, can you describe how you looked?

A Well, we had to blow off before we went out. We would either have to go out with cotton in your hair or either you had to come and brush it out one.

BY DEPUTY COMMISSIONER YATES: Q How long ago was this?

A Well, that has been all these years that I have been working there until just recently.

Q What is, just recently?

MR. GENDRON: I am going to come to all of that.

DEPUTY COMMISSIONER YATES: I will just say this to you, Mr. Gendron, the defense may come up to show that she has had

absolutely no exposure in the preceding five years and ah

MR. GENDRON: Your Honor, please I, we are going to work from the beginning to the end. Since exposure happens to be an issue in this case, I think we need to cover it thoroughly and we will deal with the last five years.

DEPUTY COMMISSIONER YATES: I am just trying to push you to that point.

MR. GENDRON: We'll get there, ha.

Q You were blowing off for years after your work shift, is that what you are saying?

A Yes.

Q When you say, you were blowing off, what does that mean, what did you have to do?

A Well, you would just take a blow pipe, you know, and just blow your clothes off.

DEPUTY COMMISSIONER YATES: Like a barber does when you get a haircut, I guess, is what it means, Mr. Gendron.

MR. GENDRON: Yes Sir, right. I have to fill the requirements of the record.

Q Now, just so we don't overlook this, when did you stop blowing off? Personally?

A Ah, Well, I hope I'm right, but I think it has been about a year ago they stopped us from blowing off.

Q What do you mean, they stopped you from blowing off?

A Well, they just asked us to quit using the blow pipe.

Q They asked you to quit using it, why were you still blowing off up until a year ago?

A Well, because we were dirty, we had lint and cotton all over us?

Q Where did the lint and cotton come from?

A All over the mill, from cotton I guess.

Q Now, we were talking about blowing off overhead and blowing off the machines fifteen and twenty years ago, did that go on all through the period of your employment with Fieldcrest?

A Yes.

Q But you mentioned some changes?

A Yes.

Q What changes took place recently?

A Well, they have did a lot of cleaning up and work in the card room and down through the spinning. They have cleaned it up. And they have got up to the yarn preparation and they are putting in, I think the way that I understood it, which I

am not there right now but it is something like a vacuum, that is something, that sucks all the dust up.

Q UH Huh.

A And it is really getting to be a clean place to work and my department that I was working at, is, they are working on it now. And then when they finish that, they will be through.

Q So they started down in card, and spinning, and they are working toward the yarn preparation?

A Yes.

Q You are not working in yarn preparation amymore?

A No.

Q When did you leave yarn preparation?

A It was in May but I have forgotten now what day it was.

Q Okay. What was the condition of the air in yarn preparation when you left?

A I dom't know.

Q Had the circumstances changed much as far as the cotton dust in the air at the time that you left yarn preparation?

A No, it was the same.

Q About the same?

A Yes.

DEPUTY COMMISSIONER YATES:

Are you claiming any disability from work other than a staged situation?

MR. GENDRON: No Sir, this claimant is filed purely under Section 56.1 Sub-Section 20, as specified.

DEPUTY COMMISSIONER YATES: What stage are you claiming?

MR. GENDRON: Three.

Q Okay, so, from the condition you described twenty years ago, when you left the yarn preparation department the conditions had not changed drastically, is that what you are saying?

A Yes.

Q But changes were being made in the area?

A Yes.

Q - overhead vacuum cleaner, you mentioned installed?

A In our part?

Q In the yarn preparation?

A It was after I left from up there.

Q After you left?

A Yes.

Q Did you ever wear a respirator or a mask or anything?

DEPUTY COMMISSIONER YATES: I don't have anything filed in defense of any violation of the safety rule?

MR. GENDRON: Well

DEPUTY COMMISSIONER YATES: I haven't found one.

MR. GENDRON: No Sir, that is not the purpose of this, introduction of this evidence, though.

DEPUTY COMMISSIONER YATES: Okay.

Q Did you ever wear a mask or respirator?

A They had started, right before I went out of us wearing them. And that was, you know, it was real hard to breathe with one on in there.

Q Did you try?

A I tried, yes.

Q Were you able to use it?

A Well, I tried and it was awful hard.

Q Was wearing a respirator something that was voluntary, or was it a company requirement?

A It was a company requirement.

Q Okay. Was it required in the card room?

A Not at that time, no; they didn't.

Q Was it required in the spinning room?

A No.

Q But it was required in yarn preparation?

A Yes.

Q Did you ever smoke cigarettes?

A Yes.

Q When did you begin to smoke cigarettes?

A Well, when I was a real young girl I smoked a little while and then I stopped, and then I don't, I guess, it was, I am not good at years but I will do the best I can in remembering. It was, may-be, I was around 'forty' or something. I started smoking with my husband and, ah, so I smoked about two and a half years ago.

Q You smoked from the time that you were 'forty' until two and a half years ago?

A Yes, now that is the best that I can remember the years.

Q Okay.

A It was after my little girl was born and she is thirteen so I will have to kind of-

Q Give your child now roughly nine years then, is that right?

A Yes.

Q During the nine-year period, how many packs a day did you smoke?

A Well, I smoked, ah, it was over a pack. It would be around from a pack and a half to two packs of cigarettes a day.

Q Were you allowed to smoke in the mill?

A Yes.

Q During the time you were working?

A Well, we had, you know, smoking booths where we could take

Q Had to take a break to go and smoke?

A Yes.

Q This pack and a half to two packs a day that you smoked, were they filter cigarettes?

A Yes.

Q Is there anything special about the way that you smoked them?

A Yes, I think that the reason that I smoked, it was just a nervous tension like and, that I was just smoke, just to be, I reckon, just doing something. And I was, you know, I would light one and sometimes I would have two cigarettes lit at the same time. And it was just, more or less, just a nervous thing.

Q Did you smoke the whole cigarette when you smoked?

A No, I just more-or-less let it burn up.

Q Can, let me ask you this first, do you have a problem with your breathing now?

A Well, I have, like if I climb steps, or if I overwork, I do.

Q When did you first notice your breathing problem?

A Well, this is another real hard question, it has been years ago. I worked twenty-five years on second shift before I got day and before then I had some problems of breathing. Because like, when I would go out of the mill at night and hit the cold air, you know, I could tell its real tightness.

Q Uh Huh.

A And then when I would go home, you know, and like for a little while when I would get home, it would be the same way. After I went to work on days, when you go out of air conditioned and hit hot air, its just, you know, it is just an awful feeling. You just can't get no breath or nothing.

Q Your breathing problems, then, first manifested themselves about twenty years ago?

A Yes. You know, of course.

Q And you began to smoke about ten or eleven years ago?

A Yes.

Q What, if any, breathing problems did you have before you went to work at Fieldcrest?

A Not any.

Q Do you have any other problems other than shortness of breath?

A No.

Q When you first noticed your breathing problem, did you notice any relations, well, let me put it this way: was it better, worse, or no difference, when you were in the mill?

A Well, it was worse when I was in the mill.

Q How did you notice it?

A Well, like the first day that you would go back to work if it was a Monday, or any first day from being out for a while and you would go in, well, gradually on up into the day you would just get short of breath, and you would have this tightness in your chest, and you would almost have to just pant for breath, which I was doing when I went out of there. And as I say, the first day of any week was always the worse.

Q Okay, now, that was when you first noticed your problem?

A Yes.

Q Was that true just up until recently when you left it?

A Yes.

Q Your first day was still the worse?

A Yes.

Q When you first began to notice your breathing problems and Monday was your worse day, how far into the week did it continue to bother you?

A Well, as I recall at first, you know, it would, you know, after the first day, the others would be, you know, pretty good. And then when I went out, after I went to Dr. Harris

then I went out for about two months with my leg. Then when I went back, I couldn't tell any difference in any days, they all were bad. I couldn't breathe, you know, at all. I mean, one day was just as bad as the other. I guess just staying out for a while and then going back into it is what caused it to be so bad.

Q Now, you are not in yarn preparation any more?

A No.

Q Where are you working now?

A Down in the sewing department.

Q What do they do in the sewing department?

A Well, they just hem towels and cut towels and where I am at, they mostly hem them and pick the first class out of seconds.

Q How are you breathing now?

A Well, it is a whole lot better. I don't have no problem, you know, as long as I don't have to walk up steps, or lift, or overwork, I do fine.

Q What happens when you have to walk up steps or lift?

A Well, I just have to stop and wait and, I just can't rush up them, I just have to, you know, for I am so out of breath I can't make it.

Q Did anybody at Fieldcrest ever tell you that cotton dust would cause any damage?

A No.

Q Can you describe your functions at home?

DEPUTY COMMISSIONER YATES: Is this going to help us any, Mr. Gendron?

MR. GENDRON: Probably not. I will withdraw the question.

Q Have you had any cotton dust exposure, Ms. Smith, that you are aware of, anywhere other than at Fieldcrest Mills?

A No.

Q Answer to Mr. Doss, please.

MR. DOSS: I don't have any questions.

DEPUTY COMMISSIONER YATES: Alright, then leave, do you have anyone else?

MR. GENDRON: No, Sir.

DEPUTY COMMISSIONER YATES: Do you have anyone to put on?

MR. DOSS: Mr. Baggett, please, Your Honor.

DEPUTY COMMISSIONER YATES: Allright, go ahead.

KENNETH ROGER BAGGETT, WITNESS

BY MR. DOSS:

Q State your full name, please?

A KENNETH ROGER BAGGETT.

Q Where do you live, Mr. Gaggett?

A Greensboro, North Carolina.

Q By whom are you employed?

A Fieldcrest Mills.

Q In what capacity are you employed?

A Director of Safety, Workmen's Compensation, and OSHA Compliance.

MR. DOSS: And I would like to mark these three for identification.

DEPUTY COMMISSIONER YATES: Are these to be admitted into evidence?

MR. DOSS: Yes, let me look at them and I will see how many of them Mr. Gendron has got.

Q Mr. Baggett, specifically what does your job duties relate to and entail.

A They relate to the total safety and accident prevention program for Fieldcrest Mills. They relate to the total self insured Workmen's Compensation Programs for Virginia, North Carolina, and Georgia.

Q Alright, sir.

A They relate to the total cooperate compliance programs for all OSHA standards and regulations.

Q Mr. Baggett, state whether or not is a part of your duties, and your job duties, whether or not it is your responsibility to be aware of and see to the measurements of dust levels in our plants?

A Since the OSHA Act was enacted in 1971, after that it has been my responsibility.

Q I want you to look at, if that is Exhibit 1 which is also attached

MR. DOSS: Your Honor, is Exhibit B to the answers to the interrogatories.

Q And identify it for me, please?

A This is a compilation of the respirable dust levels at the Fieldale Towel Mill Quilling Department.

Q Is this the department that Ms. Smith was working in?

A Yes, it is.

Q State what the permissable limits of levels were in that area at the time that those levels were taken?

MR. GENDRON: I object, no proper foundation has been laid for that.

DEPUTY COMMISSIONER YATES: You mean the OSHA limits?

MR. DOSS: That's right.

DEPUTY COMMISSIONER YATES: Am I to conclude that if I allow the testimony that

if it is within the OSHA limits that is therefore must follow that there can be no injurious exposure, is that the conclusion that you are driving toward?

MR. DOSS: It is evidence of lack of exposure or it is evidence of lack of sufficient exposure. We are going to take other testimony as the Commissioner has already indicated and this is just part of it. It won't all rise and fall on the strength of one person's testimony. Mr. Baggett has already testified that he is responsible for the OSHA compliance and we think that it bears on the levels. She has testified as to how dusty it was and it floating in the air, and hanging on the ceiling, and things like this, and we are entitled to show what those levels were for the benefit of the record. As to whether or not they were permissable by OSHA standards and the evidence will speak for itself.

DEPUTY COMMISSIONER YATES: I will let it come in but I would recommend both sides

to look at Volume 58 of the printed Commission Opinions that has just been released. None of them deal with cotton dust but deals with the extent of the amount of exposure in asbestos. And there are several cases in there in which the Full Commission and, I believe, the Supreme Court took one of those. I know about the case Nixon v. Caudel Hyatt, it is 219 Virginia, I believe. But you all take a look through there and see what the Commission has been doing with these, but I will let this come in.

Q What were the permissable limits at that time in that area?

A The time, the dates of the sample shown on this sheet the permissable limits was a thousand micrograms.

Q And what are those figures there

BY DEPUTY COMMISSIONER YATES:

Q Per what?

A Per cubic meter of air.

MR. GENDRON: Those are not OSHA standards.

A At the time of these samples.

MR. GENDRON: Your Honor, just for the record, I will register a hearsay to that.

BY MR. DOSS:

Q State what the figures that are on this exhibit and what terms are they expressed?

A These are expressed in micrograms per cubic meter of air.

Q Okay. I want you to look at Defendant's Exhibit 2 and tell me what that is a copy of.

A This is a compilation of the total plant's cotton dust levels. This is expressed in milligrams per cubic meter of air.

Q Alright, does it show the area in which Ms. Smith would have been employed?

A No, it doesn't.

MR. DOSS: We will withdraw that one, Your Honor. I thought it showed the area.

Q Identify that exhibit for me, please sir?

A This is a complilation of all of the spirometry that has been administered to Ms. Smith since the Fieldcrest Mills medical surveillance program was, had its census--

Q State whether or not this is the compilation of pulmonary function tests that were provided as exhibits to answer to your interrogatories?

A Yes, it is.

Q You reviewed those?

A Yes sir.

Q What are the figures that are represented on the chart, and what are the figures that are represented by the pulmonary function test?

A The FEV-1 and the FVC.

Q Is that the test that are performed on Ms. Smith to demostrate pulmonary function?

A Yes it is and those two -- the FEV-1 and FVC.

Q Now, on this spirometer test that was submitted in answers to interrogatories and on the chart here which shows it altogether once, there is more than one FEV-1 figure and FVC figure, what do those represent?

A Those represent a FEV-1 and FVC prior to going to work and FEV-1 and FVC after six hours of exposure.

Q What is the purpose of having a spirometer test at the time upon entering the mill and a spirometer test six hours after being in the mill?

A To determine reactivity to the enviroment.

Q Would you state what the figures on this chart indicate as to the reactability of Mrs. Smith?

MR. GENDRON: Objection. It calls for a medical conclusion.

MR. DOSS: No it doesn't, he is reading his figures.

MR. GENDRON: Well, that is an interpretation of a medical examination.

MR. DOSS: It is not a medical examination.

DEPUTY COMMISSIONER YATES: Who took the test, who administered it?

MR. DOSS: Under the auspices of Mr. Baggett's office. He has testified earlier that it is his job to administer these programs and to see that they are taken care of. We respectfully submit and he will testify from his records, from the records that are kept in his office.

MR. GENDRON: Your Honor, if I may, he also said that it was an indication of pulmonary function which is obviously a medical question and he is offering an interpretation of a medical examination.

MR. DOSS: The mills are required by OSHA standards, Your Honor, to keep these records. We are suppose to take the test on entering, before entering the building and after six hours exposure. Mr. Baggett has got to apply some sort of interpretation in administering the program. The figures speak for themselves. I am not asking him to give medical opinions, I am asking him to determine, to state what the figures that are shown on the pulmonary function test which has already been submitted to Mr. Gendron reflect. And he is entitled to show that. He has to do that to admister the program under OSHA regulations

DEPUTY COMMISSIONER YATES: Who gives the test, though?

MR. DOSS: There are several people who give the test.

DEPUTY COMMISSIONER YATES: Medical sources?

MR. DOSS: Not all. This is not any different from the same test that is given

by the -- Lung Association in the basement of the Baptist Church.

DEPUTY COMMISSIONER YATES: Oh, I realize that if you go in the hospital you get a lot of tests that is done by lab technicians that are, very likely, a part of the record.

MR. GENDRON: Those tests are interpreted by medical doctors.

DEPUTY COMMISSIONER YATES: I agree.

MR. DOSS: Not entirely.

MR. GENDRON: Well, at that, the item speaks for itself, why don't you just introduce it and let it speak for itself, why does it call for an interpretation?

MR. DOSS: Alright, will you agree to that?

MR. GENDRON: Well, it's going in over my objection but it's in already.

MR. DOSS: I'll do that. It will shorten the problem.

MR. GENDRON: Alright.

MR. DOSS: That is No. 3, Your Honor. And I'll give you No. 1 back, and No. 2 --

DEPUTY COMMISSIONER MILLER: Any other questions?

MR. DOSS: No, Sir.

DEPUTY COMMISSIONER MILLER: Mr. Gendron.

BY MR. GENDRON:

Q Mr. Baggett, with regard to Exhibit No. 1 which was some sort of indication that the pollution levels in the quilling department?

A That is correct.

Q How are they measured?

A A vertical elutriator.

Q Beg your pardon?

A A vertical elutriator.

Q And where is that placed?

A Vertical eluctriator is placed in proximity to the work stations of the individuals as to determine the -- levels of air that they would be exposed to as they traversed through their work areas.

Q You mean it is placed in on the level where the employee happens to be?

A Approximately five feet, seven one-half inches to the --

Q Can you recall your answer to the original interrogatories filed about, let's see how the thing was, there were any pollution measurement devices, I believe was the question

A Yes sir.

Q The answer was, there were no permanent devices installed.

A There is never a permanent

Q Wait a minute, let's let him have a chance to look at the question, Your Honor. Okay which question are you asking?

A What is your question, sir?

Q Question 6 of the Interrogatories I originally filed was to please state whether each of the rooms listed in question 2 has a device designed to measure air pollution and if so, when was the device installed? The answer was, measurement reporting of air pollution or inhalants are under the direction of Ken Baggett and Lee Investor. To my knowledge, there is no permanent installation of such a device. The interrogatories were signed by you. How often was that device placed in the room?

A Every six months.

Q Every six months, for what period of time?

A For a period of six hours approximately four to six hours depending upon particular-

Q And when was the last time it was in the room?

A The last time this

Q The last time that particular test was run?

A -- when she worked, I think, Mrs. Smith stated that she worked on the first shift.

Q Right.

A Was in there on, on March 24, 1979.

Q That was the last time?

A Yes.

Q Is that all that document shows, the results of that March 24th test?

A The March 24th test, the January, 1979 test, the September, 1978 test.

Q Okay, so it goes back to September, 1978 and that is all?

A On that document.

Q Did you do the compilation of the spirometery test, yourself?

A No sir.

Q Somebody else compiled that?

A Yes sir.

Q So you can't vertify whether or not those figures are accurate?

A No sir.

Q Thank you.

MR. GENDRON: Thank, you, that's all I have.

DEPUTY COMMISSIONER YATES: I'll give thirty days to have the depositions taken

and the transcripts in the Commission's office. And do you gentlemen ask that the interrogatories and all answers be made a part of this record?

MR. GENDRON: Yes, Sir.

DEPUTY COMMISSIONER YATES: Do you, Mr. Doss?

MR. DOSS: Yes, Sir.

DEPUTY COMMISSIONER YATES: The answer is 'yes' from both attorneys. Okay, and I think that will do it.

WITNESSES DISMISSED

TABLE 98. INTERNATIONAL CLASSIFICATION OF PERSISTENT RADIOLOGICAL OPACITIES IN THE LUNG FIELDS PROVOKED BY THE INHALATION OF MINERAL DUSTS*

(Geneva, 1958)

	No-pneumo-coniosis	SUSPECT	PNEUMOCONIOSIS											
Type of opacity			Linear opacities	Small opacities									Large opacities		
Qualitative features	O	Z	L	p			m			n			A	B	C
Quantitative features				1	2	3	1	2	3	1	2	3			
Additional symbols	(co)/(cp)	(cv)	(di)	(em)			(hi)			(pl)			(px)		(tb)

* Including coal and carbon dusts.

DEFINITION AND COMMENTS

The object of the classification is to codify the radiological appearances of the pneumoconioses in a simple, easily reproducible way. It is intended to describe the radiographic appearances of the persistent opacities associated with pneumoconiosis, not to define pathological entities, nor to take into account the question of working capacity.

Where there is an appreciable difference in the appearance of the two lungs, the two appearances may be described separately, beginning with the right lung.

No pneumoconiosis	O	No radiographic evidence of pneumoconiosis.
Suspect opacities	Z	Increased lung markings.
Pneumoconiosis		
Linear opacities	L	Numerous linear or reticular opacities, the lung pattern being normal, accentuated or obscured.
Small opacities[1]		*The following types are defined according to the greatest diameter of the predominant opacities.* p Punctiform opacities. Size up to 1.5 mm. m Micro-nodular or miliary opacities. Greatest diameter between 1.5 and 3 mm. n Nodular opacities. Size between 3 and 10 mm. *The categorisation depends on the extent and the profusion of the opacities.* *Category 1:* A small number of opacities in an area equivalent to at least two anterior rib spaces and at the most not greater than one-third of the two lung fields. *Category 2:* Opacities more numerous and diffuse than in category 1 and distributed over most of the lung fields. *Category 3:* Very numerous profuse opacities covering the whole or nearly the whole of the lung fields.
Large opacities[2]	A	An opacity having a longest diameter of between 1 and 5 cm, or several opacities each greater than 1 cm, the sum of whose longest diameters does not exceed 5 cm.
	B	One or more opacities, larger or more numerous than those in category A, whose combined area does not exceed one-third of one lung field.
	C	One or more large opacities, whose combined area exceeds one-third of one lung field.
Additional symbols		
Recommended additional symbols[3]	(co)	abnormalities of the cardiac outline. To be replaced by (cp): cor pulmonale, if this condition is strongly suspected.
	(cv)	cavity.
	(di)	significant distortion of the intra-thoracic organs.
	(em)	marked emphysema.
	(hi)	marked abnormalities of the hilar shadows.
	(pl)	significant pleural abnormalities.
	(px)	pneumothorax.
	(tb)	opacities suggestive of active tuberculosis.

[1] The choice of order of the symbols is left to the convenience of the physician. [2] The background of small opacities should be specified as far as possible. [3] The use of these symbols is optional.

These 12 categories were taken up by the International Union Against Cancer (UICC), the United States Public Health Service and a Canadian working group so that the classification could be extended to asbestosis and, more generally, to pneumoconioses with small irregular opacities. The first report of the UICC was published in 1968. This classification is given in Table 99.

Short and extended classification, 1968

The international classification was revised in 1968 by the ILO, in consultation with the Commission of the European Communities.

The 1958 scheme, amended and called the "short classification", was supplemented by an extended classification (Table 100). The short classification applied to pneumoconioses with small regular rounded opacities, and therefore to silicosis, coalworkers' pneumoconiosis and pneumoconioses provoked by mixed dusts. It was designed to provide a simple coding system for practical purposes. Like the 1958 classification, it divided radiological appearances into small and large opacities; on the other hand linear opacities were no longer regarded as part of the usual picture of pneumoconioses with regular opacities, and the symbol *L* was omitted. The symbol *Z* indicated lung or hilar appearances which were not sufficient to diagnose pneumoconiosis, but which could be the result of exposure to dusts and were therefore retained for preventive purposes. The additional indications, which the 1958 classification had considered optional, were divided into obligatory indications and optional indications The main innovation was the extended classification taken from that of the UICC; it applied to all pneumoconioses: those with small regular opacities which were covered by the short classification, and those with small irregular opacities, such as asbestosis. The classification thus took account of several factors such as the clear or ill-defined appearance of the radiograph, pleural changes (which were classified according to severity), and the position of anomalies in the six zones into which the lung is divided. There were 12 categories, which provided a classification that was much more precise and useful for epidemiological investigations and the radiological evaluation of pneumoconioses. Standard radiographs were chosen (see plates 1–13 of "Pneumoconioses and Other Lung Diseases"). From the technical point of view, it should be noted that the use of high kilovoltages now enables very detailed lung films to be obtained, thus facilitating the study of pneumoconioses.

International classification (ILO/UICC), 1971

Shortly before this article was passed for press, the ILO and UICC schemes were fully integrated following a further revision of the classification.

The short classification, which aimed at an over-all evaluation of the radiological table of pneumoconioses, has been enlarged to cover pneumoconioses with small irregular opacities, designated by the symbols *s*, *t* and *u* of the extended classification. As a result, both classifications now apply to all pneumoconioses, including asbestosis. The symbol *Z*, which is now superfluous, is deleted.

The extended classification aims at providing an analytical description of radiographs and enables certain parameters necessary for the study of the progress and epidemiology of pneumoconioses to be quantified; it was revised and expanded with other symbols with this aim in view. A single set of standard radiographs is in preparation: it will be codified under both systems and will illustrate cases of silicosis, coalworkers' pneumoconiosis, pneumoconioses provoked by mixed dust, asbestosis and other pneumoconioses.

The ILO/UICC classification at present represents the most advanced stage of research in this field, although no doubt it has defects which it will be easier to assess after a certain time has elapsed. Today, however, what appears more essential than the perfection of the scheme is that it should be applied as widely as possible and in the greatest number of countries. The United States Federal Coal Mine Health and Safety Act, 1969, which prescribes the adoption of this classification in radiographic examinations of coalworkers, will no doubt quickly help to enrich experience in this field. The other point that should be emphasised is that the 1971 classification, while being accessible to non-specialists, is equally valid for research workers and, according to the needs, can be applied in its synthetic or in its analytical form.

TABLE 100. INTERNATIONAL CLASSIFICATION OF RADIOGRAPHS OF PNEUMOCONIOSES (GENEVA, 1968)
GENERAL SCHEME

Radiographic feature	Short classification (regular opacities)	Extended classification (regular and irregular opacities)	
pneumoconiosis	O	Rounded	0/–, 0/0, 0/1
Suspect pneumoconiosis	Z	Irregular	0/–, 0/0, 0/1
PNEUMOCONIOSIS			
Small regular opacities			
Profusion	1; 2; 3	1/0, 1/1, 1/2; 2/1, 2/2, 2/3; 3/2, 3/3, 3/4	
Type	p; m(q); n(r)	p; m(q); n(r)	
Extent	—	zones 1–6	
Small irregular opacities			
Profusion	—	1/0, 1/1, 1/2; 2/1, 2/2, 2/3; 3/2, 3/3, 3/4	
Type	—	s, t, u	
Extent	—	zones 1–6	
Large opacities			
Size	A; B; C	A; B; C	
Outline	—	wd (well defined)-id (ill defined)	
Obligatory symbols			*Grades*
Pleural calcifications	plc	*site:* diaphragm, wall, others	0, 1, 2, 3
Pleural thickening (significant)	pl	*site:* costophrenic angle	lower limit
		other sites	0, 1, 2, 3
Cardiac outline	co	anomalies	—
		outline ill defined	0, 1, 2, 3
Eggshell calcifications	es	es	—
Active tuberculosis	tba	tba	—
Carcinoma	ca	ca	—
Other significant disease	od	od	—
Optional symbols: ax cn cp cv di em hi ho px rl tb K			

SPECIAL REPORT

UICC/Cincinnati Classification of the Radiographic Appearances of Pneumoconioses

A Cooperative Study by the UICC Committee

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The Need for and the Development of a New Classification

The International Conferences on the Biological Effects of Asbestos held in 1964 and 1968 indicated renewed interest in the health hazards of asbestos dust and the need for further epidemiologic studies. This research is likely to be of greater value if valid comparisons can be made in different countries, where the methods of using asbestos differ and the exposures of the workers may be to only one type of asbestos fiber or to mixed asbestos and other dusts. A step towards improving comparability would be the existence of an internationally accepted classification of the radiographs. The International Union Against Cancer (UICC) Working Group on Asbestos and Cancer in 1964[1] recognized this need and recommended that "a scheme based if possible on an extension of the International Labour Organization (ILO) 1958 Classification[2] be developed." A number of schemes[3-8] have been suggested in the past, but none has come into general use or has been systematically tested for variations in interpretation between observers and by the same observer on repeated occasions.

To meet this need a group working under the auspices of the UICC Committee on Asbestos and Cancer in 1965 collected 125 films of men exposed to asbestos of different types and in different occupations from Canada, Finland, Germany, South Africa, United Kingdom and the United States. The films were read independently by all the members of the group, using a classification modified from one suggested by Bohlig[9] and Sluis-Cremer and Theron.[10] At about the same time, a group of radiologists working with the US Public Health Service, (USPHS) was also developing a classification for

the films of men working in the asbestos manufacturing industries in the United States. In March, 1967, Professor J. C. McDonald and his colleagues had an immediate need for a system of classifying several thousand films available from Asbestos and Thetford Mines in Quebec, where a survey of past and present asbestos workers was in progress.

The three groups met at the USPHS National Center for Urban and Industrial Health in Cincinnati for four days in October/November, 1967. They reviewed the results of the UICC reading trial, a pilot Canadian trial, and the experience of the USPHS group. A systematic examination of the radiographic features and the ways of recording them was made. Unanimous agreement was achieved on a proposed new scheme designated as the UICC/Cincinnati (U/C) classification which was an extension of the ILO 1958 classification. It was decided not to publish the proposal until tests had been made of its practicability and a study of the inter- and intra-observer variation carried out. During the period November, 1967 to April, 1968, 12 readers from six countries classified 100 films of asbestos workers. Following this, the group met in London where it was decided that the classification was sufficiently promising to be published together with the evidence about its practicability and observer variation. This report describes the proposed classification and comments on the results of the reading trials.

Aims of the Classification

1. To provide a scheme for the systematic recording of the various radiographic appearances associated with exposure to asbestos and other dusts.
2. To provide a system in which the qualitatively different features of the film can be recorded separately and graded.
3. To provide a code that permits a brief description of the important radiographic features of the pneumoconioses.

The primary aim is, therefore, to assist in epidemiologic studies of workers exposed to asbestos and other dusts and to relate these findings to other information, such as lung function, clinical features, past dust exposure, and studies of morbidity and mortality. At this time there is no attempt to establish a separate system of grading asbestosis. The radiographic appearances may vary with different types of asbestos exposure as well as with age and other factors. As the classification incorporates all the major features of the ILO 1958 scheme, together with the additional features seen in asbestosis, it is likely that the new proposals will prove adequate for the classification of all types of pneumoconiosis. However, further tests are needed to establish this.

Principles of the Classification

1. As far as possible it is purely descriptive of radiographic appearances and does not use interpretive words such as "fibrosis" or "infection" which already have definitions in terms of pathology.
2. It describes the natural history of the changes produced by asbestos and other dusts as far as is known, but it avoids the use of terms such as "early stages," "progressive," or "final."
3. It provides a system of recording semiquantitatively (with the help of verbal descriptions and standard films) features of the film which can be separately assessed with a reasonable degree of certainty.
4. It provides a means of describing the appearances seen in workers known to have been exposed to asbestos dust as well as other dusts.

The principles are, therefore, similar to those used in the ILO 1950 and 1958 schemes, but differ importantly from schemes which were primarily systems of grading the extent and severity of an assumed underlying pathology.

General Description of the Classification

The ILO 1958 scheme divided the opacities in the lung fields (lung parenchyma) into "small" and "large." The U/C scheme retains this main subdivision, but further divides the small opacities into "rounded" and "irregular," and the large opacities into "well defined" and "ill defined." The ILO scheme recorded pleural changes with a symbol "pl." The U/C scheme brings the pleural changes into the main classification, with a subdivision into "calcified" and "noncalcified."* It also records the presence of a poorly defined cardiac outline or diaphragm or both within the main scheme, but retains the symbols "co" (abnormal cardiac shape) and "cp" (suspect cor pulmonale) as defined in the ILO, 1958 scheme and its later modification by the USPHS.[11] Table 1 shows how the ILO 1958 classification and the U/C 1968 scheme fit together.

Provision has been made for the separate recording of three features for each variable:
1. *Type.* For example, small or large, rounded or irregular, calcified, etc.
2. *Profusion.* By this is meant the number of opacities (rounded or irregular) per unit area—eg, per zone (Table 1). The word "profusion" is used in preference to density because this latter word is also used radiologically to describe the radiopacity of a shadow. The profusion is graded on a basic 4-point scale, 0, 1, 2, 3, with a means of increasing this to a 12-point scale when greater precision is required (Table 1).
3. *Extent.* The area (number of zones) of the lung field affected or length, as in the case of cardiac border involvement. This also provides information about the site of abnormality, which may later be of value.

In the ILO 1958 scheme, category 1 of small opacities was defined in terms of the number of rib spaces involved—a measure of extent. Categories 2 and 3 included factors both of extent and of profusion. One of the criticisms of the ILO 1958 scheme is that it failed to provide for the classification of a film with definite but

* The use of the word "calcified" is at variance with the general principle of not using interpretive words, but was accepted because of its wide use in radiology.

Table 1—*Comparison of ILO 1958 and UICC/Cincinnati 1968 Classifications*

		ILO 1958	UICC/CINCINNATI 1968
	No pneumoconiosis	0	0/- 0/0 0/1 (rounded or irregular)
	Suspect pneumoconiosis	Z	
Small Opacities	Rounded		
	Profusion	1	1/0 1/1 1/2
		2	2/1 2/2 2/3
		3	3/2 3/3 3/4
	Type	p m n	p q r
	Extent	—	Lung zones, 1-3 on each side
	Irregular		
	Profusion	—	1/0 1/1 1/2
			2/1 2/2 2/3
			3/2 3/3 3/4
	Type	L	s t u
	Extent	—	Lung zones, 1-3 on each side
Large Opacities	Size	A B C	A B C
	Type	—	wd (well defined) id (ill defined)
Other Features	Pleural thickening	pl	
	Costophrenic angle		Right Left (lower limit standard film)
	Other—type		Diffuse Plaques (uncalcified)
	extent		1 2 3
	Ill defined diaphragm	—	
	Site		Right Left (lower limit standard film)
	Ill defined cardiac outline	—	
	Extent		1 2 3
	Pleural calcification	pl	
	Site		Diaphragm Walls Other sites
	Extent		1 2 3

Additional Symbols Used in Both Classifications (see text for definitions)

Obligatory in U/C and optional in ILO: ca co cp es od tba

Optional in both U/C and ILO: ax bu cn cv di em hi ho k px rl tb

Notes

Types (sizes) of small opacities	The letters 'q' and 'r' are used in the U/C classification instead of 'm' and 'n' to reduce errors of transcription. There are no changes of definition.
12 point scale for small opacities	To use this, the film is classified in the usual way by comparison with the standard films and "if during the process a neighboring category is considered as a serious alternative, record this after the formal category". Thus a subcategory 2/1 is a Category 2 but Category 1 was considered as a serious alternative.

very sparse rounded opacities seen in more than two rib spaces. This criticism is met in the U/C scheme.

The classification recognizes the existence of a continuum of change from complete normality to the most advanced category or grade in the recorded features. For example, with regard to small opacities a film may be correctly classified as a category 0 if there are no opacities seen or if it is thought to show a few which are not sufficiently definite or numerous to reach the definition of category 1. No sudden step from normality to abnormality is implied at the 0-1 boundary.

Much thought was given to the advantages and disadvantages of a separate classification for asbestosis. This suggestion was unanimously rejected for two reasons:

1. Workers exposed to asbestos dust frequently have also been exposed to other types of dust, either in or outside the asbestos industry. Therefore, the radiographic signs of another type of pneumoconiosis, or even combined types, may be encountered among asbestos workers.

2. The ILO 1958 scheme and its USPHS modification have received wide international use. This was a strong argument for attempting to develop an extension of that scheme to cover asbestosis rather than develop a new classification.

Details of the Classification

Table 2 is a summary of the classification in a form convenient for reference while reading radiographs.

Small Opacities

Small Rounded Opacities. These are classified as in the ILO 1958 scheme modified by the USPHS, with some further alteration of the verbal definitions.

(a) *Type.* The nodules are classified according to the approximate diameter of the predominant opacities.

p = rounded opacities up to about 1.5 mm diameter.

q = rounded opacities exceeding about 1.5 mm and up to about 3 mm diameter.

Table 2—*UICC/Cincinnati Classification of Radiographic Appearances of Pneumoconioses*

		Codes	Definitions
Small Opacities	Rounded Profusion		The category of profusion is based on assessment of the concentration of opacities in the affected zones. The standard films define the mid categories.
		0/- 0/0 0/1	Category 0—small rounded opacities absent or less profuse than in category 1.
		1/0 1/1 1/2	Category 1—small rounded opacities definitely present but relative few in number.
		2/1 2/2 2/3	Category 2—small rounded opacities numerous. The normal lung markings are usually still visible.
		3/2 3/3 3/4	Category 3—small rounded opacities very numerous. The normal lung markings are partly or totally obscured.
	Type	p q r	The nodules are classified according to the approximate diameter of the predominant opacities.
			p—rounded opacities up to about 1.5mm diameter.
			q—rounded opacities exceeding about 1.5mm and up to about 3mm diameter.
			r—rounded opacities exceeding about 3mm and up to about 10mm diameter.
	Extent	Lung zones	The zones in which the opacities are seen are recorded. Each lung is divided into thirds—upper, middle, lower zones. Thus a maximum of 6 zones can be affected.
	Irregular Profusion		The category of profusion is based on assessment of the concentration of opacities in the affected zones. The standard films define the mid categories.
		0/- 0/0 0/1	Category 0—small irregular opacities absent or less profuse than in category 1.
		1/0 1/1 1/2	Category 1—small irregular opacities definitely present but relatively few in number. The normal lung markings are usually visible.
		2/1 2/2 2/3	Category 2—small irregular opacities numerous. The normal lung markings are usually partly obscured.
		3/2 3/3 3/4	Category 3—small irregular opacities very numerous. The normal lung markings are usually totally obscured.
	Type	s t u	As the opacities are irregular, the dimensions used for rounded opacities cannot be used, but they can be roughly divided into three types.
			s—fine irregular or linear opacities.
			t—medium irregular opacities.
			u—coarse (blotchy) irregular opacities.
	Extent	Lung zones	The zones in which the opacities are seen are recorded. Each lung is divided into thirds—upper, middle, lower zones—as for rounded opacities.
Large Opacities	Size	A B C	Category A—an opacity with greatest diameter between 1cm and 5cm, or several such opacities the sum of whose greatest diameters does not exceed 5cm.
			Category B—one or more opacities larger or more numerous than those in category A, whose combined area does not exceed one third of the area of the right lung.
			Category C—one or more large opacities whose combined area exceeds one third of the area of the right lung.
	Type	wd id	As well as the letter 'A', 'B' or 'C', the abbreviation 'wd' or 'id' should be used to indicate whether the opacities are well defined or ill defined.
Other Features	Pleural thickening Costophrenic angle	Right Left	Obliteration of the costophrenic angle is recorded separately from thickening over other sites. A lower limit standard film is provided.
	Other sites	1 2 3	Grade 0—not present or less than grade 1.
			Grade 1—up to 5mm thick and not exceeding one half of the projection of one lateral chest wall. A lower limit standard film is provided.
			Grade 2—more than 5mm thick and up to one half of the projection of one lateral chest wall *or* up to 5mm thick and exceeding one half of the projection of one lateral chest wall.
			Grade 3—more than 5mm thick and extending more than one half of the projection of one lateral chest wall.
	Diaphragm Ill defined	Right Left	The lower limit is one third of the affected hemidiaphragm. A lower limit standard film is provided.
	Cardiac outline Ill defined (shagginess)	1 2 3	Grade 0—up to one third of the length of the left cardiac border or equivalent.
			Grade 1—above one third and up to two thirds of the length of the left cardiac border or equivalent.
			Grade 2—above two thirds and up to the whole length of the left cardiac border or equivalent.
			Grade 3—more than the whole length of the left cardiac border or equivalent.
	Pleural calcification Diaphragm Walls Other sites	1 2 3	Grade 0—no pleural calcification seen.
			Grade 1—one or more areas of pleural calcification, the sum of whose greatest diameters does not exceed 2cm.
			Grade 2—one or more areas of pleural calcification, the sum of whose greatest diameters exceeds 2cm but does not exceed 10cm.
			Grade 3—one or more areas of pleural calcification, the sum of whose greatest diameters exceeds 10cm.

Other Symbols

Obligatory

ca —suspect cancer of lung or pleura.
co —a normality of cardiac size or shape.
cp —suspect cor pulmonale.
es —eggshell calcification of hilar or mediastinal lymph nodes.
tba—opacities suggestive of active clinically significant tuberculosis.
od —other significant disease. This includes disease not related to dust exposure, e.g. surgical or traumatic damage to chest walls, bronchiectasis, etc.

Optional

ax —coalescence of small rounded pneumoconiotic opacities.
bu —bullae.
en —calcification in small parenchymal opacities.
cv —cavity.
di —marked distortion of the intra-thoracic organs.
em—marked emphysema.
hi —marked enlargement of hilar shadows.
ho —honeycomb lung.
k —Kerley (septal) lines.
px —pneumothorax.
rl —pneumoconiosis modified by rheumatoid process.
tb —inactive tuberculosis.

r = rounded opacities exceeding about 3 mm diameter up to about 10 mm diameter.

(b) *Profusion.* The standard films define the midcategories.

Category 0—small rounded opacities absent or less profuse than in category 1.

Category 1—small rounded opacities definitely present but relatively few in number. The normal lung markings are usually visible.

Category 2—small rounded opacities numerous. The normal lung markings are usually still visible.

Category 3—small rounded opacities very numerous. The normal lung markings are partly or totally obscured.

The category of profusion is based not on extent, but only on the concentration of opacities in the affected zones.

(c) *Extent.* The specific zones in which the opacities are seen are recorded. Each lung field is divided into thirds—upper, middle, and lower zones. Thus, there can be a maximum of six zones affected.

(d) *Notes.*

(1) 'q' and 'r' are used in place of 'm' and 'n' of the ILO 1958 scheme because of phonetic and scriptory errors caused by using 'm' and 'n'. No change of definition is entailed.

(2) In category 1 small rounded opacities are commonly seen in the upper and middle zones, but may occur in any zones or in one lung only.

(3) There is evidence[12-15] that subdivision into finer grades than the four categories, 0, 1, 2, 3, is possible without the use of extra standard films, and conveys extra information for epidemiologic purposes. The instructions are to classify the film in the usual way into one of the four categories and if, during the process, a neighboring category is considered as a serious alternative, record this after the formal category. Thus category 2/1 is a film which is category 2, but category 1 was seriously considered as an alternative. The film which is without doubt a category 2, *ie*, a midcategory closely similar in profusion to the standard film, would be classified as 2/2. In films within category 0, a subdivision is also possible. Thus, category 0/1 is a film which is category 0, but category 1 was seriously considered. Category 0/0 is a normal film without small opacities. Occasionally films look exceptionally "normal" *ie*, there is exceptional clarity of the normal architecture. These "barndoor"* normal films are usually, though not exclusively, from young individuals. Provision for these is made by the category 0/-. Thus the formal four-point scale becomes a 12-point scale: 0/-, 0/0, 0/1, 1/0, 1/1, 1/2, 2/1, 2/2, 2/3, 3/2, 3/3, 3/4. In practice this elaborated scale takes no longer than the four-point system and it is easier for the reader, as his doubts about the borderline films are quickly recorded.

Small Irregular Opacities. This is the main new feature of the classification. The term is used to describe features which in other schemes have been called "linear," "reticular," "fibrotic," "network," "honeycomb." It includes films which would be classified as "L" in the ILO 1958 scheme, and also some, but not all, films formerly read as "Z." Small irregular opacities are of varying thickness, shape, and density, and often have a curved or linear appearance. They tend to obscure the normal lung architecture (vascular pattern), particularly when present in considerable profusion. Hence, obscuration of normal lung architecture is a feature of the higher categories of both small "rounded" and small "irregular" opacities.

(a) *Type.* As the opacities are irregular, the dimensions used for the rounded opacities cannot be applied, but to conform to the general scheme, the types may be roughly divided into three:

s = fine irregular or linear opacities.

t = medium irregular opacities.

u = coarse (blotchy) irregular opacities.

Assessment is made of the predominant type of small irregular opacity by comparison with the appropriate standard film.

(b) *Profusion.* The standard films define the midcategories.

Category 0—small irregular opacities absent or less profuse than in category 1.

Category 1—small irregular opacities definitely present, but relatively sparse. The normal lung markings are usually visible.

Category 2—small irregular opacities numerous. The normal lung markings are usually partly obscured.

Category 3—small irregular opacities very numerous. The normal lung markings are usually totally obscured.

The category of profusion is based not on extent, but only on the concentration of opacities in the affected zones.

(c) *Extent.* The specific zones in which the irregular opacities are seen are recorded. Each lung is divided into thirds—upper, middle, and lower zones, as for rounded opacities.

(d) *Notes*

(1) The types 's,' 't,' and 'u' are less well defined than the 'p,' 'q,' 'r' sequence of small rounded opacities. It is not known whether subdividing irregular opacities in this way will be useful, nor was it known when 'p,' 'm,' and 'n' were first suggested that pathologic and functional differences existed between the different types. Subsequent research has shown they are meaningful.[16-18]

(2) In category 1, small irregular opacities are more commonly seen in the lower zones, but may occur in any zones or in one lung only.

(3) The differentiation between "rounded" and "irregular" opacities is readily seen by comparing the standard films of each type, but films occur in which both types are seen. It is recommended that both "rounded" and "irregular" should be recorded if both types are clearly seen in the same film. However, further research is needed to show how well they can be differentiated.

(4) Experience in classifying films of those pneumoconioses in which the small opacities are predominantly rounded has revealed a small proportion which, though undoubtedly abnormal and probably the result of dust exposure, do not fit well into the ILO 1958 classification. The U/C classification provides a means of classifying these as they often fit well into the "small irregular opacities" group.

(5) Where there is a marked difference in profusion in different parts of the lungs, the zones predominantly affected are the ones over which averaging is made.

Large Opacities

The scheme used is that in the ILO 1958 classification, with the additional qualification of "well defined" (wd) and "ill defined" (id). The "well defined" large opacities are those covered by A, B, and C in the ILO 1958 system. The "ill defined" are those opacities in which the edge is very poorly differentiated from the surrounding lung. Large opacities of that type sometimes occur in advanced asbestosis, but are also seen in other types of pneumoconiosis. Thus U/C provides a more complete system of recording the features of large opacities.

Category A—an opacity having a diameter exceeding 1 cm and up to and including 5 cm, or several opacities each greater than 1 cm, the sum of whose greatest diameters does not exceed 5 cm.

* Oxford English Dictionary: "Barndoor" used jocularly as a target too large to be missed.

Category B—one or more opacities larger or more numerous than those in category A whose combined area does not exceed one-third of the right lung field.

Category C—one or more opacities whose combined area exceeds one-third of the right lung field.

Notes

(1) The abbreviation "wd" or "id" should be used to indicate whether the shadows are well or ill defined. Reference to the standard film will help to make the differentiation. Sometimes both types should be recorded.

(2) When recording large opacities the type and category of small opacities in the background should also be noted. If small opacities are not seen, a comment to this effect must be recorded.

Pleural Thickening

Pleural thickening is classified according to type (diffuse or plaques), site, and extent, but changes which might represent pleural thickening over the diaphragm and cardiac outline are recorded separately because there is insufficient evidence, especially in cases of asbestosis, to be certain whether the ill defined outline of the cardiac border (shaggy heart) or diaphragm or both results from pleural thickening or alteration of adjacent lung parenchyma.

Costophrenic Angle. Obliteration of the costrophrenic angle is recorded separately from thickening over other areas because it is so commonly seen in individuals with no history of dust exposure. A lower limit standard film is provided. No upper limit film is used. If the thickening extends further up the chest wall, then the film should be classified as costophrenic angle obliteration *and* pleural thickening, if this is up to grade 1 or more. Costophrenic angle obliteration is recorded as absent or present, right or left.

Note: Leafing (scalloping) of the diaphragm should not be recorded as costophrenic angle obliteration.

Chest Wall. Pleural thickening is recorded in four grades as follows:

Grade 0 = not present or less than grade 1.

Grade 1 = definite pleural thickening up to 5 mm thick which alone or combined with similar shadows does not exceed one-half of the projection of one lateral chest wall. The standard film is at the lower limit of grade 1.

Grade 2 = pleural thickening more than 5 mm thick and up to half of a lateral chest wall, *or* less than 5 mm thick if it extends more than the equivalent of one half of a lateral chest wall.

Grade 3 = pleural thickening more than 5 mm thick and extending more than the equivalent of one-half of a lateral chest wall.

Note: (1) Do not record the "companion" rib shadows that simulate pleural thickening.

(2) The sharpness of the outline of the pleural thickening varies greatly. In asbestos-exposed workers it may appear as a well defined band along the lateral chest wall (see Grade 1 standard film) or as a much more widespread shadow. The widespread and well defined forms are recorded together as "diffuse." Occasionally, localized areas of uncalcified pleural thickening—"pleural plaques"—are seen on the diaphragm or chest wall, and should be recorded as such. The diffuse and localized forms should be considered together when grading pleural thickening.

(3) Widespread pleural thickening on the anterior or posterior surfaces of the lung or chest wall may lead to veiling or obscuration of the lungs (ground glass appearance). It is graded on its maximum length. It is usually more than 5 mm thick.

Ill Defined Diaphragm

This is recorded as absent or present and right or left. The lower limit is one-third of the affected hemidiaphragm. A lower limit standard film is provided.

Note: A single adhesion, scalloping, hernia, eventration, calcification, plaque, and tumor are not included within the term "ill defined diaphragm."

Ill Defined Cardiac Outline

Only the length of the cardiac border affected is used for grading. The degree of poorness of definition is not separately recorded. Four grades are used. Regardless of which side is affected, the grading is based on its length in relation to the length of the left heart border.

Grade 0 = up to one-third of the length of the left cardiac border or equivalent.

Grade 1 = between one-third and two-thirds of the length of the left cardiac border or equivalent.

Grade 2 = between two-thirds and the entire length of the left cardiac border or equivalent.

Grade 3 = more than the length of the left cardiac border or equivalent.

Notes:

(1) Grade 1 is set fairly high so only the more definitely abnormal films will be graded 1 or above.

(2) The sharpness of the cardiac border is affected by heart movement and hence the exposure time of the radiograph. If heart movement is thought to be the only cause for the irregular cardiac border, do not record it.

(3) Cardiac fat pads are not included in the grading.

(4) In asbestos-exposed workers the earliest change in the radiograph may be an ill defined cardiac outline.

Pleural Calcification

This feature is recorded separately from pleural thickening, the site noted, and whether the calcification is uni- or bilateral. It is also graded with the help of standard films.

Grade 0 = no pleural calcification.

Grade 1 = an area of calcified pleura with greatest diameter not exceeding 2 cm, or a number of such areas, the sum of whose greatest diameters does not exceed 2 cm in length.

Grade 2 = an area of calcified pleura with greatest diameter exceeding 2 cm and not exceeding 10 cm, or a number of such areas, the sum of whose greatest diameters exceeds 2 cm but not more than 10 cm.

Grade 3 = an area of calcified pleura with greatest diameter exceeding 10 cm or a number of such areas whose sum of greatest diameters exceeds 10 cm.

Note: Uni- or bilaterality is recorded because calcification due to mineral dusts, including asbestos, is often bilateral whereas that due to other causes, such as infection or trauma, is more frequently unilateral.

Additional Symbols

Additional symbols are used as in the ILO 1958 scheme to record features which are not in the main classification. If all symbols are optional the recording is usually incomplete. Two groups—obligatory and optional—are therefore recommended.

Obligatory Symbols

ca — suspect cancer of lung or pleura.

co — abnormality of cardiac outline in size and shape, indicating cardiac disease.

cp — suspect cor pulmonale.

es — eggshell calcification of hilar or mediastinal lymph nodes.

od — other significant disease. This includes disease not related to dust exposure, eg, surgical or traumatic damage to chest walls, bronchiectasis, etc.

tba — active, clinically significant tuberculosis (excludes calcified primary complex).

Optional Symbols

ax — suspect coalescence of small rounded pneumoconiotic opacities.
bu — bullae.
cn — calcification in small parenchymal opacities.
cv — cavity.
di — marked distortion of the intrathoracic organs by pneumoconiosis.
em — marked emphysema.
hi — marked enlargement of hilar shadows.
ho — honeycombing of the lung.
k — Kerley (septal) lines.
px — pneumothorax.
rl — pneumoconiosis modified by rheumatoid process.
tb — inactive tuberculosis.

General Instructions

When deciding whether a film is to be classified within the scheme the following recommendations are made:

(1) Decide if there are no changes or if *any* of the changes seen in the pleura or the parenchyma sufficiently resemble the pattern of any of the pneumoconioses to be recorded. If so, proceed with the classification.

(2) If it is probable that *all* the changes seen are the result of some etiology other than pneumoconiosis, do not classify but record opinion using appropriate symbols and comments.

(3) If changes might be due to pneumoconiosis, classify features, but make a note that other etiology is possible.

In the U/C scheme, unlike the ILO scheme, no provision is made for doubtful pneumoconiosis. This omission is intentional, as the scheme is intended principally for epidemiologic studies where a "suspect" group contributes little to the information. The provision of a 12-point scale for both "small rounded" and "small irregular" opacities provides a method of classifying radiographs showing fewer small opacities than in category 1.

In epidemiologic studies failure to record all readings can be an important source of loss of information. To reduce this to a minimum the recording sheet (Fig. 1) is so designed that at least one entry must be made between each pair of heavy lines. In Figure 1, ten sketches of the roentgen appearance of lesions in pneumoconiosis are given, together with their corresponding readings.

Results of Testing the Classification

(a) *Practicability*

The considerable increase in the amount of information to be recorded from each film compared with the ILO 1958 scheme might have reduced the practicability of the U/C Classification. This did not prove to be the case. Six members of the group classified nearly 16,000 chest films of past and present asbestos miners and mill workers at Thetford Mines and Asbestos (Quebec, Canada). No serious difficulties were encountered with the classification. Despite the number of observations to be made for each film, each reader was able to classify 300-500 films a day. By using the reading sheets and clerks to record, omissions were reduced to 0.3 percent in 42,000 readings. The films were a representative sample of the population at risk and, therefore, contained a high proportion of normal films; but some abnormality, however slight, was recorded in substantial number. The classification was done using a set of provisional standards derived mainly, though not exclusively, from films available from the Quebec mines.

(b) *Reproducibility of readings by the same observer (intra-observer variation)*

The variation in reading by the same observer over a few days to three months was investigated during the classification of the 16,000 Canadian films. For each observer, approximately 600 films selected at random were fed back for a second reading without his knowledge. This gave a realistic trial of intra-observer variation under survey conditions, but the proportion of films in some of the subgroups was too small to test fully their reproducibility.

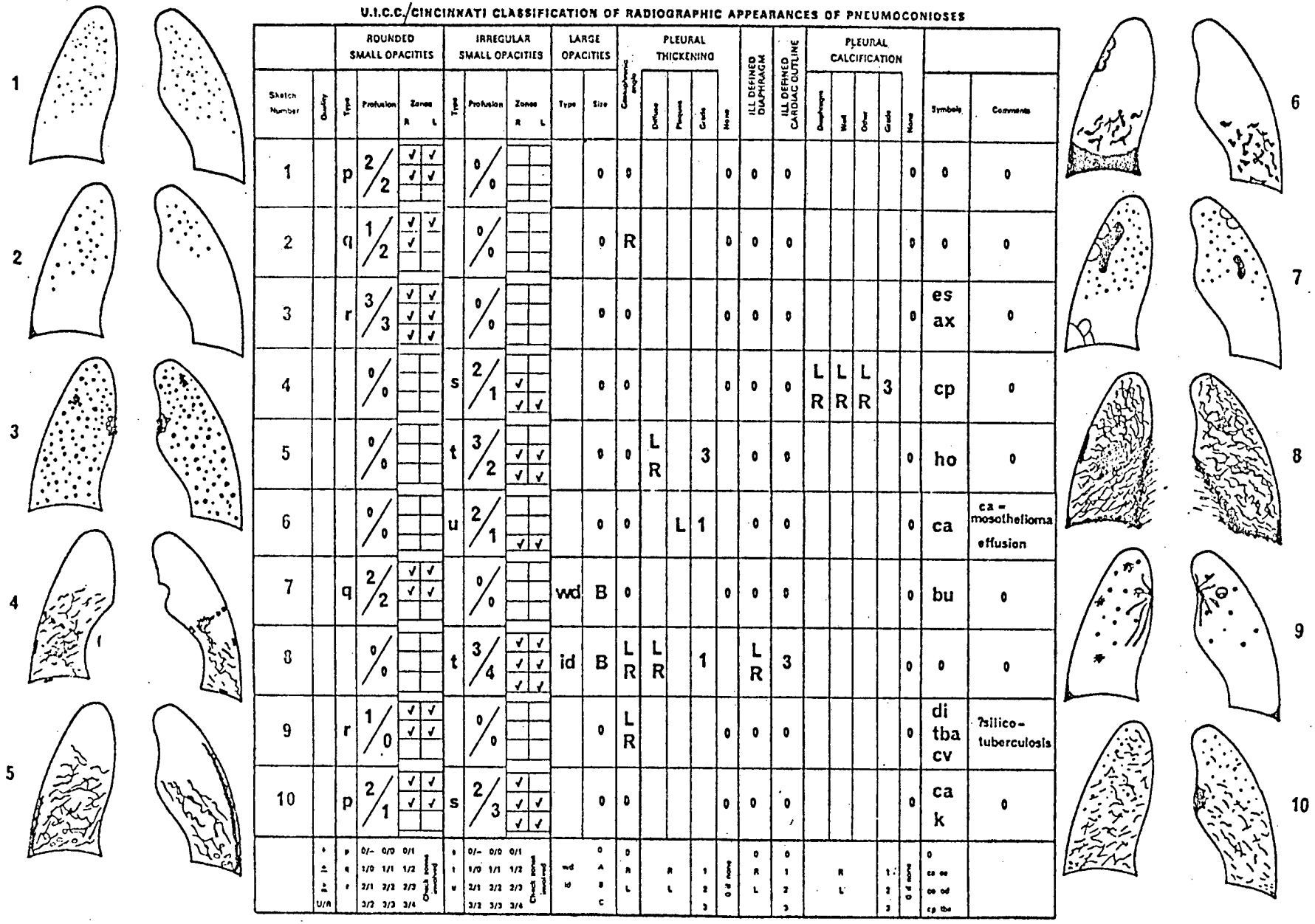
The variation in the repeatability between the different features was not large (78 percent to 93 percent); also the range between observers was not very large. It was also apparent that the variation between observers was uniform so that no one observer was consistently higher or lower in his repeatability when all the features were taken together. These results were thought to be well within the acceptable limits for a new classification on its first use in a large survey.

(c) *Agreement between different observers (inter-observer variation)*

After the meeting in Cincinnati, a further reading trial of 100 films read independently by 12 of the group was organized. The 100 films were chosen so as to include about 30 normal or nearly normal films. The films were from six countries and covered most of the range of features seen in asbestos-exposed workers. There were no films of coalminers or other types of pneumoconioses in which small opacities classifiable on the ILO 1958 scheme were the main feature. The 100,000 or so observations were tabulated for easy inspection and analysis. (This tabulation may also be obtained on request).

Figure 2 shows the prevalence for the 12 readers of minimal changes (category or grade 1 or more) for small rounded opacities, small irregular opacities, pleural thickening and calcification and ill defined diaphragm. Agreement in reading calcified pleural plaques was best, as would be expected. The readings of irregular small opacities showed widest variation. This variation results in part from the lack of previous experience in grading this type of opacity compared with small rounded opacities and may be expected to decrease with practice and the improved standard films.

Inspection of the readings for each feature showed that the instances where only one reader out of 12 reported a feature were not randomly distributed among the readers. This strongly suggests that particular readers were consistent in interpreting what they saw, but at a higher or lower level than was accepted by the majority. This is an encouraging observation because systematic differences between readers can be allowed



U.I.C.C./CINCINNATI CLASSIFICATION OF RADIOGRAPHIC APPEARANCES OF PNEUMOCONIOSES

Sketch Number	Quality	ROUNDED SMALL OPACITIES Type	Profusion	Zones R	Zones L	IRREGULAR SMALL OPACITIES Type	Profusion	Zones R	Zones L	LARGE OPACITIES Type	Size	Costophrenic angle	PLEURAL THICKENING Diffuse	Pleural	Grade	None	ILL DEFINED DIAPHRAGM	ILL DEFINED CARDIAC OUTLINE	PLEURAL CALCIFICATION Diaphragm	Wall	Other	Grade	None	Symbols	Comments
1		p	2/2	✓ ✓ ✓ ✓			0/0				0	0				0	0	0					0	0	0
2		q	1/2	✓ ✓ ✓			0/0				0	R				0	0	0					0	0	0
3		r	3/3	✓ ✓ ✓ ✓ ✓ ✓			0/0				0	0				0	0	0					0	es ax	0
4			0/0			s	2/1	✓ ✓ ✓			0	0				0	0	0	L R	L R	L R	3		cp	0
5			0/0			t	3/2	✓ ✓ ✓ ✓			0	0	L R		3		0	0					0	ho	0
6			0/0			u	2/1		✓ ✓		0	0		L	1		0	0					0	ca	ca = mesothelioma effusion
7		q	2/2	✓ ✓ ✓ ✓			0/0			wd	B	0				0	0	0					0	bu	0
8			0/0			t	3/4	✓ ✓ ✓ ✓ ✓ ✓		id	B	L R	L R		1		L R	3					0	0	0
9		r	1/0	✓ ✓ ✓ ✓			0/0				0	L R				0	0	0					0	di tba cv	?silico-tuberculosis
10		p	2/1	✓ ✓ ✓ ✓		s	2/3	✓ ✓ ✓ ✓ ✓ ✓			0	0				0	0	0					0	ca k	0
	s ≥ ≥ U/R	p q r	0/– 0/0 0/1 1/0 1/1 1/2 2/1 2/2 2/3 3/2 3/3 3/4	Check zones involved		s t u	0/– 0/0 0/1 1/0 1/1 1/2 2/1 2/2 2/3 3/2 3/3 3/4	Check zones involved		wd id	0 A B C	0 R L	R L		1 2 3	0 if none	0 R L	0 1 2 3	R L			1 2 3	0 if none	0 ca oe co od cp tbc	

FIGURE 1.

135

for in the analysis when several readers are used in a survey. It also suggests that better definition of the grades, and discussions between readers on a survey, will reduce bias between them while retaining the advantages of independent separate readings.[19] This was the first use of the classification by 12 readers from six countries with no opportunity for detailed mutual discussion on a pilot group of films, hence it was a stiff test.

In summary, the tests of practicability, intra- and inter-observer variation showed that the proposed classification had reached a stage where it was likely to be a useful tool in epidemiologic studies.

Radiographic Technique

In the reading trial on 100 films a comment was recorded on radiographic technique: good or acceptable (+), poor (+−), very poor (+−−), and unreadable (U/R).

Agreement about technique was worse than for any of the radiographic features in the classification, but standard films were not used for this assessment. The range "acceptable" to "very poor" was recorded by different observers on a quarter of the films so that criteria on what constitutes an acceptable film are not clearly established.

The majority of the films were taken with conventional methods and without grids. Proposals for achieving a higher proportion of good films by using grids and high KV techniques were made by three members of the group and are to be published.[20] All members of the group agreed that the average technical standard of routine and survey films was considerably below what could be achieved with existing equipment, but the films used in this trial were chosen from those readily available from many sources and so inevitably included a wide variation in technique. It was also agreed that there was a need for further trials to show the effect of changes of technique on readings.

Discussion

The U/C scheme is a logical extension of the ILO 1958 system of classifying the radiographs of pneumoconioses, to include features seen in asbestos-exposed workers. We believe that it will also be suitable for all types of pneumoconiosis, though further tests on many other forms of pneumoconiosis are necessary to prove this.

The important extensions are:

1. The replacement of the subdivision "L" of the 1958 scheme by categories of "small irregular opacities."
2. The subdivision "Z" is omitted.
3. Pleural changes, calcified and non-calcified, are bought into the main classification and graded.
4. The shaggy heart of asbestosis is recorded and graded separately from pleural changes, as "ill defined cardiac outline."
5. Similar changes in the diaphragms are recorded without grading.

It is the intention to provide standard films for the categories and types of small "rounded" and "irregular" opacities, large opacities, pleural thickening, pleural calcification, obliteration of the costophrenic angle (lower limit only), and the changes in cardiac and diaphragmatic outline. The method of producing the copies is still

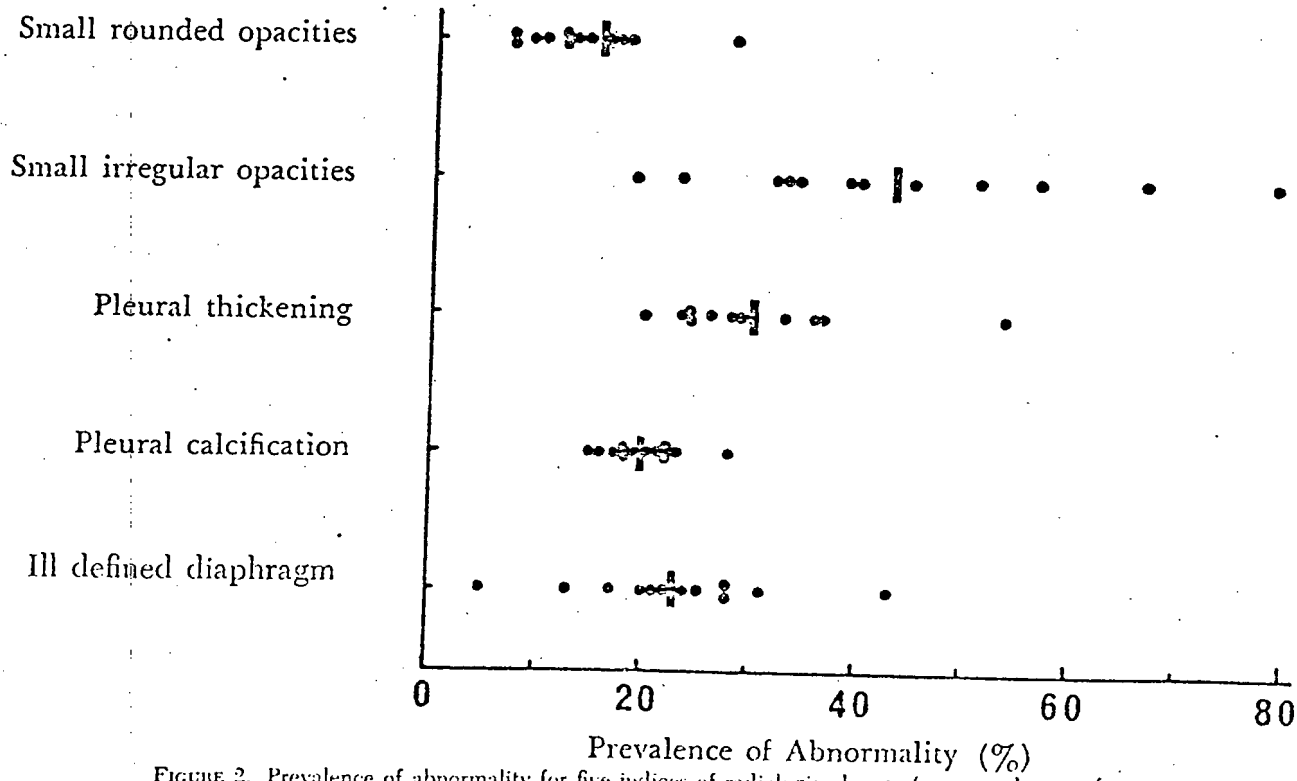


Figure 2. Prevalence of abnormality for five indices of radiologic change (mean and range for 100 films read by 12 readers).

under development, but in the interim, copies will be available* made by a better method than that used for the ILO 1958 standards.

At the Cincinnati meeting it was agreed that, in order to maintain as close correspondence as possible with the ILO schemes, the definition of categories of small rounded opacities should not be changed, though this might perpetuate the defect of the ILO 1958 scheme that *extent* and *profusion* of the opacities were combined in the definition. This has led to difficulties. There are films with a few but definite small round opacities in more than two rib spaces which by definition put the film beyond category 1, but the films clearly have far less profusion of opacities when compared with the category 2 standard. A meeting of experts at ILO in December, 1968[22] advised the separation of profusion and extent in the new revision of the ILO scheme, so this change has also been introduced into the U/C proposals. Thus, the categories of small rounded and irregular opacities are based only on profusion (concentration of opacities in a defined area) using verbal definitions supported by standard films which are intended to be midcategory examples.

In recommending the use of the system of subcategories of small opacities developed and tested by the British National Coal Board's Pneumoconiosis Field Research Scheme, provision is made for the reader to use either the formal categories 0, 1, 2, and 3, or the full 12-point scale. This extended scale largely overcomes the need for a category Z ("suspect" pneumoconiosis) because the subcategories 0/1 and 1/0 provide two ranges on the continuum between a clearly normal film (0/0) and one read as midcategory 1 (1/1). The 12-point scale applies to both small rounded and irregular opacities. There is good evidence[13] that the reading levels in the formal categories are not disturbed by adopting the 12-point scheme, which does not require extra standard films and takes no longer to record, but does provide more information. The extent of the small opacities is recorded by noting the zones of the lung—upper, middle, and lower—in which the abnormality is present but without attempting to provide a grade for each zone. There was good agreement among readers on the zones affected. This innovation of mapping the distribution of lesions may be of assistance in distinguishing changes due to different dusts or from other causes.

However, separation of rounded from irregular opacities was less consistently achieved. The inconsistency here between readers shows the need for further trials on groups of films covering a wide range of the types of small opacities. Differences in reading levels and random errors can be reduced by closer attention to the standard films and prior discussions between readers, and probably by adopting the convention recommended of recording both rounded and irregular opacities if both types are definitely seen. However, further research is needed on this point. Independent readings still provide more information than attempting to get agreement between the observers on each film.[19]

All classifications are compromises between excessive complexity and over-simplification. The U/C scheme appears considerably more complex than the ILO 1958 system, but in practice it is no more difficult to use. Many of the features noted in the U/C scheme are in fact observed in the course of complete scrutiny of any film and the classification provides a simple means of recording these features semiquantitatively. In the Quebec study the readers reported very few films which could not be adequately described. The overall consistency of reading pattern when viewing the computer tabulations of the 100 films came as some surprise to the authors, especially as there had not been any extensive discussions on the pilot group of films among all the readers before the trial.

Improvements of the scheme are likely to come when more is known about the correlations between the separate features recorded and pathology, lung function, and type and intensity of past dust exposure. Information on this is already accumulating.[21]

Summary and Conclusions

The International Union Against Cancer (UICC) convened a Working Group on Asbestos and Cancer in 1964 which recommended that an international classification of the radiographic appearances of the chest films of asbestos-exposed workers be developed.

Three interested groups—the UICC Working Party, the U.S. Public Health Service Group of Radiologists, and a McGill University epidemiologic research group—met in Cincinnati in November, 1967. Agreement was achieved on a proposed new classification which is an extension of the International Labour Organization (ILO) 1958 scheme. Tests of the practicability and intra- and inter-observer variations made subsequently were sufficiently encouraging for the Group to recommend publication of the scheme at their next meeting in April 1968.

The principal extensions from the ILO 1958 scheme are:

1. Small opacities are subdivided into "rounded" (as in the ILO 1958 scheme) and "irregular." This new "irregular" group has four categories, 0-3, and describes verbally and with standard films the linear or irregular small opacities which are frequently seen in ashestosis and in some of the other pneumoconioses.
2. Large opacities, defined as in the ILO 1958 scheme, carry an extra comment on whether the outline of the shadow is well or ill-defined.
3. Pleural thickening, for which a single symbol was used in the ILO 1958 scheme, is brought into the main classification and divided into "calcified" and "noncalcified." A system of grading, with standard films, is provided. Costophrenic angle obliteration is separately recorded.
4. Ill-defined cardiac outline (shaggy heart) and diaphragmatic outline are also separately classified, using standard films.

*The standard sets are available from the American College of Radiology, 6900 Wisconsin Avenue, Chevy Chase, Maryland 20015 or from Dr. J. C. Gilson, MRC Pneumoconiosis Unit, Llandough Hospital, Penarth CF6 1XW, U.K.

5. The additional symbols used in the ILO scheme are divided into an obligatory and an optional group.

With a well-designed reading sheet, the classification was found easy to use by six readers from four countries in 16,000 radiographs from a survey of asbestos miners and mill workers in Quebec. The variation within the same observers was tested and found to be reasonably small. The variation between observers was tested in a study of 100 radiographs read by 12 readers from six countries. The results indicate that the classification should be satisfactory for many epidemiologic purposes. But it is clear that further improvement in definitions and in the standard films might be expected to improve the agreement between readers.

The classification is known as the UICC/Cincinnati Classification of the Radiographic Appearances of Pneumoconioses. We believe it can be used to describe all the principal types of pneumoconiosis.

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Reprint requests: Dr. William Lainhart, 1014 Broadway, Cincinnati 45202.

Exhibit B

		OUTL-LING
	1	
	2	
	3	
16, 17	1	
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	3	
23	1	
	2	
	3	
	1	
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3	3	
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	3	
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114

Data recorded in Micrograms)

Rec. & Adm.
Def. 9-10-80
WPG

EDEN, NORTH CAROLINA — FIELDALE WINDING — MILL DEPT — DATE 03/04/80

EPA.C

EMPLOYEE	BRONCH GR	DYSP GR	BYSSN HIST GR	HEART COND	ALLERGY GR	SMOKER	X-RAY	EMPHY GR
81320 SMITH, EVELYN A	0	3	1	NO	2	YES		2

TEST DATE	TEST DAY	TASK NO	SEX	AGE	HEIGHT	PRDT FEV1	BEFORE FEV1	WORK %	6 HR FEV1	SAMPLE %	FEV1 CHANGE	FUNCTIONAL SEVERITY	PRDT FVC	BEFORE FVC	WORK %	6 HR FVC	SAMPLE %
07 71	0			0	65.5	2.85	1.00	35.0	1.60	56.1	60.0	F-0 C	3.35	2.10	62.6	2.55	76.1
08 72	0			0	65.5	2.85	1.20	42.1	1.30	45.6	8.0	F-0 C	3.35	2.25	67.1	2.20	65.6
10 73	0			0	64.0	2.70	1.61	59.6	1.75	64.8	8.0	F-0 C	3.16	2.20	69.6	2.60	82.2
10 74	0			0	64.0	2.70	1.22	45.1	1.22	45.1	(0.0)	F-0 C	3.16	2.17	68.6	2.00	63.2
10 75	0			0	65.0	2.75	0.90	32.7	1.00	36.3	11.0	F-0 C	3.22	1.71	53.1	1.80	55.9
10 76	0			0	65.0	2.75	0.78	28.3	0.94	34.1	20.0	F-0 C	3.22	1.52	47.2	1.67	51.8
10 77	0			0	65.0	2.65	1.04	39.2	1.60	60.3	53.0	F-0 C	3.20	2.04	63.7	2.48	77.5
10 78	0			0	65.0	2.65	0.95	35.8	0.89	33.5	(6.0)	**F-1 C**	3.20	1.85	57.8	1.90	59.3
03 79	0			0	65.0	2.65	0.81	30.5	0.72	27.1	(11.0)	**F-2 C**	3.20	1.81	56.5	1.66	51.8
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Rec. & [illegible] 9-10-80 [illegible]

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GENERAL COURT REPORTING SERVICES
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NORTH CAROLINA

COMMONWEALTH OF VIRGINIA.

DEPARTMENT OF WORKMEN'S COMPENSATION.

INDUSTRIAL COMMISSION OF VIRGINIA.

I. C. FILE No. 660-914.

EVELYN ADAMS SMITH, Plaintiff; -v- FIELDCREST MILLS, Inc., Defendant.	DEPOSITION OF HERBERT SALTZMAN, M. D.

APPEARANCES

For the Plaintiff: Gendron, Kirby and Smith
Attorneys at Law
6 East Main Street
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Edwin A. Gendron, Jr., Esquire, appearing.

For the Defendant: M. Kenneth Doss, Esquire
Associate General Counsel
Fieldcrest Mills, Inc.
Eden, North Carolina 27288

In Attendance: Kenneth Baggett
Director, Workmen's Compensation
Fieldcrest Mills, Inc.

At Durham, North Carolina.

Friday, September 26, 1980.

OCT 06 1980

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PENGAD CO., BAYONNE, N.J. 07002 · FORM 2094

The following deposition of DR. HERBERT SALTZMAN, called as a witness by the defendant, was taken before N. Annette P. Myers, Court Reporter and Notary Public in and for the State of North Carolina at Duke Medical Center, Durham, North Carolina, Room 0587, on Friday, September 26, 1980, commencing at 11:10 a.m.

Whereupon,

DR. HERBERT SALTZMAN,
having been duly sworn,
was examined and testified
as follows:

DIRECT EXAMINATION BY MR. DOSS:

(DEFENDANT'S EXHIBITS 1 and 2,
SALTZMAN'S DEPOSITION,
MARKED FOR IDENTIFICATION.)

MR. DOSS: Doctor, my name is Ken Doss and I represent Fieldcrest Mills , who's the defendant employer in this case with Mrs. Evelyn Adams Smith.

This is Mr. Ken Baggett of Fieldcrest Mills, who's Director of Workmen's Compensation and Safety

PENGAD CO., BAYONNE, N.J. 07002 • FORM 2094

at Fieldcrest (indicates person at counsel's right).

The Commission in Virginia who has this case has left the record open for to allow each of us, if we so desire, to cross examine the doctors that are in this case, and I believe that we probably can agree Ed, that pursuant to that we've worked out by agreement of counsel and the witness to be here today so that notice of the time and date and place of taking the deposition would be waived.

MR. GENDRON: Yes.

MR. DOSS: You have already been sworn, so let me ask you about Mrs. Smith, who I believe you have seen and you rendered a report.

A. I have.

Q. The court reporter has marked for identification Defendant's Exhibit 1, which I will hand you, which appears to be six (6) pages, and state whether or not that comprises your report that was rendered upon your examination of Mrs. Smith.

A. (Compares exhibit with file) Identical, absolutely.

Q. Okay, now, Doctor, I want to ask you a few questions about the report and for the purposes of the rest

PENGAD CO., BAYONNE, N.J. 07002 - FORM 2094

of my questions would you refer to your copy and tell what your diagnosis was of Mrs. Smith, after your examination.

A. (Looking at report) Chronic obstructive pulmonary disease, chronic byssinosis more likely than not, possible contribution by cigarette smoking and emphysema.

Q. Okay, and these are set out on page 2 of your report, is that correct?

A. Yes.

Q. All right.

A. Yeah, well, the emphysema I got into after I assembled her laboratory base.

Q. Okay.

A. That's outlined more, I think, on page 3, as a matter of fact.

Q. All right, sir.

A. The last paragraph.

Q. All right, sir, now, for the purpose of our discussion today, the report indicates that you saw Mrs. Smith on May the 6th, 1980, is that correct?

A. Yes.

Q. And that you took a history --

A. Yes.

Q. --of Mrs. Smith?

And you conducted a physical examination of Mrs. Smith?

A. Yes.

Q. And you had pulmonary function studies done?

A. Yes.

Q. Blood gas tests done?

A. Yes.

Q. And other related tests?

A. Yes.

Q. Pursuant to examining her pulmonary condition?

A. Yes.

Q. During your examination you found some other medical problems which you'd indicated that these were unrelated to her pulmonary problem as I understand?

A. Yes.

Q. All right, sir.

Now, the pulmonary function studies that were conducted are attached to your report as page 6, I believe, is that correct, Doctor?

A. Yes, I have one right here.

Q. Now, the pulmonary function test does not diagnose any specific disease, does it?

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A. That's correct.

Q. It only indicates whether or not there is impairment of pulmonary function?

A. Yes.

Q. Okay. I believe--

A. (Interposing) It would be fair to qualify that by saying that there are certain kinds of impairment in a pulmonary function test that are appropriate to certain diagnosis.

Q. You cannot diagnose byssinosis based on a pulmonary fucntions study?

A. No.

Q. It really is to measure impairment?

A. Yes.

Q. You also cannot diagnose byssinosis by x-ray?

A. That is correct.

Q. X-ray can show other pulmonary diseases?

A. Yes.

Q. Other than byssinosis?

A. Yes.

Q. And you did conduct some x-ray studies of Mrs. Smith.

Now, diagnosis of byssinosis is essentially based on history of exposure, is it not?--Together with pulmonary impairment?

PENGAD CO., BAYONNE, N.J. 07002 · FORM 2094

A. A history of exposure is essential plus documentation of chronic obstructive pulmonary disease by pulmonary function testing.

Q. So, you find out from the pylmonary function study whether or not there is, in fact, impairment and then you go to phase 2 to try find out what caused that impairment?

A. Precisely, a certain kind of impairment.

Q. Right, and that is when you get concerned about exposure or nonexposure to cotton dust.

A. In one or the other order.

Q. Right, I see.

Now, the x-ray studies that you made of Mrs. Smith were positive for emphysema, were they not?

A. They--the x-rays showed--let me be very specific on this. The x-rays showed hyperinflation and x-rays showed increased linear density scarring.

The x-rays showed some curvilinear markings suggesting a cyst or blebs.

Only the latter part of the x-ray findings in itself is suggestive of emphysema per se. The hyperinflation, the increased markings can be seen in garden variety chronic bronchitis, or chronic bronchitis called chronic byssinosis or in any

form of chronic obstructive pulmonary disease.

The diagnosis of emphysema in this lady's case that I made was based in part on the x-ray changes and in part on the degree of hyperinflation in her pulmonary function test, which was relatively marked and in part on certain subtleties in the pulmonary function test that went beyond what one usually sees in a simple chronic bronchitis, chronic byssinosis.

Q. All right, and it was based on those observations that you diagnosed emphysema?

A. Yes.

Q. Okay.

A. Yes, now, I would state that in addition, emphysema is a pathologic diagnosis. It's a diagnosis which can be made in absolute terms by microscopic examination. One can make a strong presumption however, based on the kind of data which I-- you've alluded to.

Q. Okay, but you--you didn't make those other tests because you didn't have the samples to work with?

A. That's correct.

Q. Those are done at autopsy?

A. Or at--

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Q. (Interposing) Or live biopsy.

A. Right.

Q. And you did not perform those on Mrs. Smith?

A. Did not.

Q. Emphysema and chronic bronchitis are diseases that are common to the general public, are they not?

A. Yes.

Q. They can be gotten by any person in any working environment?

A. Yes.

Q. Now, a person who's exposed to cotton dust, say, in a textile mill, will not necessarily as a matter of course contract byssinosis, will they?

A. No.

Q. Okay, some do and some don't.

A. Yes.

Q. Okay, all right, in taking the history from Mrs. Smith, she told you that she had worked in a textile mill and that she had been in--been exposed to cotton dust while working in that textile mill?

A. Yes.

Q. You do not know the level of cotton dust that Mrs. Smith would have been exposed to, do you?

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A. No, I have only her subjective description.

Q. Okay. In history taking from Mrs. Smith, she also told you she had smoked cigarettes?

A. Yes.

Q. And I believe she told you that essentially she had smoked one to two packs a day during a ten year interval?

A. Yes.

Q. And whether or not she had smoked longer or less than that, you don't know, you take her word for it?

A. That's right.

Q. I believe in the trade you'd call that a fifteen to twenty pack year history of cigarette exposure?

A. It's going to be someplace between ten or twenty.

Q. Okay.

A. You might split the difference.

Q. Depending on whether she smoked one pack or two packs?

A. Right.

Q. All right, sir.

Do you consider that significant tobacco exposure?

A. Yes.

Q. And of course, any longer time, if the record

indicates that Mrs. Smith had, in fact, smoked longer would be even more significant exposure?

A. (No response)

Q. Would you agree with that?

A. Yes, I think that it is clear that the injury associated with cigarette smoking penetrates to a different degree in people.

Q. Right.

A. Just as people who work in a cotton mill may get into trouble or may not.

People may smoke and not get into trouble and most of them don't, some do.

Q. Is it not true Doctor that a person with emphysema and chronic bronchitis and who has smoked, but has never been exposed to cotton dust could exhibit the same symptoms and same pulmonary functions and same x-ray findings that Mrs. Smith exhibited?

A. Yes, yes.

MR. GENDRON: I'm sorry, I was writing can you repeat that just for my benefit?

MR. DOSS: I'll try to repeat it for you and if that doesn't suit you, we can go back. (referring to reporter's record)

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I asked him that isn't it true that a person with emphysema, chronic bronchitis and who has smoked but who had never been exposed to cotton dust could exhibit the same symptoms, pulmonary function and x-ray as Mrs. Smith did. And, his answer was yes.

Q. (Mr. Doss) If Mrs. Smith had come into see you Doctor, and exhibited the same symptoms and pulmonary function, same x-ray findings as were shown on your examination, minus the history that she had worked in a textile plant, you would have diagnosed emphysema, would you not?

A. I--I would have to give you a qualified yes. There would also have to be minus the history of symptomatology associated with working in a cotton mill specifically, okay?

But, if you are addressing that to the symptoms and signs at the time I saw her at the office, irrespective of that earlier history, my answer would be yes.

Q. Well, the earlier history being the history you took from her?

A. Yes.

Q. So, essentially, when we throw in the byssinosis

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1 component of her pulmonary problem it is
2 essentially referred to history of exposure?
3 A. Absolutely.
4 Q. Okay.
5 A. History of exposure and symptoms associated with
6 that exposure.
7 Q. Right.
8 A. To be precise.
9 Q. Meaning reaction to it?
10 A. Yes.
11 Q. Okay, Now, reaction to cotton dust, generally
12 speaking to people who are employed in the textile
13 trade, is measured in part by a decrease in what
14 you call FEV1?
15 A. Yes.
16 Q. And decrease in FVC, forced vital capacity?
17 A. Yes.
18 Q. After some period of exposure?
19 A. Yes.
20 Q. Generally speaking, this --in the trade, this
21 is--these tests when performed are performed after,
22 say, six hours of exposure?
23 A. Before and after.
24 Q. Before and after.
25 Q. A test before exposure and a test six hours after

exposure?

A. Yes.

Q. Now, your past experience dealing with people who worked in the textile mill and with textile company indicate that that is how the tests are conducted, is that correct?

A. Yes.

Q. Is that a fair way of conducting such a test to indicate reactibility to exposure.

A. Reactivity. Yes, at the appropriate time.

Q. Right.

A. In the course of the illness.

Q. Okay. Now, if a person has a better FEV1 function or better FVC function after six hours of exposure as compared to pre-work exposure, would you conclude from that then that person has not had reaction to cotton dust exposure?

A. I would conclude that it was not then demonstrable on that day under those conditions.

Q. Okay.

A. And the reason for it are several.

One might be that the patient does not react to the cotton dust.

Q. Right.

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A. Another might be the patient might have taken medication.

Q. Right.

A. Another might be that the patient was tested at a point in the natural history of this illness where the changes were fixed and reactivity no longer particularly evident.

The--there are a lot of variations. I would, in general, expect that a patient with chronic obstructive pulmonary disease would have some reactivity present, would given the proper quality of testing be worse at the end of the day than at the beginning.

Q. Okay.

A. But there are--

Q. (Interposing) Exceptions.

A. Explanations.

Q. Well, assuming that the person who was conducting the test inquired as to whether or not this subject was on medication and conducted the test, in fact, prior to exposure and, in fact, after six hours of exposure and did this not on one occasion but over a series of occasions over a prolonged period of time, say, for several years, if the FEV1 and

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FVC was better after six hours exposure than as compare to pre-work exposure, you would conclude from that, that that person has not had a reaction to cotton dust, would you not?

A. I would, given the qualifications.

Q. Right, sir.

A. You could, you know, the other qualification, that the system worked on other people.

Q. Right.

A. And showed the response of people who have it.

Q. Right. One of the alternative conclusions would be that the person does not react to cotton dust?

A. It certainly would.

Q. Doctor, we--maybe Mr. Gendron and I both and I'm sure yourself have heard from time to time descriptions from people who've been employed in the textile industry about cotton dust being in the air and the lint getting on their hair and their clothes and being dusty. That is not the dust that is respirable, is it?

A. Well, it's respirable but the pure cotton itself is thought not to be the cause--

Q. (Interposing) Okay.

A. --of the injury. It is thought to be associated

with the bract material.

Q. The trash.

A. Which is called trash.

Q. All right, sir, so, it is generally accepted in the medical field that the harmful part that causes byssinosis is the part that's being respired but is not seen?

A. (No response)

Q. Is that correct?

A. I think that's correct.

Q. Okay.

Let me state it another way. I'm trying to make sure I understand.

The descriptions of the cotton in the air and the cotton dust and the lint that's in your hair and the lint that's on your nose is not a true indication of the--the agent that the person is exposed to that causes the problem?

A. That would be true or not true depending upon whether the concentration of the agent correlates with the concentration of lint.

Q. If you got more of the seen stuff, you might have more of the unseen stuff?

A. Possibly, you know, your people would have a better

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idea of that.

Q. Okay.

A. Depending on the location.

Q. I want to show you another document that Doctor, I believe you have seen before which has been identified as Defendant's Exhibit 2 and it is, for the record, classified as Table 98, "International Classification of Persistent Radiological Opacities in the Lung Fields Provoked by the Inhalation of Mineral Dusts".

Take a look at that document, Doctor. (hands to witness)

Have you seen that before?

A. I'm familiar with it, oh, yes, yes.

Q. Doctor, state whether or not you can stage byssinosis according to that chart?

A. You cannot.

Q. Okay.

A. It is useless for byssinosis.

This is for pneumoconiosis.

Q. This is a pneumoconiosis chart.

A. Yes.

Q. And that chart has as its basis the diagnosis of pneumononiosis based on radiographic evidence?

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A. Yeah, in coal miners in particular which is for what it was designed.

Q. Do you know of any way of grading, staging or correlating degrees of byssinosis based on radiographic evidence?

A. No.

Q. Okay.

(DEFENDANT'S EXHIBIT 3,
SALTZMAN'S DEPOSITION,
MARKED FOR IDENTIFICATION.)

Doctor, I hand you another document which has been identified as Defendant's Exhibit 3, and ask you please, if you will tell me what that is.

A. It looks like the bills for the work-up of the patient.

Q. Okay, that would have been when Mrs. Smith was down to have these tests that were done that you've described?

A. Right, yeah, which were done on the 6th and 13th of May.

Q. Okay, now, under Block 16A, Admitting Diagnosis, would you tell me what those are, please?

A. (reading from exhibit) "Other diseases of--"

something, "diseases of aortic valve, rheumatic psoriasis" and I see them, I didn't put them there.

Q. Okay, and under 17 there is additional diagnosis of other psoriasis, is that correct?

A. Yes.

Q. That is a skin disorder, isn't it?

A. Yes.

Q. That does not relate to pulmonary function problems?

A. Does not.

Q. The first one, Doctor that I want to call your attention to is '5192, other disease of lung".

Is 5192 a kind of classification of disease?

A. (looks at exhibit) That must have some significance relevant to classification but--.

Q. Is that not the International Classification of Diseases numbers? Is that what that's used for?

A. It may well be. I do not use those.

Q. You do not. Do you know who put that on there?

A. No, I don't even know who put it there.

Q. Do you know whether or not the number 5192 is a part of the International Classification of Diseases?

A. I don't know whether that's true or not. I would

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guess it has to do with the standard classification system.

Q. Okay, do you know off the top of your head what 5192 is?

A. I do not.

(DEFENDANT'S EXHIBIT 4,
SALTZMAN'S DEPOSITION,
MARKED FOR IDENTIFICATION.)

Q. Doctor, I want to hand you another exhibit which has been identified as Defendant's Exhibit 4, which is essentially a xerox copy of the face page of the book and the other pages have to do with the classification system inside involving the respiratory system, at least, that's what I'm saying. I want you to look at it and tell me if that's correct, please, sir.

A. It's so labeled, the International Classification of Diseases.

Q. Are you familiar with that book?

A. Yeah, I'm familiar with the book.

Q. Are you familar with that system of classification?

A. I'm generally familiar with the--that the system exist.

Q. And would you look and tell me for the record,

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please, what the classification is for 519.2?

A. "Other disease of lung, Broncholithiasis, Bronchopneumonia or pneumonia: allergic, lipid, Loeffler's pneumonia, Pneumonitis: cholesterol, eosinophilic, Pulmolithiasis, Pulmonary eosinophilia".

Q. Okay, Dr. Saltzman, just a few more questions.

A. Sure.

Q. When you saw Mrs. Smith in April, I'm sorry, in May of 1980, did you have the benefit of the report of Dr. Reginald Harris?

A. No.

Q. Have you seen it since?

A. No.

Q. Have you ever seen it?

A. No.

MR. DOSS: Thank you, Doctor, that's all.

CROSS-EXAMINATION BY MR. GENDRON:

Q. Doctor, let me start with--first with the questions that Mr. Doss has addressed and then move on to some more general information.

Probably the best thing to address first would be this billing statement from the Duke University Private Diagnostic Clinic. Do you

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have any responsibility or control over the preparation of that document?

A. None.

Q. I notice that the admitting doctor which is blank number 10 is leftblank on that document, did you give any direction with regard to the preparation of this document?

A. I--when I fill out the administrative sheet, I would put diagnosis, not a code and then a clerk will take the diagnosis and put a code number on. They clearly, at least, put an erroneous code number on it or at least this one.

Q. That code number does not correspond with the diagnosis that you made?

A. It does not.

Q. (Looks at note) I think it would be better to come back to some of those.

You and Mr. Doss discussed levels of cotton dust exposure. Did Mrs. Smith give you any details of exactly where she worked within the Fieldcrest plant?

A. Yes, she stated that she worked as a quiller tender, and I understood this to be a location between the spinning room and weave room. That is, in relative

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terms, near the front end of the mill. And she described her exposure to cotton dust as being substantial.

Q. You also discussed the difference in the pure cotton dust and the bract or the trash of the cotton dust, where--where is most of the bract encountered?

A. Most of it is encountered in the opening room and there is progressively less as one moves through carding, spinning and weaving.

Q. Mrs. Smith was in the department which was between spinning and weaving?

A. As she stated to me, yes.

Q. Would the--in your diagnosis, would the fact, if it were true, that there was no division, no walls or separation between the card room and where Mrs. Smith worked make any difference?

A. It would imply the likelihood of a greater exposure to the bract material.

Q. Switch tracks for just a moment. How do you--how does one normally contract byssinosis or suffer the effects of it?

A. I presume you refer to the chronic byssinosis?

Q. Yes, sir.

A. Typically this occurs as the result of prolonged

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1 occupational exposure to cotton dust in the
2 front part of a mill over a period of five years
3 or longer.
4 There are arguments about the exact length
5 of time necessary to incur chronic byssinosis,
6 but for the purposes of the State of North
7 Carolina we accept five years as the absolute
8 minimum.
9 Q. Okay, you mentioned front line exposure would--
10 MR. DOSS: (Interposing) Excuse me, let
11 me just for clarification ask on that point, when
12 you say, "the State of North Carolina", are you
13 talking about the medical people in North Carolina
14 or the Industrial Commission in North Carolina?
15 A. Medical and Industrial Commission and also the
16 United Kingdom.
17 It was ten years and we just reviewed this
18 last Monday with the British, but you know, at
19 the bell end of the curve, you know, they end up--
20 you end up stretching it, but this is now what
21 is accepted.
22 Q. (Mr. Gendron) You mentioned front line exposure,
23 would working in the same room as a card room
24 be front line exposure?
25

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A. Yeah, opening, carding, spinning and weaving, the epidemiologic distribution is of lesser and lesser frequency as one moves away from opening and carding towards weaving.

Q. Okay. Spinning or a position between spinning and weaving would or would not be consider front line?

A. It would.

Q. It would, and of course, if it just happened to be in the same room with carding that would just make it all the more front line?

A. Yes, front end.

Q. Front end?

A. Front end, in mill terms.

Q. All right.

Did Mrs. Smith give you a history in regard to how long she'd worked in a cotton mill?

A. She stated that she had worked in the same area for approximately thirty-three years.

Q. So, obviously her position in the mill and length of time that she was exposed was consistent with the diagnosis of byssinosis?

A. Yes.

Q. If one were to--and this is more in the nature of

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a hypothetical question than one that relates specifically to Mrs. Smith, if one were to suffer the effects of byssinosis and the disease were to progress, does it or does it not become irreversible?

A. It becomes irreversible.

Q. Based upon your examination and treatment of Mrs. Smith was she--would you say that her condition is reversible or irreversible?

A. Irreversible, in the main.

Q. In the main?

Do you want to elaborate on that?

A. Most patients with chronic obstructive pulmonary disease will feel better or worse at different times.

Sometimes this has to do with intercurrent infection making them feel worse and feeling better when these superimposed effects are ameliorated.

Sometimes patients with chronic obstructive pulmonary disease, including byssinosis, may have multiple pulmonary problems. They may have an element of reversible airway obstruction, typically small.

Q. The reversible portion would be small?

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A. Would be small.

Q. Suppose a person reached an irreversible stage and then the environment in which they worked or lived which was causing this problem was cleaned up, would it make any difference to that person?

A. Not at this stage.

Q. Okay, I believe you earlier indicated the answer to this question, but just to be sure, how long would it take a person to reach the irreversible stage?

MR. DOSS: I'm going to object to the question in that it calls for speculation about some other patient and other circumstances which may or may not be in evidence and doesn't relate to Mrs. Smith's case.

MR. GENDRON: All right, you may answer.

A. Well, it is very variable in the individual, but we typically see irreversible changes after ten years.

Q. (Mr. Gendron) After more than ten years?

A. (nods head affirmatively)

Q. And in response to a question Mr. Doss asked you, that is generally accepted within the medical profession both in the United States and Great Britian?

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A. Yes.

Q. Is byssinosis a problem or disease suffered by the general public?

A. No.

Q. Can the general public contract byssinosis?

A. No.

Q. Why is that?

A. The lack of exposure to cotton dust.

Q. Of course, the general public has some exposure to cotton dust. I assume you mean from that a matter of degree?

A. Yes, as--

MR. DOSS: (Interposing) I'm going to object to counsel assuming what exposure the general public has got.

Q. (Mr. Gendron) Well, can you distinguish between the general public's exposure and those people who may suffer from byssinosis?

A. Well, people who suffer from byssinosis work in cotton textile mills or in hemp mills or flax mills.

I'm not aware of this diagnosis being made under other circumstances.

Q. People who suffer from byssinosis work in cotton textile mills, hemp or flax mills?

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A. Yes.

Q. Why is it that those people who suffer from byssinosis and the general public does not?

A. Those people who are so exposed occupationally inhale cotton dust and certain of the raw ingredients or trash associated with the cotton dust.

Q. Could you just give us a brief definition of chronic obstructive pulmonary disease?

A. Chronic obstructive pulmonary disease refers to one, a disease which is chronic, which is characterized by obstruction of the flow of air through the airways and out of the lung and which the obstruction is, in the main, permanent and irreversible.

Q. All right, Mrs. Smith, referring to your diagnosis, has chronic obstructive pulmonary disease?

A. Yes, yes, now, I have to clarify my previous answer by saying that there is one form of chrnoic obstructive pulmonary disease, bronchial asthma, in which the definition is slightly different, and in which reversibility is a cardinal part of the definition.

Q. The definition of chronic obstructive pulmonary

disease would encompass--?

A. A variety.

Q. A variety of problems?

A. Yes.

Q. Is bronchitis within that?

A. Yes.

Q. Category?

A. Yes.

Q. It falls under the rubric of chronic obstructive pulmonary disease?

A. Yes.

Q. Could you tell us, please, what bronchitis is?

A. Bronchitis is a--chronic bronchitis is a chronic pulmonary condition characterized by cough, variable sputum production and in its fullblown form by airway obstruction, which is, in the main, irreversible, with proliferation of certain glands in the soft tissues, i.e., the mucus membranes lining the airway and thickening of the membranes in areas, and that's what it is.

Q. How is--how do those symptoms of bronchitis vary from the symptoms of--well, let me withdraw that question.

How is byssinosis related to bronchitis?

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A. Chronic bronchitis and chronic byssinosis are indistinguishable with two exceptions.

One is the occupation exposure and the second is, many patients with chronic bronchitis--chronic byssinosis have earlier history of certain acute symptoms when exposed to the raw cotton dust in the mill during the early part of the work week.

Q. You're saying, if I follow you correctly, then, that the symptoms of byssinosis and bronchitis are identical?

A. Are identical with those exceptions.

Q. Okay, with those exceptions which would mean then that the byssinosis is essentially bronchitis caused by cotton dust exposure?

A. I think that is a fair way of putting it.

Q. You mentioned certain acute symptoms from people suffering from byssinosis, could you tell us what they might be?

A. Typically, the initial part of the work week the worker describes symptoms such as tightness or congestion or heaviness accompanied by cough, sometimes wheezing and restlessness.

These symptoms tend to diminish or become

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absent during the course of the work week, they disappear completely during the weekend.

They characteristically do so during the early phase of which the symptoms first appear and then occur again in acute form at the beginning of the next work week.

Q. Is this what you describe as Monday Morning Syndrone?

A. Yeah, there may be fever which is likely to imply suprainfection.

Q. So, people who have been removed from the cotton dust exposure and then put back into it on Monday morning have more acute symptoms, is that basically what you're saying?

A. Yes.

Q. And that would generally last through part of the day on Monday and then subside?

A. Yes.

Q. How about after the disease has reached its irreversible stage, is the Monday morning symptoms still apparent then?

A. No.

Q. Why is that?

A. Because at that point they have permanent changes

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and they have symptoms throughout the week and throughout the weekend.

These patients will often feel worse when working than when not working. It's not clear how much that has to do with inhaling foreign material and how much it has to do with working.

Q. You've diagnosed Mrs. Smith as having emphysema and byssinosis?

A. Yes.

Q. What is emphysema exactly?

You've already described byssinosis as being bronchitis caused by cotton dust, what is emphysema?

A. Yes.

MR. DOSS: I'm going to object to that last statement because that's not what the doctor testified to.

Q. (Mr. Gendron) If that's not what you testified to, would you tell us what you did say?

A. Well, I--I thought I said Mrs. Smith had chronic byssinosis and emphysema.

Q. Right.

A. I think it would be reasonable to presume--well, when

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1 someone has chronic obstructive pulmonary
2 disease in these categories, whether there is
3 an element of bronchitis independent of bronchitis
4 that is implicit in chronic byssinosis is hard to
5 sort out.
6 She's been a cigarette smoker.
7 Q. Okay, I think what Mr. Doss was objecting to--
8 A. (Interposing) Yeah, I'm not sure on that.
9 Q. --is the definition of byssinosis is bronchitis
10 caused by cotton dust.
11 Is that what you said the definition was?
12 A. Yeah, I think that's a fair definition.
13 You can't--you can't separate out clinically
14 and pathologically chronic bronchitis from byssinosis
15 aside from the occupational history, there is
16 simply an occupational form of chronic bronchitis.
17 Q. All right, then, what is emphysema?
18 A. Emphysema is a form of chronic obstructive
19 pulmonary disease with it's cardinal characteristic
20 is a disruption of lung tissue.
21 There is an actual loss of lung tissue that
22 is progressive and it is associated with airway
23 obstruction. And it may well be associated with
24 other kinds of chronic obstructive pulmonary
25

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1 disease, including chronic bronchitis if the
2 individual is a smoker.
3 But, the cardinal distinction is that lung
4 tissue is lost with time.
5 Q. Okay.
6 A. And there are certain characteristics of that
7 on that.
8 Q. Physical effect, then, of emphysema show up
9 primarily within the lung?
10 A. Yes.
11 Q. Where do the physical effects of bronchitis and
12 byssinosis show up?
13 A. They show up within the lungs but primarily the
14 airways of the lungs, in the bronchii?
15 Q. Tubes and air passages?
16 A. Tubes, yes.
17 Q. So the symptoms are fairly distinguishable
18 between the two?
19 A. The symptoms may not be distinguishable.
20 The symptoms are not distinguishable, the
21 pathology is different
22 There is a great overlap in the pulmonary
23 function test. There are some fine distinctions
24 that may or may not apply in pulmonary function.
25

It is possible to see changes in the chest x-ray that point toward emphysema. Symptoms? No. Symptoms in the chronic state.

Q. In your opinion both of these diseases were present in Mrs. Smith?

A. Yes.

Q. Briefly, Doctor, would you tell us what the Schilling Index describes?

A. The Schilling Index is a crude classification of byssinosis which incorporates the initial acute phase and extends to chronic irreversible phase.

It goes through a 0, 1/2, 1, 2, 3 sequence in which the lowest number refer, in general, to those individuals who had this asthma-like transient, early in the work week symptomatology which is tot--with transient changes in the pulmonary function tests which is totally reversible.

And the Class 3 refers to the irreversible inpairment then, symptomatically and by pulmonary function tests.

Q. Shcilling has class or stage 1, 2 and 3, is that correct?

A. Yeah, and sometimes he's used a class 1/2.

Q. Okay. Now, in the same vein, the AMA Scale goes

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Class 1 through 4?

A. Yes.

Q. But, it's based on different criteria?

A. Well, yeah, and it is not specifically related to byssinosis. It's a general classification of respiratory impairment.

Q. And Schilling is specifically related to byssinosis ?

A. Yes.

Q. There is also something known as the Karnofski Scale?

A. Yes.

Q. What is that?

A. The Karnofski Scale turns it around.

That is, the Karnofski is generally a scale of impairment, of functional capability rather than impairment.

It describes what an individual is capable of doing based on his total medical assessment. It does not relate specifically to lung disease but relates to whatever the patient has that says this individual is capable of doing such and such.

Q. Do you know of any other scales or categories or classifications other than the AMA, Schilling or

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Karnofski to measure COPD?--Or classify it?

A. There are some others but they're not in very common use.

The classification that sometimes has been grafted on and used are those of the Heart Association which is used to classify patients with heart disease. And, some of these various classifications they use have been employed also in lung disease. They are particularly because the exercise tests, stress tests have commonly been worked out with heart fitness criteria.

Q. Are these three we have discussed the most common three in use?

A. Yes.

Yeah, I want to add that the AMA classification is a nationally used scale which--in which the classification for, let's say, respiratory impairment also corresponds to classifications they use for orthopaedic problems or cardiac problems or other systems.

Q. Okay, so, once again, this Schilling is the only one that pertains specifically and exclusively to byssinosis?

A. Yes.

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Q. Mr. Doss asked you if you had seen Dr. Harris' report, dated August 29th, 1980 on Mrs. Smith. I'll show you that.

If you'll refer to the conclusions page.

A. (turns to page)

Q. You indicated in your report that you classified Mrs. Smith AMA category 3, Dr. Harris has her in category 4.

How do you make a determination of what category a patient is in?

A. There are three --there are three or four--three yardsticks which can be used.

One is the symptomatic performance of the patient. What the patient describes as his or her capabilities.

The patient describes herself as having to walk slowly on level ground, having some difficulties therein. And that, symptomatically, generally, conforms to a stage 3, AMA level of impairment.

At the same time she is capable of working and most people who are capable of industrial employment are generally thought to be better than that and conform to stage 2.

On the other hand, she was doing a job she

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knows how to do, and our experience has been that people continue to work at levels of impairment that would not make it possible with less experienced or less motivated.

If one turns to her pulmonary functions test, the--that conforms to a stage 4, because she has a--her FEV1 is below fifty percent (50%) and everything else in the pulmonary function test corresponds with that.

I'm talking about the tests that we did.

Q. Right.

A. If one looks at her cardio-respiratory exercise test this patient had a severe subnormal performance and was somewheres roughly on the 3-4 interface.

She could easily be classified as stage 4 on that basis. She could be classified as stage 3.

My bias has been, where I thought I had good information from the patient, that I would often use the symptomatic classification but--and it was hard for me to relate her ability to continue to work, you know, out performing her symptoms. Way out performing her pulmonary function test, and put her in a classification that applies to

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1 someone who is essentially an invalid.
2 Q. you have--
3 A. (Interposing) It's these little things.
4 Q. You had a borderline then between 3 and 4 on
5 that?
6 A. Absolutely.
7 Q. And you placed her in class 3 based primarily on
8 what she told you she was able to do?
9 A. Yes.
10 Q. In spite of the fact that she tested sicker than
11 that?
12 A. Her tests-were--showed more severe impairment
13 than her symptomatic performance.
14 Q. Now, just a point of clarification before we go
15 on. Now, the AMA Scale from 1 through 4 you
16 describe categories which are more severe--strike
17 that.
18 Less severe in stage 1 and progressively
19 more severe through stage 4?
20 A. Yes.
21 Q. On the Schilling Scale you're describing a
22 problem which is less severe at stage 1 and more
23 severe through stage 3?
24 A. Yes.
25

Q. Your report doesn't include any Schilling classification, are you in any position to make one today?

A. Schilling 3.

Q. Schilling 3.

That's related to her byssinodic state?

A. Yes.

Q. Doctor, based on your experience, training and on your treatment and diagnosis of Mrs. Smith, is it your opinion that she has byssinosis or not?

A. Yes.

Q. Okay, and you have just stated that she is stage 3?

A. Yes.

MR. GENDRON: That's all I have.

REDIRECT EXAMINATION BY MR. DOSS:

MR. DOSS: Just a few more questions.

Q. Doctor, when talking with Mr. Gendron about exposure, a great deal of your testimony, I would assume, was from a general standpoint and not--maybe not totally related to Mrs. Smith?

Is that correct?

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A. That's right.

Q. In specifics, as it relates to Mrs. Smith, you are not aware of the levels of cotton dust exposure, are you?

A. I have no objective information.

Q. You have simply what she told you?

A. Yes.

Q. Do you know what is done in the quilling department? What kind of operation is performed?

A. Not in details, she did give me some description, I don't have precise information on that.

Q. Have you ever been into any cotton mill and ever taken any dust levels?

A. No.

Q. Based on what you have read and studied and from your past experience, if it is a sewing thread that Mrs. Smith works with in the quilling department, would you expect there to be a significant amount of dust, cotton dust from that operation?

A. I wouldn't expect it from working with finished thread.

Q. Okay. If working with finished thread in a re-packaging process as opposed to a yarn processing operation, would that be an operation which you

would expect there to be a significant amount of dust?

A. No.

Q. Would you consider four hundred (400) micrograms to be significant cotton dust exposure?

A. That's thought to be a low level.

Q. And three hundred and two hundred would be even less?

A. Yes.

Q. COPD, Doctor, chronic obstructive pulmonary disease is a broad classification for a number of pulmonary diseases?

A. Yes.

Q. Including but not limited to emphysema, chronic bronchitis and byssinosis?

A. Yes.

Q. Chronic obstructive pulmonary disease does not in and of itself give any indication of the specific pulmonary problem from which one may suffer?

A. That's correct.

Q. Or --or what its causal relation may or may not be to, say, work environment?

A. Correct.

Q. Because people who do not work in textile mills

can have and do get COPD?

A. Right.

Q. In the form of emphysema, in the form of chronic bronchitis?

A. Yes.

Q. You can get chronic bronchitis without working in a cotton mill, can't you?

A. Yeah.

Q. The Schilling Index and the AMA Scale that you testified about, neither of those two are based on x-ray evidence, are they?

A. You're correct.

There are x-ray criteria in the AMA index but they're very general and a minor part of the classification.

Q. That brings to mind, the AMA classification is a rather complicated classification.

A. Complicated, it applies to a lot of illnesses, there are a lot of x-ray criteria in it, but there--they're very general. They have very little impact on the ultimate classification.

Q. It--the AMA classification also has a great deal of involvement with the--with the cardio--the heart aspects of pulmonary impairment too, doesn't it?

A. Yeah, yes, that covers things like tuberculosis.

Q. Right.

A. And cancer, almost anything that has comes--

Q. (Interposing) Right, what it amounts to when you use the classification is that it is about as good a guess as you can come up with, isn't it?

A. I thin it--that--I find that as a statement, vague.

The AMA classification, I find helpful. It doesn't make a diagnosis.

Q. Right.

A. But, it does help to compartmentalize patients into groups that are definable in terms of impairment.

Its vagueness comes from the problems of assessing very complicated biologic systems, humans.

And it can be very unvague--it can be very precise on some individuals. It can be very vague in others.

That depends on many factors.

Q. In your report you originally interpreted Mrs. Smith to have a class 3, AMA respiratory impairment, thirty-five percent (35%) whole body?

A. That's correct.

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Q. And you interpreted that half of this impairment to reflect byssinosis.

A. Yes, very arbitratily.

Q. Now, byssinosis is the only one of the COPD diseases that could have related to her occupational exposure?

A. Yes.

Q. You're talking about half of the thirty-five percent of the whole body in your report?

A. Yes.

Q. All right, now, sir, as you've previously testified, the basis of that is essentially the history of exposure as conveyed to you by Mrs. Smith, correct?

A. The history of exposure and the symptoms associated with it, yes.

Q. Okay, the symptoms being pulmonary impairment?

A. In the early work week.

Q. Okay.

The pulmonary impairment could have related to any of the other COPD diseases, and in fact, you did so--diagnose one of them as emphysema, isn't that correct?

A. I think that her present pulmonary impairment

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symptoms and objective findings cannot be--
could occur in some one who had never gone into
a cotton mill, that's absolutely true.

Q. right.

A. The symptoms she described that she worked in
the mill years ago have some significance, if
they're valid diagnostically in terms of
byssinosis.

She did describe early work week, an early
work week asthma equivalent, if you want to use
that term, Monday morning symptoms.

If the history is accurate that has
diagnostic significance.

Q. All right, now, one of the things about bronchitis
is the chronic cough.

A. Yes.

Q. With production of sputum?

A. Yes.

Q. Over some prolonged period of time?

A. Yes.

Q. Now, Mrs. MSmith did not relate those symptoms
to you, did she?

A. (Looks in medical file) She did indeed relate
cough and sputum production in my rough notes.

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I emphasized in my typed notes the wheezing and the breathlessness that were initially transient and then persistent.

In my rough notes she did describe cough in association with the wheezing. She did describe brownish sputum expectoration.

Q. That was left out in the typed report?

A. That was not in the typed report.

Q. Now, I want to make sure I understood what it was you told Mr. Gendron.

Did you tell Mr. Gendron while ago that chronic bronchitis was caused by exposure to cotton dust?

A. I said that chronic bronchitis is indistinguishable from chronic byssinosis aside from the occupation--

Q. (Interposing) Okay.

A. --exposure history.

And that one can choose to describe chronic byssinosis as a special form of chornic bronchitis due to the cotton dust exposure.

It is indistinguishable symptomatically and pathologically otherwise.

Q. Okay, you indicated to me earlier, Doctor, that number one, a person can have emphysema and never

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1 have worked in a textile mill?
2 A. Yes.
3 Q. A person who has worked in a textile mill may
4 also have emphysema?
5 A. Absolutely.
6 Q. A person may have chronic bronchitis who has never
7 worked in a textile mill?
8 A. Yes.
9 Q. Somebody who had worked in a textile mill may also
10 have chronic bronchitis?
11 A. True, yes, sir.
12 Q. A person may have worked in a textile mill for a
13 long, long period of time, more than ten years,
14 and not have byssinosis?
15 A. That's correct.
16 Q. But, a person may have worked in a textile mill
17 for longer than ten years and may have byssinosis?
18 A. Yes.
19 Q. So, if a person has worked in a textile mill, who
20 has smoked cigarettes and has a diagnosis of
21 emphysema, he could just have likely gotten that
22 emphysema from someplace other than the workplace?
23 A. We presently think that the emphysema has nothing
24 to do with workplace.
25

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Q. Okay, a person who has worked in a cotton mill and smoked cigarettes and had a diagnosis of chronic bronchitis, could have just as well have gotten that chronic bronchitis from someplace else and cigarette smoking?

A. Yes.

Q. A person who has worked in a cotton mill--strike the question.

As far as Mrs. Smith is concerned, her diagnosis of COPD or pulmonary problems could have just as well have come from cigarette smoking or from emphysema unrelated to her employment in a textile mill, could it not?

A. Yes.

MR. DOSS: Thank you.

MR. GENDRON: Doctor, just a couple of brief questions.

RE-CROSS-EXAMINATION BY MR. GENDRON:

Q. With regard to harmful exposure, if a person has worked for thirty years in the yarn preparation department, which is between spinning and weaving but in the same room as the card room, do you consider it likely that they have harmful exposure?

MR. DOSS: I'm going to object to that unless he can tell us what those levels were, as pure speculation.

MR. GENDRON: Okay, let me just say--this is for the record, that this is in direct response to a question propounded by Mr. Doss to the doctor with regard to exposures.

A. My answer to the question is, yes, presuming there have been significant levels of cotton dust.

Q. Okay.

With regard to significant levels of cotton, did I understand you to tell Mr. Doss that this cotton you can see in the air, is filtering down, getting on machines and clothes, that is most likely the harmless type of cotton dust, but, if that's in the air most likely the harmful-type cotton dust is also in the air?

A. I think that obviously depends on the technology of the system.

That depends on what--how the cotton was processed at the point at which one sees it.

Q. Okay.

A. In the mills that exposures that relate to the patients that I am seeing, these generally relate

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to exposures that go back to thirty-forty year interval, there has been in many mills, but probably not in all mills, harmful exposure to raw--to the trash part of cotton in those conditions.

Q. Suppose a person had worked in a cotton mill for thirty years, and today there was absolutely no cotton dust in the air, does that mean that the person could not contract byssinosis?

A. No, because one would need to know what the exposure was over that thirty years.

Q. All right, can emphysema be caused or contributed to by other chronic obstructive pulmonary diseases?

A. Under certain circumstances, yes, as a general response.

Q. Okay.

Is there any way to tell which came first if you have two pulmonary problems and they both existed at the time of the diagnosis?

A. One would have to deal with more specifics.

There are certain conditions which we are not talking about today but which clearly lead on to emphysema and certain of those individuals, there are certain kinds of exposures which clearly

aggravate the process.

But, one would have to deal with specific entities.

Q. Is byssinosis one of those things that could aggravate or cause emphysema?

A. Not to my knowledge.

Q. You've expressed no opinion with regard to what effect cigarette smoking may have had on Mrs. Smith's condition. Do you hold no opinion in that regard or has it just been omitted or what?

MR. DOSS: I'm going to object to counsellor's question as it incorrectly states the doctor's position about what he said about cigarette smoking in this patient.

MR. GENDRON: I withdraw that question.

Q. (Mr. Gendron) Let me put it this way.

You stated in response to Mr. Doss's question, I believe, and if I'm wrong correct me, that cigarette smoking could have an effect on the pulmonary condition of Mrs. Smith?

A. Yes.

Q. But, if you gave an opinion of your own as to whether it did, I don't recall.

Did you give such an opinion?

A. I don't think I clearly stated it.

I think that--this. This lady almo--very, very probably has emphysema, based on the information we know about her.

The fact that she did smoke cigarettes almost certainly aggravated that problem, if it wasn't a major factor in its cause.

We cannot know all of the reasons why one individual develops emphysema, but we--there are--there is a very significant correlation between cigarette smoking and emphysemanis changes.

And, it would be reasonable to presume that with her smoking history, with having emphysema, that there is a relationship between the two.

Q. You mean emphysema and smoking?

A. Yes.

Q. Is there any relationship between smoking and byssinosis?

A. Okay, there is an--there is reason to speculate and think that emphysema induced by cigarette smoking combined with the chronic byssinosis process would lead to more impairment than one of these processes alone, or than the two processes' sum, in terms of their individual

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contributions.

If we study in experimental models conditions in which one condition is present and then add a second condition and compare the two conditions separately to the sum of the two, the sum of the two will produce more impairment of function in the laboratory.

Q. Let me go back a moment, but you said, I believe that cigarette smoking may have caused the emphysema?

A. Yes.

Q. But, cigarette smoking could not have caused the byssinosis?

A. That's correct.

Q. But, the two problems together may be more important than the sum of the two halves?

A. Yes.

MR. GENDRON: Thank you, that's all I have.

FURTHER REDIRECT EXAMINATION BY MR. DOSS:

Q. I think you also told me that all of Mrs. Smith's problems could have been caused by the cigarette smoking?

A. It's possible.

Q. Okay, or could have been caused by the emphysema?

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A. Yes, possible.

MR. DOSS: Thank you, Doctor.

MR. GENDRON: I have one last question and I'll be through.

A. Sure.

FURTHER RE-CROSS-EXAMINATION BY MR. GENDRON:

Q. Doctor, you say that all her problems could have been caused by the cigarette smoking, but so far you've stated no opinion as to whether they were, are you capable or are you in a position to do that?

A. My--based on the information that I had, I think that this lady has both emphysema and chronic byssinosis.

I think that on a more likely than not basis that chronic byssinosis is a component, significant component of her pulmonary problem.

That is based on the information that I have.

FURTHER REDIRECT EXAMINATION BY MR. DOSS:

MR. DOSS: Would your opinion be the same Doctor if pulmonary function studies done on Mrs. Smith over a period of about eight consecutive years indicated that her FEV1's and F--

MR. GENDRON: (Interposing) Object to that question because there is no foundation in the record of what you're about to say has been done.

MR. DOSS: The record has been introduced at the last hearing.

Q. (Mr. Doss) That the test indicate that the FEV1 and FVC were better after six hours of exposure than pre-work--

MR. GENDRON: (Interposing) Excuse me, I need to lodge another objection. The document may have been entered but there's been no interpretation or explanation of the document, and therefore, the foundation has not been properly laid.

MR. DOSS: Go ahead and answer it, Doctor.

A. I would certainly have to rethink my diagnosis.

See, it depends on variables that we've already talked about.

Q. (Mr. Doss) Right.

A. It--it would depend, of course, you know, one thing I didn't talk about is what was the pretreatment value, how close was it to normal.

I think what I'm saying is that, the further down the road she was when they started testing

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her the less con--diagnostic is the pre- and post-treatment relationship.

If you take someone early on who has a normal FVC and you put them in the mill and-- for six hours and you test them, and there is no change, then you've got a very clearcut result.

Q. Well, what if there is change?

A. And if there is change, you've got a very significant result, either way.

Q. If it changes for the better?

A. If it changes for the better, you're not dealing with acute byssinosis.

MR. DOSS: Thank you.

A. But, if you see someone who's got a fifty percent vital--forced vital capacity, then you test them, you're already dealing with damaged goods. And, the interpretation is different.

Q. You're dealing with somebody with some sort of pulmonary problem?

A. Absolutely.

Q. Not necessarily byssinosis?

A. That's correct.

MR. DOSS: Thank you.

MR. GENDRON: But, that person is in a

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category where an increase between the relationship between FEV and FVC really makes no difference.

A. It's more difficult to interpret.

MR. GENDRON: All right.

MR. DOSS: It does make some difference.

(LAUGHTER)

A. Yes.

MR. DOSS: That's all.

MR. GENDRON: We'll stop.

(WITNESS EXCUSED)

FURTHER DEPONENT SAITH NOT

CERTIFICATE

I, N. Annette P. Myers, Court Reporter and Notary Public in and for the State of North Carolina, duly commissioned qualified and authorized to administer oaths and to take and certify depositions, do hereby certify that on September 26, 1970, DR. HERBERT SLATZMAN, being by me duly sworn to tell the truth, thereupon testified as above set forth as found in the preceding 61 pages, his examination being reported by me verbatim and then reduced to typewritten form, that the foregoing is a true and correct transcript of said proceedings to the best of my ability and understanding; that I am not related to any of the parties to this action; that I am not of counsel; and that I am not interested in the event of this cause.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official notarial seal this the 1st day of October, 1980.

NOTARY PUBLIC

My commission expires 6-2-82.

Manie P. Currin and Associates
Court Reporters
203 Main Street
Oxford, North Carolina 27565
919/ 693-6954.

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DUKE UNIVERSITY MEDICAL CENTER

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M-03

MEDICAL NOTE

'ITH, Evelyn Adams

N6 8 242

Dr. Saltzman

MPDC

5/6/80

DEFENDANT'S EXHIBIT 1 Saltzman Dep. 9-26-85

The patient is a 51-year-old widow and textile mill employee from Bassett, Virginia where she lives in a conventional rural setting. There are two children. She has been exposed to cotton dust in a textile mill in the same area for approximately 33 years. She works as a quiller tender (between the spinning room and weave room). The exposure to cotton dust, according to the patient, is substantial. She did smoke one to two packs of cigarettes a day during a 10 year interval, terminating this habit 1 1/2 years ago. There is a dog house pet and house plants.

CHIEF COMPLAINT: Shortness of breath.

HISTORY: Beginning 10 years ago the patient noted the onset of some chest tightness, wheezing, breathlessness and a feeling of being unwell in association with work. Symptoms were more severe at the beginning of the week and were clearly not continuous then. Gradually during the subsequent 10 years this pattern has continued with a significant change in that symptoms are now continuous although she remains bothered more early in the week than later. Recently dust masks have been given to employees in that area. She finds these so uncomfortable that she cannot wear them when working however. At present the patient may be short of breath without exertion at times and she cannot keep up with her contemporaries walking on level ground. She has had mild symptoms of spring and autumn hay fever throughout her life. There is no other personal or collateral history of allergy related illnesses. There is no history of childhood asthma. Recently she has taken a liquid medicine for breathing, in the evening. Other significant medical problems have included psoriasis for which she is followed (salve used in treatment and generally adequately controlled) and a chronic left lower leg ulcer during the past 10 years for which she is also being followed elsewhere. The review of systems otherwise was positive for difficulty in sleeping, chest pain with bad breathing episodes between the shoulders and under both breasts, the need for two pillows at night, occasionally waking up short of breath and she did have a pelvic examination within the past year. The past medical history otherwise was positive for the usual childhood illnesses and intermittent pleurisy (last time 1978). A benign cyst was removed from the right breast operatively. The family history was uninformative.

Physical examination revealed a well developed, slender white lady in no acute distress. Vital signs: weight 114; height 5'4"; temp. 36.5; BP 80/60; respirations 24; pulse 16.
Skin: psoriasis near elbows-stasis changes on skin of lower extremities.
Lymphatics: no significant systemic lymphadenopathy.
Head, Neck: narrowed retinal arterioles, normal pupillary reflexes and ocular motion, slightly swollen nasal mucous membranes but nasal passages are adequate, normal transillumination of sinuses, normal tympanic and pharyngeal membranes, supple neck without masses.
Thorax: symmetrical, decreased excursions. Normal resonance. Very distant breath sounds. With forced maximal exhalation the expiratory breath sound was prolonged and expiratory wheezes were heard over both lungs.

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N6 8 242

Dr. Saltzman

MPDC

5/6/80

Cardiovascular: regular rhythm, no gallops or murmurs. Decrease in pedal pulses bilaterally.
Breasts: no masses.
Abdomen: no masses or tenderness
Pelvic+Rectal: gynecologic examination elsewhere.
Extremities: varices present bilaterally. Edema and stasis changes on skin. Chronic ulcer on left leg above ankle (bandage).

Assessment:

1) chronic obstructive pulmonary disease, chronic byssinosis more likely than not-possible contribution by cigarette smoking
2) psoriasis-medical treatment elsewhere
3) peripheral varices and stasis ulcer (medical treatment elsewhere)
4) atherosclerosis and physical findings of peripheral vascular insufficiency
5) mild allergic rhinitis

Recommended management:

1) data base to be expanded with complete blood count, clean catch urinalysis, 18 blood chemistries ECG, chest x-ray, pulmonary function tests and cardiorespiratory exercise test with arterial blood gases. I will review the results of these tests and provide a completed assessment to the patient and her attorney, Mr. Gendron

Herbert A. Saltzman, M. D.

HAS/cm
D: 5/6/80
T: 5/6/80

cc: Patient
Mr. Gendron

CBC: hemoglobin 13.3; hematocrit 39.4; RBC 4.61; WBC 6500; neutrophil 58; lymphocyte 35; monocyte 4; eosinophil 2; basophil 1; normocytic; normochromic; adequate platelets; MCV 86; MCHC 34.3.
Urine: yellow, hazy; pH 5.0; sp. gr. 1.020; protein 0; sugar 0; WBC rare; RBC 0; epithelial cell occ.; bacteria 0; casts 0; ketone bodies 0; benzidine 0.
Chem 6: sugar 76; BUN 13; sodium 144; potassium 4.3; chloride 108; CO2 content 30.
Chem 12: total protein 6.1; albumin 4.0; calcium 9.8; phosphorus 3.4; cholesterol 208; uric acid 4.1; creatinine 0.8; total bilirubin 0.4; alkaline phosphatase 75; LDH 204; SGOT 18.
Chest x-ray: PA and lateral views of chest show nonspecific increase in markings in all lung fields; linear scarring is noted in both upper lung fields and apical pleural thickening is present bilaterally; many of the markings are curvilinear suggesting cysts and/or blebs; diaphragms are low and flattened; cardiac silhouette within normal limits; this patient does have a slight kyphosis and a pectus deformity which tends to confuse evaluation of the anterior mediastinum.

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SMITH, Evelyn Adams
N6 8 242
Dr. Saltzman
MPDC
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ECG: sinus bradycardia, rate 58; otherwise normal ECG; no previous ECG found.

ADDENDUM:
The assembled laboratory base has been reviewed. Chest x-ray changes are those of chronic obstructive pulmonary disease with a significant component of emphysema. Pulmonary function tests are entirely consistent with the radiologic picture, revealing severe ventilatory obstruction, marked hyperinflation (absolute and relative) and severely impaired carbon monoxide transfer. The cardiorespiratory exercise test was abnormal with subnormal aerobic performance. At the maximal level of exercise attained, ventilation was the limiting parameter. Normal gas exchange was maintained under these conditions with normal resting arterial blood gases (PaO2 of 88 and PaCO2 of 40 mmHg). With progressive exercise oxygenation of arterial blood improved (105 and 37 mmHg respectively for PaO2 and PaCO2 at 75 Watts).

The following comments bear on questions relevant to causes of pulmonary impairment and quantitation of impairment. Clearly the patient has had an occupational exposure to cotton dust. Clearly she has severe chronic obstructive pulmonary disease. Emphysema and chronic bronchitis are the evident causes for her chronic obstructive pulmonary disease. I interpret byssinosis to be a more likely than not etiologic factor in the evolution of chronic bronchitis. The role of cigarette smoking is difficult to quantitate here. It may well contribute to bronchitis symptoms. The emphysema can be regarded presently as reflecting factors other than cotton dust exposure. Cigarette smoking may be a relative causative factor. There are no nonpulmonary work related problems, identified in this work-up. The patient does have other significant medical conditions. These are enumerated in my note of 5/6/80. They do not appear to be functionally limiting. I interpret this patient to have Class III AMA respiratory impairment-35% whole body. I interpret half of this impairment to reflect byssinosis. By conventional criteria this patient has sufficiently severe respiratory impairment to be unable to withstand the rigors of regular industrial employment. Since she is presently gainfully employed under these circumstances a discrepancy exists. This is not uncommon in a motivated individual performing a familiar job for which compensatory techniques have been learned. Clearly the patient requires long term medical supervision and treatment for her severe chronic lung disease. Clearly she should not continue to work in an environment containing noxious or potentially noxious inhalants.

Form
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DUKE UNIVERSITY MEDICAL CENTER

PULMONARY FUNCTION LABORATORY

NAME: SMITH, EVELYN
HISTORY #: N68 242
WARD: MPDC
DOCTOR: SALTZMAN
HEIGHT (cm): 165.1
WEIGHT (kg): 50.5
AGE: 51 DATE: 5/13/80

EXERCISE TEST

INDICATION: Evaluate exercise capacity of patient with history of occupational exposure to cotton dust (34 years).

TEST CONDITIONS:

TIME: 11:30 A.M.

MEDICATIONS: None.

SMOKING HISTORY: Quit 1½ years ago; 1 to 2 packs/day for 10 years prior to quitting.

CURRENT ACTIVITIES: Can walk slowly on the level without much difficulty. Climbing stairs, sweeping and mopping causes shortness of breath.

Arterial blood pressure and blood samples were obtained from a cannula in the right brachial artery.

Heart rate was obtained from the EKG (CM_5).

Patient had never ridden a bicycle prior to the test.

OBSERVATIONS: Patient terminated exercise after 50 seconds at 75 watts due to "leg fatigue and shortness of breath". She reached a heart rate of 123 B/min (70% of predicted maximum) with an oxygen uptake of 811 ml O_2/min (55% of predicted maximum*). Her minute ventilation at 75 watts was 54.7 L/min which is 118% of the previously measured MVV (MVV = 46.2). There was no evidence of exercise induced bronchospasm. A metabolic (lactic) acidosis developed during the exercise, but the work rate at which the anaerobic threshold was reached could not be determined. Arterial oxygenation improved and blood pressure increased appropriately with exercise. There were no changes in the EKG to suggest coronary insufficiency.

INTERPRETATION: This patient's aerobic capacity is less than predicted normal due to ventilatory impairment. She should not be expected to engage in sustained activities requiring more than 9.5 ml O_2/min/kg** without developing ventilatory mechanical difficulties.

Nelson E. Leatherman, Ph.D./J. A. Kylstra, M.D.

NEL:nk

* $\dot{V}_{O_2\,max}$ = 48-0.37 x age (ml/kg/min).

** $\dot{V}_{O_2}$ at 60% $\dot{V}_{Emax}$/body weight.

See opposite side for numerical data and references.

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in)	(watt	(L, BTPS/min)	VT (mL, BTPS)	HR (beats/min)	VCO2 (mL, STPD/min)	VO2 (, STPD/min)	R ($\dot{V}CO_2/\dot{V}O_2$)	BE meq/L	PaCO2 (mmHg)	PaO2 (mmHg)	pHa	BPa (mmHg)
3	Rest	9.6	419	66	171	158	1.08	.5	40	88	7.41	130/70
2	0	25.9	564	85	449	371	1.21	0	37	101	7.43	140/75
1	50	39.6	746	103	701	587	1.19	-.4	35	10[illegible]	7.43	155/80
3	75	54.7	912	123	1063	811	1.31	-2.2	37	105	7.39	165/85
	100											
	125											
	150											
	175											
	200											
	250											

NORMAL VALUES

$\dot{V}O_2$ (mL/min) = (+ 5.8 Wt (kg)
+ 10.1 work (watts)

$\dot{V}O_2$ max (L/min) =
males: 4.2 - 0.032 age (yrs)
females: 2.6 - 0.014 age (yrs)

HR max = 210 - 0.65 age (yrs)

Activity	$\dot{V}O_2$ (ml/min/kg)
Driving car	9.0
Walking on level	10.5
House painting	10.5
Volleyball	10.6
Sweeping floors	11.0
Making beds	11.7
Automobile repair	12.6
Dancing (foxtrot)	13.3
Bicycling on level	15.1
Golfing	16.3
Weeding	17.7
Tennis	20.8
Chopping wood	23.0
Basketball	24.0
Digging	28.0

REFERENCES

Consolazio, C. F., Johnson, R. E., Pecora, L. J. Physiological Measurements of Metabolic Function in Man. pp. 330-331, 439. New York, Toronto, London. McGraw-Hill, 1963.

Jones, N. L., Campbell, E. J. M., Edwards, R. H. T., Robertson, D. G. Clinical Exercise Testing. pp. 34, 202. Philadelphia, London, Toronto. W. B. Saunders Co. 1975.

Wasserman, K., Whipp, B. "Exercise Physiology in Health and Disease", Am. Rev. Resp. Dis., 112:219 - 249, 1975.

DUKE UNIVERSITY MEDICAL CENTER

Form

PUL. FUNCTION
May 13, 1980

PATIENT#SMITH EVELYN FEMALE AGE 51.
HEIGHT 65. WEIGHT 111.

DETERMINATION	ACTUAL	PRED	%PRED
VITAL CAPACITY,L (FVC)	2.68	3.15	85.
FORCED EXP VOL,L(FEV1)	1.00	2.51	40.
TIMED VC,%1SEC,(FEV1%)	38.	80.	48.
MAX MID FLOW, L/SEC	.30	3.10	10.
PEAK FLOW, L/MIN	106.	319.	33.
MAX BR CAP,L/MIN (MVV)	46.2	110.0	42.
RESPIRATORY RATE (F)	22.		
VENTIL,L/MIN (VE)	8.45		
TIDAL VOL,ML (VT)	388.		
O2 UPT.,ML/MIN (VO2)	153.		
VENT EQUIV L/100ML	5.5	<2.5	
INSP CAPACITY,L (IC)	1.64		
EXP RESERVE,L (ERV)	.51		
CALC VC, L	2.14	3.15	68.
FUNC RES VOL,L (FRC)	4.05		
TOT LUNG CAP,L (TLC)	5.69	4.56	125.
RESID VOL,L (RV)	3.54	1.41	251.
(RV/TLC) X 100,%	62.	31.	200.
HE MIX TIME,MIN	3.0	<3	
DLCO, ML/MIN/MM HG	8.1	23.5	34.
MEAN OF 2.			

SALTZMAN-------MPDC-------5/13/80
COOP GOOD
N68242
WH
BEFORE ISURPREL

OPTION=
INTERPRETATION: Severe obstruction. There is absolute as well as relative hyperinflation. Carbon monoxide transfer is severely impaired.

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J. A. Kylstra, M.D.

OPINION BY YATES
Deputy Commissioner

NOV 21 1980

Hearing before Deputy Commissioner YATES, in Martinsville, Virginia on September 10, 1980.

This case is before the Commission on application of the plaintiff, filed March 27, 1980, alleging an occupational disease (byssinosis) which should be the responsibility of the defendant. By stipulation, the Commission finds an average weekly wage of $180.24. The case is defended on the basis of no showing of an occupational disease, which is the responsibility of this employer; and further that byssinosis is not stageable. The plaintiff further contends that she should be awarded specific disability as provided by Section 65.1-56 (20), Code of Virginia. Such a staging would provide 300 weeks specific disability.

All medical reports, including post-hearing medical depositions, are made part of this hearing record.

Dr. Saltzman forthrightly conceded that byssinosis cannot be detected by radiological procedures and that its presence can be determined only from exposure to minute unseen particles of cotton waste and to symptoms related by the afflicted individual. Dr. Saltzman remained unshaken in his deposition that a person with no exposure to cotton dust with a history of cigarette smoking of over ten years (such as this plaintiff) could exhibit exactly the same symptoms as this plaintiff. Dr. Saltzman, based on the long exposure of this plaintiff in the defendant's cotton mill, has drawn the conclusion that the plaintiff is afflicted with byssinosis. Dr. Saltzman indicated a staging reached by a determination on a classification known

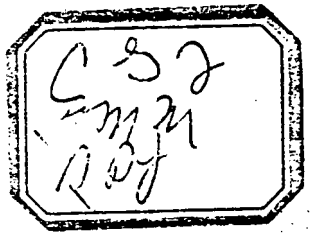
as the Schilling Index (T.p. 37). This Hearing Commissioner is aware that an opinion issued in the case of Maness v. Miss Virginia, Inc. (55 OIC, 235, 1973) awarded first stage pneumoconiosis as the result of the exposure to fiber dust in the employer's garment factory. This Commission has consistently held that the pneumoconioses cannot be staged except by x-ray examination. Since it is medically established in the case at bar that byssinosis cannot be detected by X-ray, we are at a loss to know how the employee Maness, supra, could have been found to have contracted his lung problem working in a garment factory. Maness, supra, was heard by a single Commissioner, the opinion was not appealed, and the claim file has now been destroyed by this Commission due to its age. For these reasons, we do not consider Maness, supra, to be binding on the Commission at this time..

Dr. Saltzman indicated that byssinosis is the same thing as chronic bronchitis. He agreed in his deposition that chronic bronchitis is, in itself, a common disease of life afflicting the general population without the cotton dust exposure. According to Dr. Saltzman the minute waste matter from the cotton causes the same irritation of the bronchi and produces exactly the same symptoms and results as does a case of bronchitis in a non-cotton worker. Dr. Saltzman is not able to say that this plaintiff would never have become afflicted with bronchitis had she never worked in the cotton mill or that the heavy cigarette smoking over a number of years did not cause her problems. From the record before us it is apparent that there are several imponderables present in this case from the

plaintiff's standpoint, such as the history of heavy cigarette smoking, the lack of a diagnostic staging acceptable to this Commission, and the incidence of chronic bronchitis among non-cotton workers. We cannot accept staging, as presented by this plaintiff in accordance with the determination thereof by symptoms only, as binding on this Commission. It is just as likely that this plaintiff has been afflicted with her bronchial problems as an ordinary disease of life (as aggravated by heavy cigarette smoking over a period of ten or more years) as that she sustained her bronchial problems by prolonged exposure (thirty-three years) in this employer's work place. We cannot adopt from several possibilities, one of which would be favorable to the proponent thereof, the theory most favorable to the proponent. Put differently, every proponent must carry the requisite burden of proof (the burden of persuasion). It is our finding the plaintiff has not carried the burden of proving an occupational disease which can be shown to have been caused by exposure at the employer's business, and which is susceptible to a rating by X-ray as mandated by this Commission, See also the case of Janie L. Simpkins v Dan River, Inc. (I. C. No. 639-117), decided against the employee on substantially similar facts, said denial affirmed by the Full Commission on review November 6, 1980.

This case is dismissed and stricken from the Commission's hearing docket.

Opinion by JAMES
Commissioner



APR 10 1981

REVIEW before the full Commission at Richmond, Virginia on March 4, 1981.

This case is before the Full Commission for review of the opinion of November 21, 1980 denying the employee's claim for an occupational disease (byssinosis) pursuant to §65.1-56 (20), Code of Virginia.

The employer operates a garment factory and the claimant, a fifty-one year old female, has been employed with this employer continuously for a period of thirty-four years and continues. It is her testimony that she worked in and around cotton dust during this entire time. Approximately ten years ago, she commenced to experience tightness in her chest with wheezing and some difficulty with breathing.

Section 65.1-49, Code of Virginia, provides, in effect, that the first communication of the diagnosis of an occupational disease to the employee shall be treated as the happening of an injury by accident. The record discloses that the parties either agreed that the communication date was August 29, 1979, or that the claimant alleges this to be the date. The claimant did not testify to a communication date.

To prevail the claimant must prove she contracted an occupational disease pursuant to §65.1-46, Code of Virginia, and said statute read as follows:

> "As used in this Act, unless the context clearly indicates otherwise, the term "occupational disease" means a disease arising out of and in the course of the employment. No ordinary disease of life to which the general public is exposed outside of the employment shall be compensable, except:
>
> (1) When it follows as an incident of occupational disease as defined in this title; or
>
> (2) When it is an infectious or contagious disease contracted in the course of employment in a hospital or sanitarium or public health laboratory.
>
> " A disease shall be deemed to arise out of the employment only if there is apparent to the rational mind, upon consideration of all the circumstances:
>
> (1) A direct causal connection between the conditions under which work is performed and the occupational disease,
>
> (2) It can be seen to have followed as a natural incident of the work as a result of the exposure occasioned by the nature of the employment,
>
> (3) It can be fairly traced to the employment as the proximate cause,
>
> (4) It does not come from a hazard to which workmen would have been equally exposed outside of the employment,
>
> (5) It is incidental to the character of the business and not independent of the relation of employer and employee, and
>
> (6) It must appear to have had its origin in a risk connected with the employment and

> to have flowed from that source as a natural consequence, though it need not have been foreseen or expected before its contraction."

Further, to receive compensation pursuant to §65.1-56, Code of Virginia, subsection 20, the disease must be staged.

The record also reveals that for approximately ten years immediately prior to the filing of the application before this Commission asserting this claim this claimant had smoked one and a half to two packs of cigarettes daily.

The claimant also must prove that the occupational disease alleged was caused by her employment. If it is just as probable that the conditions claimed resulted from a non-compensable cause (smoking) as that it resulted from a compensable cause (cotton dust exposure), the claim must fail. Van Geuder v. Commonwealth, 192 Va. 548, 65 S.E. (2d) 565; Tuck v. Roanoke Memorial Hospital, 52 O.I.C. 261.

In the case of Hansel v. Sherman Textiles, Record No. 80101C207, the Court of Appeals of North Carolina, on October 7, 1980, reversed a holding by the Full Commission of the Industrial Commission of North Carolina awarding compensation benefits for the occupational disease of "byssinosis" on the ground, "our review of the record reveals that the absence of specific findings with respect to the amount of cotton dust ordinarily present in the area where plaintiff worked leads us to conclude that the Commission's findings that the plaintiff contracted byssinosis as a result of her exposure to cotton dust in her employment with the defendant is unsupported by sufficient competent evidence." The physician relied upon by the claimant in that case testified in part, "In her particular case, I don't really have any reliable information as to what the particular fiber was and the extent of

exposure in various fibers and exposure, and to what was in the weed room. It is more difficult to answer that question."

The case before us contains evidence from only two physicians, both of whom are pulmonary specialists.

Dr. T. Reginald Harris, in a letter of September 17, 1979, said in part as follows:

> "*** She has significant obstructive lung disease which is most likely both byssinosis and emphysema.***"

In a report from Dr. H. A. Saltzman dated May 6, 1980, he said in part as follows:

> "The following comments bear on questions relevant to causes of pulmonary impairment and quantitation of impairment. Clearly the patient has had an occupational exposure to cotton dust. Clearly she has severe chronic obstructive pulmonary disease. Emphysema and chronic bronchitis are the evident causes for her chronic obstructive pulmonary disease. I interpret byssinosis to be a more likely than not etiologic factor in the evolution of chronic bronchitis. The role of cigarette smoking is difficult to quantitate here. It may well contribute to bronchitis symptoms. The emphysema can be regarded presently as reflecting factors other than cotton dust exposure. Cigarette smoking may be a relative causative factor. There are no nonpulmonary work related problems, identified in this work-up. The patient does have other significant medical conditions. These are enumerated in my note of 5/6/80. They do not appear to be functionally limiting. I interpret this patient to have Class III AMA respiratory impairment - 35% whole body. I interpret half of this impairment to reflect byssinosis. By conventional criteria, this patient has sufficiently severe respiratory impairment to be unable to withstand the rigors of regular industrial employment.***"

Dr. Salztman was deposed on pages 9 and 10, 11,12,13 and 19 of his deposition he said in part as follows:

> "<u>BY MR. DOSS</u>:
>
> Q You do not know the level of cotton dust that Mrs. Smith would have been exposed to, do you?

A No, I have only her subjective description.

Q Okay. In history taking from Mrs. Smith, she also told you she had smoked cigarettes:

A Yes.

Q And I believe she told you that essentially she had smoked one to two packs a day during a ten year interval?

A Yes.

* * * * *

Q Is it not true Doctor that a person with emphysema and chronic bronchitis and who has smoked, but has never been exposed to cotton dust could exhibit the same functions and same x-ray findings that Mrs. Smith exhibited?

A Yes, yes."

* * * * *

Q (Mr. Doss) If Mrs. Smith had come into see you Doctor, and exhibited the same symptoms and pulmonary function, same x-ray findings as were shown on your examination, minus the history that she had worked in a textile plant, you would have diagnosed emphysema, would you not?

A I -- I would have to give you a qualified yes. There wold also have to be a minus the history of symptomatology associated with working in a cotton mill specifically, okay?

But, if you are addressing that to the symptoms and signs at the time I saw her at the office, irrespective of that earlier history, my answer would be yes.

Q Well, the earlier history being the history you took from her?

A Yes.

Q So, essentially, when we throw in the byssinosis component of her pulmonary problem it is essentially referred to history of exposure?

A Absolutely.

Q Okay.

A History of exposure and symptoms associated with that exposure.--

Q Right.

A To be precise.

Q Meaning reaction to it?

A Yes."

* * * * *

Q Do you know of any way of grading, staging or correlating degrees of byssinosis based on radiographic evidence?

A No."

Dr. Saltzman also testified that byssinosis is essentially bronchitis caused by cotton dust. He also agreed that a diagnosis could not be determined by radiological procedures nor could the staging of said disease be based upon x-rays as is normally the procedure in silicosis or coal workers pneumoconiosis cases. Dr. Saltzman had found that the claimant suffered with third stage byssinoiss based upon the "Schilling Index." The physician went on to say the "Schilling Index" is a crude classification of byssinosis which incorporates the initial acute phase and extends to chronic irreversible phase". The bottom line is that the only method of diagnosis is history given by the person involved. In this respect Dr. Saltzman made it clear that he had no knowledge of the cotton dust level where the claimant worked except by the history from the claimant.

The Hearing Commissioner denied the claim on the ground that the claimant had not carried the burden of proof in an occupational disease which can be shown to have been caused by exposure in the employer's business and which is susceptible to a rating by x-ray as mandated by this Commission. He also quoted the case of Janie L. Simpkins v. Dan River, Inc., (I.C. No. 639-117) which was decided against the employee on substantially similar facts by the Full Commission.

It is readily apparent that these physicians have

found that this claimant suffers with third or fourth stage byssinosis and also suffers from emphysema and bronchitis all of which are causing the claimant discomfort and disability. The byssinosis diagnosis was made without any first hand knowledge as to the extent of claimant's exposure to cotton dust, and the staging was made based upon the "Schilling Index" which Dr. Saltzman readily admits is a crude method. Further, the claimant is suffering apparently from two conditions and perhaps three, one of which is not job related in any form or fashion (emphysema) and, as stated above, the claimant must prove her disabling condition, or that she has one through three stage byssinosis, is solely the result of her employment. The evidence does not so prove.

This decision is not based on the fact that the guidelines set by the Commission calls for a determination of the presence of byssinosis by radiographic findings as it is apparent that this is impossible. Such impossible guidelines cannot take precedence over the statutory provisions of §65.1-56 which contains no guidelines.

We agree with the Hearing Commissioner that the evidence simply fails to preponderate in proving that this claimant contracted the occupational disease of (byssinosis - Stage 3) which arose out of and in the course of her employment.

Accordingly, the Full Commission finds that the November 21, 1980 opinion is correct and that decision is hereby

AFFIRMED.

II

THE ERROR ASSIGNED

1) The Industrial Commission erred in holding that the Claimant had not carried the burden of proving causal connection between the disease she suffered and her occupation.

2) The Industrial Commission erred in failing to rule that the claimant had shown aggravation of a pre-existing condition.