NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

EXHIBIT
K-963

To all to whom these presents shall come. Greeting:

By virtue of the authority vested in me by the Archivist of the United States, I certify on his behalf, under the seal of the National Archives and Records Administration, that the attached reproduction(s) is a true and correct copy of documents in his custody.

SIGNATURE Twila Ridgeway

NAME BRENT C. CARTER DATE 9-22-98

TITLE Regional Director

NAME AND ADDRESS OF DEPOSITORY
Office of Regional Records Services
Southwest Region
501 W. Felix St., Bldg. 1
Fort Worth, TX 76115

GP 387-782/03529

NA FORM 13040 (10-86)

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF TEXAS

BEAUMONT DIVISION

CLAUDE J. TOMPLAIT	:	
	:	
vs	:	Civil No. 5402
	:	
COMBUSTION ENGINEERING, INC., et al	:	

March 4, 1968 - 11:00 a.m.

Deposition of Irving J. Selikoff, taken on behalf of plaintiff by written interrogatories at Mount Sinai Hospital, 11 East 100th Street, New York, N. Y., before David M. Horn, a Notary Public of the State of New York.

PRESENT:

IRVING J. SELIKOFF, M.D

MR. DAVID M. HORN,
Notary Public of the State of New York

FILED

M MAR 25 1969

James R. Cooney, Clerk, U. S.

By Margaret Driver DEPUTY

~~G 30-084-7~~ 1

I R V I N G J . S E L I K O F F , being first duly sworn by David M. Horn, a Notary Public of the State of New York, testified on written interrogatories as follows:

First Interrogatory: Please state your name, residence and place of business.

A Irving J. Selikoff, residing at 505 Upper Boulevard, Ridgewood, New Jersey.

Second Interrogatory: Please state your profession.

A I am Chairman of the Division of Environmental Medicine, Mount Sinai School of Medicine, 100th Street and Fifth Avenue, New York City. I am a physician.

Third Interrogatory: Please state how long you have been engaged in the practice of such profession.

A Twenty-three years.

Fourth Interrogatory: Please state where you received your preliminary training.

A Columbia University.

Fifth Interrogatory: Please state where you received your intern training.

A Newark Beth Israel Hospital.

Sixth Interrogatory: Please state what additional training you have had.

A Residencies in medicine and chest medicine at the Seaview Hospital, Staten Island, and fellow in morbid anatomy, Mount Sinai Hospital, New York.

Seventh Interrogatory: Please state whether or not your license to practice medicine is on record in some county in the State of New York. If so, state which county.

A I am licensed to practice medicine in the State of New York, License No. 43281.

Eighth Interrogatory: Do you practice medicine as a full time occupation?

A My practice of medicine consists of medical teaching and research. I practice medicine full time.

Ninth Interrogatory: Are you associated with any clinic or medical group? If so, please state the name.

A I am senior physician at the Paterson Clinic, Paterson, New Jersey, and am a member of the faculty of the Mount Sinai School of Medicine. I am Professor of Community Medicine at the Mount Sinai School of Medicine and director of its Environmental Sciences Laboratory.

I am president-elect of the New York Academy of Sciences and have served as chairman of its

Division of Environmental Sciences.

I am also a fellow of the American College of Chest Physicians, a fellow of the American Public Health Association and a fellow of the New York Academy of Sciences.

I am a member of the British Occupational Health Society, the American Thoracic Society and similar professional groups.

Tenth Interrogatory: Do you belong to any professional society or group? If so, please state which one.

A (Included in answer to Ninth Interrogatory).

Eleventh Interrogatory: Do you practice in any field of medical specialty? If so, please state in which specialty you engage.

A Chest diseases, with particular reference to occupational chest diseases.

Twelfth Interrogatory: If you have had any specialized medical training, please state what it was and where such specialized medical training was taken.

A In addition to the residencies, I have been a member of the attending staffs of several hospitals, including my current position as visiting physician for chest diseases, Seaview Hospital, consulting physician in chest diseases, City Hospital

at Elmhurst, consulting physician, Barnett Memorial Hospital, Paterson, New Jersey, attending physician in community medicine at Mount Sinai Hospital, New York.

Thirteenth Interrogatory: For the benefit of the jury, please state your age and the number of years you have been actively engaged in the practice of medicine.

A I am fifty-three and have actively engaged in practice for twenty-three years.

Fourteenth Interrogatory: Have you ever written any articles concerning your field of specialty, given any lectures, or received any special awards or citations for service in your field of specialty?

A I have written over fifty articles in the field of chest diseases, many with particular reference to occupational chest diseases, and have given almost two hundred lectures, including lectures before such bodies as the American College of Chest Physicians, the American Medical Association, the American Thoracic Society, the New Jersey State Medical Society, the Massachusetts Medical Society, the American Association of Governmental Industrial Hygienists, and various international congresses, including several

in Panama, Mexico City, Brazil and elsewhere.

I am editor of several monographs, including "The Management of Tuberculosis", and another, "Biological Effects of Asbestosis".

I am editor-in-chief of "Environmental Research" and senior associate editor of the "Journal of the Mount Sinai Hospital".

I am the holder of a Lasker Award in Medicine from the American Public Health Association and have a certificate of merit from the American Medical Association.

Fifteenth Interrogatory: Please state where you are presently residing and practicing medicine.

A I am presently residing in Ridgewood, New Jersey, and practice medicine in Paterson, New Jersey, and New York City, New York.

Sixteenth Interrogatory: Please state whether or not you have ever had occasion to see any x-ray films on the plaintiff, Claude J. Tomplait.

A Yes; I have.

Seventeenth Interrogatory: If you have answered "Yes" to Interrogatory No. 16, please state the date of your examination of such x-ray films.

A I have reviewed these films today.

Eighteenth Interrogatory: In all of your answers to the questions calling for medical opinion and conclusion, please state such based upon reasonable medical certainty.

A Yes, sir.

Nineteenth Interrogatory: Were the x-ray films that you previously examined sent to you by Orange Memorial Hospital, in Orange, Texas, and did such films bear the appropriate x-ray markings, identifying them as being x-rays taken of Claude J. Tomplait?

A Yes, sir.

Twentieth Interrogatory: Please state your diagnosis, based upon your examination of such x-rays, of the condition from which plaintiff is suffering, basing your answers to this question upon reasonable medical certainty.

A The films examined by me are entirely characteristic of extensive pulmonary asbestosis. The first film seen by me today was marked April 3, 1963, Film No. 19768-R, of the Orange Memorial Hospital, Orange, Texas. This film shows moderately extensive reticular and linear fibrotic infiltration of the lower half of the right lung field, with depression of the right diaphragm and blunting of

the right costo-phrenic angle.

A much denser infiltration occupies the lower portion of the left lung, with marked thickening of the lower costal pleura and obliteration of the left costo-phrenic angle. The lesser interlobar fissure is visible.

The next film seen is dated April 9, 1963 and bears No. 19768, showing the same findings on the right, but some clearing of the dense infiltrate of the left, leaving residual linear shadows, suggestive of Kerley lines. We must assume that the dense shadow seen on 4/3/63 was probably a superimposed infectious process. This is confirmed by the fact that clearing continued on the film on 4/27/63, which is very much like that of 4/9/63.

Another film, on 5/17/63, identically numbered, shows no change compared with 4/27/63, but a film of 1/23/64, identically numbered, shows some increase in infiltration in the right lower lobe.

In this latter film there is also evidence of increased thickening of the latter parietal pleura of the right.

The next film available to us is dated 9/4/64, with the same number, and essentially with

the same appearance, except that a fine line of pleural calcification is now more clearly seen on the left diaphragm and minimal infiltration of an apparently fibrotic nature is seen at the right apex.

The last film available to me is dated January 2, 1968, Orange Memorial Hospital, No. D-157-R. This film shows considerable progression of the reticular infiltration throughout the left lower lung field, the calcification of the left diaphragm and the infiltration in the right lower lobe. This film also now shows suggestive evidence of calcification of the right diaphragm.

If we compare the 1963 and 1968 films, it is evident that there has been considerable progression of the lung scarring over the five-year period.

These films are entirely characteristic of pulmonary asbestosis, and the diagnosis based upon them of this disease can be considered as certain as one can be of a diagnosis without the actual pathological specimen.

This diagnosis is based upon parenchymal infiltrates, the pleural fibrosis and the diaphragmatic calcification, a triad pathognomonic of

pulmonary asbestosis.

Twenty-first Interrogatory: Please state to the jury your background of study and knowledge dealing with theillness of asbestosis, fully explaining to the jury the background of your qualifications so that the jury might be able to judge for themselves your experience in this field and the weight that they might wish to give to your testimony.

A I have been studying the problem of asbestosis since 1954, including investigations of the X-ray findings in this disease, the clinical findings, physiological studies and pathological studies. My investigations include examinations of over 1,300 asbestos workers, including approximately 1,300 asbestos insulation workers and many asbestos factory workers.

I have served as chairman of an international conference on biological effects of asbestos, held under the auspices of the New York Academy of Sciences in New York City, October 1964.

I am a member of the working group on asbestos and cancer of the International Union Against Cancer. My first publication on this subject was in the American Journal of Medicine, Volume 30, pages 245 to

252, and additional publications include papers published in the Journal of the American Medical Association, Volume 188, pages 22 to 26, 1964, the New England Journal of Medicine, Volume 272, pages 560 to 565, 1965, and additional papers in the Annals of the New York Academy of Sciences, as well as the American Journal of Medicine, Volume 42, pages 487 to 496, 1967.

Another paper will shortly appear within a month or two in the Journal of the American Medical Association.

Specifically, with regard to the case at hand, it may be of interest to note a publication of x-ray and clinical studies of over 1,200 asbestos insulation workers, published in the Annals of the New York Academy of Sciences, Volume 132, pages 139 to 155, 1965, the title of this paper being "The Occurrence of Asbestosis Among Insulation Workers in the United States".

I am a principal research investigator with both the United States Public Health Service and the Health Research Council of the City of New York on problems associated with asbestosis.

Twenty-second Interrogatory: As to the inquiry above as to your diagnosis, and by that is meant what you in your medical judgment believe the x-rays portray of this patient, please state the detailed basis for your conclusion.

A The x-rays clearly demonstrate the presence of pulmonary asbestosis. The basis for this diagnosis has been outlined in the answer to Interrogatory Number Twenty.

Twenty-third Interrogatory: It may be contended in this case by some medical witness that the x-ray films portray a case of emphysema as distinguished from that of asbestosis. Will you please state what features of the x-rays, in your opinion, differentiate and distinguish Mr. Templait's situation from that of emphysema, non-occupational in origin, if you have in fact answered the previous inquiries to the effect that you believe this patient is suffering from asbestosis.

A The x-ray appearances detailed by me in answer to Number Twenty are not those of emphysema and, as stated, are specific to asbestosis.

Twenty-fourth Interrogatory: When were the first publicized reports made public dealing with the

dangerous nature of asbestos fibers and their relationship to the disease of asbestosis?

A In answer to the interrogatory following Number Twenty-third, which should have been numbered Twenty-four and was mistakenly numbered Twenty-second in the interrogatories, the following comments may be made:

The first description of pulmonary asbestosis as a result of exposure to asbestos dust were published in 1927 by Cooke and in 1928 by Seibar. These were rapidly followed by numerous reports in Great Britain (primarily the classical studies of Merewether, Gloyne, Ellman, Wood and others) and by studies in this country, where the first case report was published in 1930 and where additional excellent clinical studies characterizing this association were published during the 1930's by Dreessen and colleagues, Fulton and colleagues, Donelly, Lanza and colleagues and others.

We might summarize, therefore, the answer to this interrogatory by stating that a clear and important association between the exposure to asbestos dust and the development of asbestosis was defined in the United States as well as in other

parts of the world during the early 1930's.

Twenty-fifth Interrogatory: Mr. Tomplait has been an asbestos worker for about 25 years. Has information been available to the industry manufacturing asbestos insulating materials that asbestos fibers caused asbestosis during substantially most of this 25-year period?

A The next interrogatory is labled Twenty-third but is the Twenty-fifth Interrogatory.

The information has been available to the entire scientific community for all of this time. I do not know what was available to the asbestos manufacturing industry.

Twenty-sixth Interrogatory: In connection with your answer to the preceding question, please describe the source of such information that has been available to the industry and whether or not studies were made by any governmental agency or by any of the members of the insulating industry concerning the connection between the disease of asbestosis and the use of asbestos.

A This interrogatory is numbered Twenty-fourth but is the twenty-sixth interrogatory asked and is the final one.

Studies were made by a number of governmental agencies, including the Department of Health of the State of Pennsylvania (Fulton and colleagues, 1935) and the United States Public Health Service. (Dreessen and colleagues, 1938) and numerous other papers by other members of the Public Health Service.

Also, literally hundreds of studies on the relation between asbestos dust exposure and the occurrence of asbestosis were published by independent academic and scientific investigators. However, the phrase "members of the insulating industry" is too diffuse and indefinite for me to answer this portion of the question with any degree of certainty. The only "member of the insulating industry" who might be put in this category was Dr. Kenneth W. Smith, medical director of the Johns-Manville Corporation at the time, who published a paper, "Pulmonary Disability in Asbestos Workers" in the A.M.A. Archives of Industrial Health, Volume 12, pages 198 to 203, 1955.

However, I am not qualified to state whether Dr. Smith in any way spoke for the "insulating industry".

Cross-Interrogatories

Propounded by Gustin-Bacon Manufacturing Company

1. Direct Interrogatory No. 19 inquires as to whether the X-ray films you examined bore appropriate X-ray markings by way of identifying them.

(a) What the markings consisted of, setting forth the exact marking on each X-ray you examined;

(b) What became of the X-rays that you examined;

(c) Do you have any personal knowledge as to the time, place, date and circumstances under which the X-rays were taken;

(d) Do you have any means ofidentifying the X-rays other than information received from the Orange Memorial Hospital and, if so, state what other means you had for identifying the X-rays.

A I have in my answer to direct interrogatory numbered Nineteenth detailed the x-ray markings on the films. The x-rays were sent to me by post and are being returned by me to the Orange Memorial Hospital, Orange, Texas.

I have no personal knowledge as to the time, place or date under which the x-rays were taken, apart from the markings contained in them, and I have no other means of identifying these x-rays other than

that stated.

2. Direct Interrogatories 22, 23 and 24 refer to publicized reports and information purportedly available to the industry manufacturing asbestos insulating materials. If in answer to such direct interrogatories you have stated that there were reports and materials available, please mark for identification and attach copies of each and all of the reports that you have reference to, or give the date of publication, the name of the publishers and authors and information as to where and how copies of each report may be obtained.

A I do not feel it necessary for me to obtain and provide reports of others to which I have made reference. However, I will provide literature references by which they may easily be obtained by any competent scientist.

A list follows:

Cooke, W. E. 1927, Pulmonary asbestosis, Brit. Med. J. 2: 1024-1025.

Seiler, E. E. 1928. A case of pneumoconiosis. Result of the inhalation of asbestos dust. Brit. Med. J. 2: 992.

Merewether, E. R. A. & C. V. Price, 1930. Report on effects of asbestos dust on the lungs and dust suppression in the asbestos industry. Part I. Occurrence of pulmonary fibrosis and other pulmonary affections in asbestos workers. Part II. Processes giving rise to dust and methods for its suppression. H. M. S. O. London, England.

Wood, W. B. & S. R. Gloyne, 1934. Pulmonary asbestosis. A review of one hundred cases. Lancet 2: 1383-1385.

Lanza, A. J., W. J. McConnell & J. W. Fehnel. 1935. Effects of the inhalation of asbestos dust on the lungs of asbestos workers. Pub. Health Rep. 50: 1-12.

McPheeters, S. B. 1936. A survey of a group of employees exposed to asbestos dust. J. Indust. Hyg. 18:229-239.

Dreessen, W. C., J. M. Dallavalle, T. I. Edwards, J. W. Miller, E. F. Eason & M. F. Knick. 1938. A study of asbestosis in the asbestos textile industry. Public Health Bull. No. 241, U.S.G.P.O. Washington, D. C.

Smith, K. W. 1959. Pulmonary disability in asbestos workers. AMA Arch. Indust. Health. 19:198-205.

Fulton, W. B., A. Dooley, J. L. Matthews & R. L. Houtz, 1935. Asbestosis Part III. The effects of exposure to dust encountered in asbestos fabricating plants on the health of a group of workers. Department of Labor and Industry, Bureau of Industrial Standards, Commonwealth of Pennsylvania, Harrisburg, P. Spec. No. 42.

Lanza, A. J. 1936. Asbestosis, J. A. M. A. 106: 368-369.

Ellman, P. 1934. Pneumoconiosis; Part III. Pulmonary asbestosis. Brit. J. Radiol. 7(N.S.): 281-295.

Bader, M. E., R. A. Bader, & I. J. Selikoff. 1961. Pulmonary function in asbestosis of the lung. An alveolar-capillary block syndrome. Am. J. Med. 30: 235-242.

Hammond, E. C., I. J. Selikoff & J. Churg. 1965. Neoplasia among insulation workers in the United States with spacial referance to intra-abdominal neoplasia. This Annal.

Selikoff, I. J., J. Churg & E. C. Hammond. 1965. Asbestos exposure and neoplasia. J. A. M. A. 188:22-26.

Selikoff, I. J., J. Churg & E. C. Hammond. 1965. Relation between asbestos exposure and mesothelioma. New. Eng. J. Med. 272:560-565.

Stone, M. J. 1940. Clinical studies in asbestosis. Am. Rev. Tuberc. 41:12-21.

I am providing a set of reprints of works with which I have been associated, to which reference has been made.

(Reprint entitled "Opening Remarks", "Irving J. Selikoff" was marked Defendant Gustin-Bacon Exhibit A for identification.)

(Reprint entitled "Neoplasia among Insulation Workers in the United States with special reference to Intra-Abdominal Neoplasia" was marked Defendant Gustin-Bacon Exhibit B for identification.)

(Reprint entitled "The Detection and Localization of Mineral Fibers in Tissue", "C. Berkley, J. Churg, I. J. Selikoff, W. E. Smith" was marked Defendant Gustin-Bacon Exhibit C for identification.)

(Reprint entitled "Rheumatoid Factor in Serum of Individuals exposed to Asbestos", "B. Pernis, E. C. Vigliani, I. J. Selikoff"

was marked Defendant Gustin-Bacon Exhibit D for identification.)

(Reprint entitled "Pulmonary Function in Asbestosis; Serial Tests in a Long-term Prospective Study", "Mortimer E. Bader, Richard A. Bader, Alvin, S. Tierstein, Irving J. Selikoff" was marked Defendant Gustin-Bacon Exhibit E for identification.)

(Reprint entitled "The Occurrence of Pleural Calcification among Asbestos Insulation Workers", "Irving J. Selikoff" was marked Defendant Gustin-Bacon Exhibit F for identification.)

(Reprint entitled "The Occurrence of Asbestosis among Insulation Workers in the United States", "I. J. Selikoff, J. Churg, E. C. Hammond" was marked Defendant Gustin-Bacon Exhibit G for identification.)

(Reprint entitled Symposium on Geographic Pathology of Pulmonary Disease" was marked Defendant Gustin-Bacon Exhibit H for identification.)

(Reprint entitled "The Occurrence of Pleural Calcification among Asbestos Insulation Workers",

"Irving J. Selikoff" was marked Defendant Gustin-Bacon Exhibit I for identification.)

(Reprint entitled "Editorial", "Asbestosis and Neoplasia", "Irving J. Selikoff, M. D., Richard A. Bader, M. D., Mortimer E. Bader, M. D., Jacob Churg, M. D., and E. Cuyler Hammond, Sc. D." was marked Defendant Gustin-Bacon Exhibit J for identification.)

(Reprint entitled "Asbestos Exposure and Neoplasia", "Irving J. Selikoff, M. D., Jacob Churg, M. D., and E. Cuyler Hammond, D. Sc., New York" was marked Defendant Gustin-Bacon Exhibit K for identification.)

(Reprint entitled "Relation between Exposure to Asbestos and Mesothelioma", "Irving J. Selikoff, M. D., Jacob Churg, M. D., and E. Cuyler Hammond, Sc. D." was marked Defendant Gustin-Bacon Exhibit L for identification.)

3. Direct Interrogatory 24 refers to reports by governmental agencies. Please identify and attach copies of each report from any governmental agency that you have reference to in answering Direct Interrogatory 24, or if copies are not attached, please describe each report and state the name and

address of the agent or organization from whom copies of each report can be obtained.

A See answer to Interrogatory numbered Second.

4. What is asbestosis?

A Asbestosis is a condition of pulmonary and pleural fibrosis associated with the inhalation of asbestos particles.

5. What is the cause of asbestosis?

A The lung's reaction to the inhaled particles.

6. What is the chemical composition of the substance causing asbestosis?

A This is not known.

7. How long does it take asbestosis to develop?

A This varies with the individual, some people developing significant changes within ten years or less and some people with similar exposure not developing it for thirty, forty or fifty years, if at all.

Moreover, the time before the development of asbestosis varies with many factors, including the intensity of exposure.

8. Exposure to what concentrations of what substances over what period of time are necessary to cause asbestosis?

A As noted in answer to 7, there are many individual factors, so that inhalation of one concentration of asbestos by one individual might give asbestosis; yet the same concentration in another might not do it.

Similarly, the periods involved vary from case to case. Sometimes, only brief exposures are necessary, and in other cases prolonged exposure seems to cause no trouble. But in all of these, asbestos fibers must be present to cause the disease associated with its name.

9. Would the use of respirators be a reasonable safety precaution to prevent asbestosis?

A I think that respirators would help, at lease in preventing very heavy exposures. Unfortunately, my experience is that currently available respirators cannot be worn continuously or for long periods of time because of difficulties of fit, irritation, interference with breathing, et cetera.

As a public health measure, I have urged that improved respirators be developed, and, indeed, a conference last month convened by the Public Health Service was devoted to this perspective.

10. State whether or not the published material

referred to in answer to Direct Interrogatories 22, 23 and 24 would have been available to those employing insulators working with asbestos products.

A This published material was freely available in the recorded medical and scientific literature. I do not know what access employers have to such medical literature.

11. Is it possible to distinguish between asbestosis and other pulmonary dust diseases such as silicosis, coal miners' pneumoconiosis, bauxite pneumoconiosis and other forms of pneumoconiosis?

A Yes.

12. In arriving at the opinion that the X-rays you examined showed a case of asbestosis, state whether or not you were actually able to and did differentiate between asbestosis and other forms of pneumoconiosis.

A Yes.

13. Did you on or about February 11, 1966, give a deposition in Case No. A-13,916, 128th District Court of Orange County, Texas, in a suit entitled Claude J. Tomplait, plaintiff, vs. Queens Insurance Company, defendant:

A Yes.

14. Did you in the deposition in the cause referred to in cross-Interrogatory No. 13 testify that the X-rays you examined showed pulmonary asbestosis?

A Yes.

15. It is true, is it not, that in the deposition, on testimony given in the case referred to in Cross-Interrogatory No. 13, that you testified only to a diagnosis of pulmonary asbestosis and to no other disease or condition?

A No; it is not true. I noted that the film of April 3, 1963 showed a confluent infiltration in the left lower lung field, probably due to a superimposed infection process. This was in addition to the pulmonary asbestosis.

16. In connection with the diagnosis you have made, based solely upon your examination of the X-rays mentioned, would it not be important to have the benefit of additional clinical, both subjective and objective findings in addition to the X-rays?

A I would very much like to have additional findings to give a complete analysis of the case. I have testified only to the x-ray findings in relation to the case itself.

17. Is not your diagnosis solely on the basis of the X-rays examined?

A Yes.

18. Is it not true that even though you may feel that the X-rays which you examined reflected the possibility of a disease or a condition suggestive of asbestosis, you are not attempting to tell the jury how disability such a condition may or may not be?

A Yes.

19. Is it not true that before making any estimate as to how much disability or incapacity might be caused by the conditions which you found reflected on the X-rays, it would be necessary for you to examine the man in person?

A Yes.

20. Is it not true that any observations that you have made are simply a diagnosis as to the possibility or reasonable probability of a condition, but that your observations or your diagnosis are not in any wise intended to reflect the amount of incapacity or disability which the man may be suffering from at this time or which he may in the past or may in the future suffer from?

A Yes.

21. Is it not true that a person may have a condition known as asbestosis and yet such condition may be only slightly disabling, not disabling at all or extremely disabling?

A Yes.

22. Is it not true that in this particular case, you are not insinuating any specific degree of incapacity or disability?

A Yes.

Cross-Interrogatories

Propounded by Defendants Combustion Engineering, Inc. and E and I Refractory and Insulation Corporation.

1. Direct Interrogatory No. 1 inquires as to whether the X-ray films you examined bore appropriate X-ray markings by way of identifying them:

(a) What did the markings consist of, setting forth the exact marking on each X-ray you examined;

(b) What became of the X-rays that you examined;

(c) Do you have any personal knowledge as to the time, place, date and circumstances under which the X-rays were taken;

(d) Do you have any means of identifying the

X-rays other than information received from the Orange Memorial Hospital and, if so, state what other means you had for identifying the X-rays.

A See answer to 1 of Gustin-Bacon Cross-interrogatories.

2. The second Direct Interrogatory numbered 22 and the second interrogatory numbered 23 and Direct Interrogatory No. 24 refer to publicized reports and information purportedly available to the industry manufacturing asbestos insulating materials. If in answer to such direct interrogatories you have stated that there were reports and materials available, please mark for identification and attach copies of each and all of the reports that you have reference to, or give the date of publication, the name of the publishers and authors and information as to where and how copies of each report may be obtained.

A See answer to 2 of the same interrogatories.

3. Direct Interrogatory 24 refers to reports by governmental agencies. Please identify and attach copies of each report from any governmental agency that you have reference to in answering Direct Interrogatory 24, or if copies are not attached, please describe each report and state the name and

address of the agent or organization from whom copies of each report can be obtained.

A See answer to 3 of same interrogatories.

4. What is asbestosis?

A See answer to 4 of same interrogatories.

5. What is the cause of asbestosis?

A See answer to 5 of same interrogatories.

6. What is the chemical composition of the substance causing asbestosis?

A See answer to 6 of same interrogatories.

7. How long does it take asbestosis to develop?

A See answer to 7 of same interrogatories.

8. Exposure to what concentrations of what substances over what period of time are necessary to cause asbestosis?

A See answer to 8 of same interrogatories.

9. Would the use of respirators be a reasonable safety precaution to prevent asbestosis?

A See answer to 9 of same interrogatories.

10. State whether or not thepublished material referred to in answer to Direct Interrogatories 22, 23 and 24 would have been available to those employing insulators working with asbestos products.

A See answer to 10 of same interrogatories.

11. Is it possible to distinguish between asbestosis and other pulmonary diseases such as silicosis, coal miners' pneumoconiosis, bauxite pneumoconiosis, and other forms of pneumoconiosis?

A See answer to 11 of same interrogatories.

12. In arriving at the opinion that the x-rays you examined showed a case of asbestosis, state whether or not you were actually able to and did differentiate between asbestosis and other forms of pneumoconiosis.

A See answer to 12 of same interrogatories.

13. Did you on or about February 11, 1966, give a deposition in Cause No. A-13,916, 128th District Court of Orange County, Texas, in a suit entitled Claude J. Templait, plaintiff, vs. Queens Insurance Company, defendant?

A See answer to 13 of same interrogatories.

14. Did you in the deposition in cause referred to in cross-interrogatory No. 13 testify that the x-rays you examined showed pulmonary asbestosis?

A See answer to 14 of same interrogatories.

15. It is true, is it not, that in the deposition, on testimony given in the cause referred to in cross-interrogatory No. 13, that you testified

only to a diagnosis of pulmonary asbestosis and to no other disease or condition?

A See answer to 15 of same interrogatories.

16. In connection with the diagnosis you have made, based solely upon your examination of the x-rays mentioned, would it not be important to have the benefit of additional clinical, both subjective and objective findings in addition to the X-rays?

A See answer to 16 of same interrogatories.

17. Is not your diagnosis solely on the basis of the X-rays examined?

A See answer to 17 of same interrogatories.

18. Is it not true that even though you may feel that the X-rays which you examined reflected the possibility of a disease or a condition suggestive of asbestosis, you are not attempting to tell the jury how disabling such a condition may or may not be?

A See answer to 18 of same interrogatories.

19. Is it not true that before making any estimate as to how much disability or incapacity might be caused by the conditions which you found reflected on the X-rays, it would be necessary for you to examine the man in person?

A See answer to 19 of same interrogatories.

20. Is it not true that any observations that you have made are simply a diagnosis as to the possibility or reasonable probability of a condition, but that your observations or your diagnosis are not in any wise intended to reflect the amount of incapacity or disability which the man may be suffering from at this time or which he may in the past or may in the future suffer from?

A See answer to 20 of same interrogatories.

21. Is it not true that a person may have a condition known as asbestosis and yet such condition may be only slightly disabling, not disabling at all or extremely disabling?

A See answer to 21 of same interrogatories.

22. Is it not true that in this particular case, you are not insinuating any specific degree of incapacity or disability?

A See answer to 22 of same interrogatories.

I have reviewed all of the interrogatories submitted by Combustion Engineering and R and I Refractory and Insulation Corporation and find them apparently identical with questions propounded to me during cross-interrogatories by the Gustin-Bacon Manufacturing Company. Since these are the same,

the answers to them are also identical.

Cross-Interrogatories

Propounded by Owens-Corning Fiberglas Corporation, Johns-Manville, Fiber Glass, Inc., Johns-Manville Products Corporation, Fibreboard Paper Products Corporation

1. Did you find any characteristics of emphysema in the x-ray films of Mr. Tomplait: If your answer is "Yes", please describe fully.

A In general, there are very few x-ray findings characteristic of emphysema. In the films of Mr. Tomplait examined by me, the only finding which might be so related was some depression of the right leaf of the diaphragm. However, since the diaphragm was not flattened, one could not say that this was necessarily associated with emphysema; and, indeed, the film of January 2, 1968 does not show much depression of the right diaphragm. Therefore, there were no findings definitely characteristic of emphysema.

I would hope that the patient does not have emphysema in addition to his asbestosis, since if this were the case I would be much less sanguine about

about his prospects, since he would then have two serious diseases instead of one.

2. Are the x-ray films of Mr. Tomplait characteristic of emphysema or any disorder or disease affecting the lung other than pulmonary asbestosis? If your answer is "No", please explain.

A The only characteristic findings in Mr. Tomplait's x-ray films are those of pulmonary asbestosis.

Comments concerning the possibility of emphysema are contained in the answer to No. 1.

3. Can a firm diagnosis of pulmonary asbestosis be made without a pathological examination of lung tissue?

A The x-ray appearances in Mr. Tomplait's films are as characteristic of pulmonary asbestosis as any I have seen, and it would be extraordinarily unlikely that these appearances could be caused by anything else, especially with the diaphragmatic pleural calcification. Nevertheless, I would not quibble with any purist who wishes to say that only the lung in one's hand can allow for irrevocable certainty.

4. Is it not true that some persons engaging in

insulation work are more predisposed to respiratory defects than others when working with insulating materials? Why is this so?

A Yes. I do not know why this is so.

5. Is it not true that you know of many insulating men who have worked for more than twenty-five years with insulating materials, including asbestos, without having any respiratory defects whatsoever?

A I do not know such men.

6. Is it not true, based upon your experience with asbestosis, that a person working with insulating materials, including asbestos, does not develop any respiratory symptoms in less than twenty years of work with the products?

A This is generally true, but not invariably so. I have seen one case in which severe respiratory distress occurred after only twelve years of insulation work.

Still, by and large, people, insulation workers, do not become disabled in less than twenty years from onset of exposure.

7. In connection with the diagnosis of pulmonary asbestosis you have made based solely upon your examination of x-ray films of Claude Templait, can you

make this diagnosis solely on the basis of the 1961 x-rays of Claude Tomplait?

A I don't have the 1961 x-rays of Mr. Tomplait available to me today.

8. Is it not true that asbestos workers should wear respiratory masks in working in tight spots or under dusty conditions?

A I would urge that they wear respiratory masks under such conditions, although it is well understood that this practice would not provide complete protection.

9. Is it not true an asbestos worker should avoid high peak exposure to asbestos dust by proper ventilation or the use of respiratory masks?

A Yes.

10. Is it not true that you have hereto testified in asbestos cases that an asbestos worker should use respiratory masks in tight spots and in very dusty conditions because the avoidance of high peak exposures would prevent possible contamination?

A I have answered this in 8 and 9. I would surely testify that masks be worn in tight spots and in very dusty conditions, because the avoidance of high peak exposures wouldnot "prevent possible con-

most useful.

13. If you have testified in answer to direct interrogatories that reports and information have been available for the past twenty-five years to the effect that asbestos fibers cause asbestosis, then please state if these reports and information have been available to labor unions, including the International Association of Heat and Frost Insulators and Asbestos Workers.

A The medical literature in the past twenty-five years have been freely available to all those interested, and I would presume that they have been similarly available to labor unions.

14 Are you familiar with any publications or pamphlets distributed by the asbestos unions giving instructions or warnings to asbestos workers regarding the use of safety precautions or safety appliances in using such products?

A I am not familiar with such publications.

15. If you have answered the foregoing cross-interrogatory "Yes", then attach copies of such publications or pamphlets to your answers, or if such publications or pamphlets are not available to you, please state where they may be obtained.

A See answer to No. 14.

16. Is it not true that the existence of silica particles and bodies per se, as revealed by x-ray, does not mean that a person has asbestosis?

A I am not aware that silica parties and bocies (sic) are revealed by x-ray. In any case, the existence of silica particles would have nothing to do with asbestosis.

(Time noted: 12:30 p.m.)

Sworn to and subscribed before me this 23rd day of January, 1969

GUIDO D. TASCIONE
Notary Public, State of New York
No. 24-3933895
Qualified in Kings County
Commission Expires March 30, 1969

tamination" but would lessen the risk of inhalation of large amounts of the irritating dusts.

11. What type of preventative measures should be taken or supplied by an employer of asbestos workers to guard against the inhalation of asbestos fibers?

A A textbook on industrial hygiene practices should be written in the answer to this question. It is manifestly impossible for me to undertake this at this time, but, in general, many measures can be adopted, such as less-dusty materials, adequate ventilation, appropriate exhausts, improved masks, the use of wetted materials, less-crowded working conditions, improved ventilation in shop practices.

Of course, one might add that the best method to guard against the inhalation of asbestos fibers would be to use materials that contain no asbestos fibers.

12. Do you consider that the use of proper ventilation or ventilation fans by employers of asbestos workers is a preventative of excess inhalation of asbestos dust particles?

A I am not an industrial hygiene engineer but would presume that proper ventilation would be

WITNESS INDEX

Name	Page
Irving J. Selikoff	2

EXHIBIT INDEX

Defendant Gustin-Bacon		Page
A (id)	Reprint entitled "Opening Remarks", "Irving J. Selikoff".	20
B (id)	Reprint entitled "Neoplasia among Insulation Workers in the United States with special reference to Intra-Abdominal Neoplasia".	20
C (id)	Reprint-entitled "The Detection and Localization of Mineral Fibers in Tissue", "C. Berkley, J. Churg, I.J. Selikoff, W.E. Smith".	20
D (id)	Reprint entitled "Rheumatoid Factor in Serum of Individuals exposed to Asbestos", "B. Pernis, E.C. Vigliani, I.J. Selikoff".	21
E (id)	Reprint entitled "Pulmonary Function in Asbestosis; Serial Tests in a Long-term Prospective Study", "Mortimer E. Bader, Richard A. Bader, Alvin, S. Tierstein, Irving J. Selikoff,"	21 21
F (id)	Reprint entitled "The Occurrence of Pleural Calcification among Asbestos Insulation Workers", "Irving J. Selikoff".	21
G (id)	Reprint entitled "The Occurrence of Asbestosis among Insulation Workers in the United States", "I.J. Selikoff, J. Churg, E.C. Hammond".	21

EXHIBIT INDEX

Defendant Gustin-Bacon		Page
H (id)	Reprint entitled Symposium on Geographic Pathology of Pulmonary Disease".	21
I (id)	Reprint entitled "The Occurrence of Pleural Calcification among Asbestos Insulation Workers", "Irving J. Selikoff".	22
J (id)	Reprint entitled "Editorial", "Asbestosis and Neoplasia", "Irving J. Selikoff, M.D., Jacob Churg, M.D., and E. Cuyler Hammond, Sc. D."	22
K (id)	Reprint entitled "Asbestos Exposure and Neoplasia", "Irving J. Selikoff, M.D., and E. Cuyler Hammond, D. Sc.,New York".	22
L (id)	Reprint entitled "Relation between Exposure to Asbestos and Mesothelioma", Irving J. Selikoff, M.D., Jacob Churg, M.D., and E. Cuyler Hammond, Sc. D."	22