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WIOES

WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.
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(DRAFT)

FINAL REPORT

Contract No. 210-78-0113

Bay Area Asbestos Surveillance Project (BAASP)

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16. Abstract (Limit: 200 words) A study, the Bay Area Asbestos Surveillance Project (BAASP), was instituted to screen persons including women who had worked in shipyards during World War-II and male longshore and shipyard workers who believed they had been exposed to asbestos (1332214) prior to 1963 in the San Francisco Bay area in California. The Project initiated a process of worker notification concerning asbestos related disease in the shipyard and longshore industries, advanced public awareness of the hazards of asbestos, began to identify persons who experienced significant exposure to asbestos, and provided some assessment of the medical and social needs of asbestos exposed workers and their families. Of 2244 workers examined by x-ray, 46 percent showed potentially serious abnormality and 30 percent showed questionable abnormality. Of 208 longshoremen, 41 percent showed potentially serious abnormality and 20 percent showed questionable abnormality. Of 186 women, 26 percent showed potentially serious abnormality and 35 percent showed questionable abnormality. The author concludes that at the very least the results of the study emphasize again the importance of asbestos as a threat to many industrial workers.			13. Type of Report & Period Covered	
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FINAL REPORT

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I. INTRODUCTION

A. Background

The background of the Bay Area Asbestos Surveillance Project (BAASP) can be summarized by a chronology of events leading up to an initial pilot study.

- o In 1976, the Asbestos Workers Union at Mare Island Naval Shipyard in California, submitted chest X-rays for 26 of their members to Dr. Irving Selikoff at the Mt. Sinai School of Medicine in New York City. These X-rays were of members the union believed might be suffering from asbestos-related disease.
- o Dr. Selikoff interpreted 17 of these 26 X-rays as abnormal, and compatible with asbestos-related disease.
- o The Asbestos Workers Union presented these findings to other shipyard unions, and soon the Metal Trades Council at Mare Island joined with the Metal Trades Department of the AFL-CIO in seeking to determine the extent and severity of the problem.
- o The potential for asbestos-related disease was high among shipyard workers, for in the San Francisco Bay Area alone, an estimated 400,000 men and women had worked in shipbuilding and ship repair during World War II.
- o On the recommendation of Dr. Selikoff, the unions sought the advice of Dr. Phillip L. Polakoff, a Bay Area physician knowledgeable in occupational and environmental health problems.
- o Dr. Polakoff agreed to undertake a preliminary (pilot) study which might help the unions, the employers (including the U.S. Navy), and the medical community place the problem in the right perspective.
- o Background research was completed on the nature and history of asbestos, the quantities and types in use, the crafts and industries involved, and the numbers of persons believed to be potentially exposed.

- o Research of the clinical studies available provided some information on the effects of asbestos exposure, diseases related to that exposure, their latency periods, and methods for determining the extent of exposure in populations to be studied.

These activities culminated in a pilot study which was conducted at Herrick Memorial Hospital in Berkeley, California, in March, 1977.

B. The Pilot Study

The design of the pilot study was simple and straightforward. Participants were limited to those shipyard workers whose first exposure to asbestos was at least 10 years before. The study consisted of:

- o A single chest radiograph (posterior-anterior view) of each worker.
- o A self-administered, mailed questionnaire covering the individual's occupational history, smoking habits, respiratory symptoms, and general medical history.

The 359 participants were drawn from two Bay Area naval shipyards, Mare Island and Hunter's Point, and represented current or former workers in all major shipyard occupations.

Nearly 60% of the X-rays revealed abnormalities consistent with asbestos-related disease:

	<u>number</u>	<u>percent</u>
Normal X-rays	147	40.9%
Mild abnormality	130	36.2
Moderate abnormality	71	19.8
Other abnormality	11	3.1
Total abnormal X-rays	212	59.1

Combined with the information from the questionnaires (returned by 311 of the 359 participants), the chest radiographs corroborated the argument that asbestos-induced disease was a major health problem among shipyard workers, and justified planning for a larger and more detailed screening project.*

*For a more detailed discussion of this pilot study, see P. L. Polakoff, et al, "Prevalence of Radiographic Abnormalities Among Northern California Shipyard Workers", Annals of the New York Academy of Science, 330(1979): 333-39.

II. BAASP - DESIGN & IMPLEMENTATION

A. Organization

An organizational structure was necessary to marshal resources for the proposed screening project, to administer the testing, and to provide follow-up. Assisted by three associates on the medical staff of Herrick Memorial Hospital in Berkeley, and by a group of Bay Area labor leaders, Dr. Polakoff established the Western Institute for Occupational/Environmental Sciences (WIOES), incorporated in November, 1977, as a non-profit research and education center.

There then followed a series of events which culminated in the organization of the Bay Area Asbestos Surveillance Project (BAASP):

- 1977 July Results of the pilot study were made public at a press conference called by Dr. Polakoff and Mr. John F. Henning, Executive Secretary-Treasurer of the California Labor Federation, AFL-CIO.
- Aug. Pilot study findings were further presented at a San Francisco meeting of Bay Area labor leaders, sponsored by the Metal Trades Department of the AFL-CIO.
- Oct. Both the California Labor Federation and the Metal Trades Department officially endorsed BAASP.
- Nov. Presentations describing the pilot study and the proposed BAASP were made to the Bay Cities Metal Trades Council and to the National Convention of the Metal Trades Department meeting in Los Angeles.
- 1978 Jan. BAASP endorsements began to be received from many labor organizations. The International Association of Heat, Frost Insulators and Asbestos Workers contributed \$25,000.
- Apr. OSHA funded the salary of a labor educator for the project, and support for three follow-up education sessions.
- May NIOSH agreed to provide a mobile X-ray unit and technical staff, radiological evaluation of the X-rays, and in-kind assistance in the production of educational materials for the project.

A press conference designed to bring public attention to BAASP resulted in broad media coverage which was to continue throughout the project.

Media coverage also helped in the call for volunteers. Over 60 persons responded, joining in the orientation and training sessions, and selflessly contributing time and effort to nearly every aspect of the project.

B. Method

1. Eligibility

The project goal was to screen approximately 2,000 persons, including (a) women who had worked in shipyards during World War II, and (b) male longshore and shipyard workers who believed they had been exposed to asbestos prior to 1963.

Through stories and announcements on TV, radio, and in the press, persons who met these criteria and wished to participate in the project were urged to call a toll-free hot-line number. This line was staffed by a commercial survey firm, under contract to WIOES. Callers were asked to give their age, occupation, date of asbestos exposure, address and phone number. The phone log soon included over 2,000 persons who met the eligibility criteria, and who were then called by the volunteers and given a choice of time and place for their screening appointment.

The screening tests were conducted at three sites:

- (1) Vallejo, AFL-CIO Labor Temple (July 17 through July 28)
- (2) Oakland, Teamsters Hall, Local 70 (July 31 through August 5)
- (3) San Francisco, Longshoremen's Hall, Local 10 (August 8 through August 14)

Appointment confirmation and reminder cards were mailed, and over 90% of those agreeing to participate in the project in fact did so. To minimize waiting time, examinees were scheduled at no more than 6 per half-hour.

2. Pre-Test Procedures

a. Registration (name, address, telephone, etc.)

b. Consent

A consent form, completed by each examinee, was accompanied by a written as well as verbal explanation of the purpose of the project, the confidentiality that would be given individual information, and

the use of over-all project data. The form also included a request and authorization for release of any significant test results to the examinee's private physician.

c. Printed Materials

Two WIOES pamphlets, "Plain Talk About Asbestos", and "Asbestos Dust - Everyone's Problem", were distributed to the participants. Special tables provided additional materials (with emphasis on smoking cessation) as well as lists of services available in each Bay Area county for pulmonary function testing and respiratory therapy.

d. Film

A short video-cassette film, prepared by WIOES with assistance from NIOSH, further described the purpose and elements of the screening project, with staff again available to answer individual questions.

e. Height and Weight Measurements

f. Medical/Occupational History

This questionnaire (see Attachment A), administered to each examinee by a WIOES staff member or trained volunteer, covered the individual's job classification and work history, exposure to asbestos and other hazardous agents, use of protective equipment, and a series of questions on respiratory symptoms and smoking habits.

g. Social Support Questionnaire

This questionnaire (see Attachment B), focusing on individual attitudes and perceptions of family and social support, was administered to about half the participants on a time-permitting basis. The primary objective was to obtain some clues as to the follow-up needs of the examinees and their families.

h. "In-depth" Interview

This interview was administered to about 250 of the examinees on a random basis (with no attempt at statistical sampling). Its purpose was simply to explore further some of the attitudinal questions raised in the Social Support Questionnaire, and to provide the opportunity for some open-end discussion between the examinees and WIOES staff and volunteers.

3. X-Ray Protocols

The X-ray tests were administered in a mobile van, staffed by NIOSH personnel, and set up adjacent to the union hall. The protocol included three views of the chest: posterior-anterior (PA), right anterior oblique (RAO), and left anterior oblique (LAO).

The equipment was checked periodically by a physicist on staff at the University of Southern California.

Test and pre-test procedures together averaged about 1½ hours per examinee.

After a preliminary review for acute problems requiring immediate attention, the X-ray films were transported to the Department of Radiology, University of Southern California, where they were read by certified "B readers" - radiologists with particular training and experience in the assessment of interstitial lung disease, and who categorized the films using the International Classification of Radiographs of Pneumoconiosis (ILO/UC). Each radiologist read all of the films independently, and some of the variances resulting from this procedure are indicated in the tables accompanying this report.

As the evaluation proceeded, the X-rays were captioned as normal, questionable abnormality, or potentially serious abnormality, and a protocol established for notifying the individual examinee and his/her private physician (see Follow-up section below).

When all of the films had been read by the radiologists, the results were forwarded to NIOSH for data processing. The Medical/Occupational History Form was processed separately by WIOES.

C. Follow-up

1. Examinee Notification

A letter sent to each examinee (see Attachment C) advised them of the category of their findings:

Normal	(24%)
Questionable abnormalities	(30%)
Potentially serious abnormality	(46%)

Each physician was mailed a copy of the findings (and in very serious cases was telephoned directly by Dr. Polakoff). As of this report, there have been 41 requests for copies of the X-rays themselves, and these are provided at nominal cost.

2. Follow-along

The narrow design of the screening project, financially limited and relying heavily on volunteer effort, did not contemplate much activity beyond the notification of examinees and their physicians. Yet, a considerable follow-along has developed.

In March, 1979, after the notification letters were mailed, three follow-up seminars were held, two at union halls and one at the Solano County Fairgrounds. These meetings were well attended, and afforded the examinees and their families the opportunity to ask questions of experts on the different aspects of asbestos-related disease.

A year later, the BAASP examinees were invited to present and discuss ideas for a proposed resource center which could meet some of the needs expressed during the project interviews and at the follow-up seminars. The outcome was the WIOES Resource Center, funded by the National Cancer Institute, and giving continuity to the efforts of unions, voluntary agencies, and individuals on behalf of asbestos-exposed workers.

Even before its formal opening in July, 1980, the Resource Center had become a place where workers generally - and the BAASP examinees in particular - could begin to find answers to their asbestos-related problems. The Center soon provided a special information line for exposed workers and their families, a reference library and newsletter, and the coordination of professional and community interests around asbestos and other environmental hazards.

Some examinees joined in a smoking cessation program sponsored by WIOES and the American Cancer Society during the summer of 1979, and more recently the BAASP examinees have become part of an NIMH-funded study of "Family Supports for Asbestos-exposed Workers".

III. TEST RESULTS

A. Limitations and Caveats

The BAASP was not designed to be a research study. Its purposes were to:

- (1) Initiate a process of worker notification around asbestos-related disease in the shipyard and longshore industries.
- (2) Advance public awareness of the hazards of asbestos.
- (3) Begin to identify persons who have experienced significant exposure to asbestos, and are therefore candidates for targeted screening efforts.

- (4) Provide some assessment of the medical and social needs of asbestos-exposed workers and their families.

Thus the project was not intended to produce clinical data as such, but rather to provide a direct service to asbestos-exposed workers at high risk; and help advise them and their physicians of the extent of the problem and how to mobilize available resources for care and support.

The screening results contained in this report are therefore more descriptive than analytic. They tell us something about this particular group of workers, but comparisons with other work groups must be drawn with care. This is not to say that the data is unimportant or that it can be ignored, but only that it must be considered in context. At the very least the results emphasize again the importance of asbestos as a threat to many industrial workers. Beyond that the data, combined with our follow-up experience, suggest that several avenues of effort must be pursued in parallel: medical, psychological, social, legal, and economic.

Following are some of the factors which limit the BAASP data:

1. The test population was a self-selecting one, composed of persons who heard (or saw) the project publicity and decided to call in on the "hot line". It would be difficult to estimate the number of persons meeting the project criteria who presently live or work in the Bay Area, but the screening sample is obviously biased in favor of persons who had some symptoms they perceived as relevant to asbestos exposure, or who had sufficient knowledge or concern about the dangers of asbestos so as to want to be screened.
2. The screening results could not be compared with other test measurements such as pulmonary function or sputum cytology, which though of limited value in themselves as early indicators of interstitial disease, would perhaps have permitted a more sensitive analysis of the X-ray data.
3. Interstitial lung disease is difficult to read, and in spite of the caliber and experience of the radiologists involved, divergence of opinion must be expected in this type of survey. (An added difficulty stemmed from some technical problems with the X-ray equipment).
4. The occupational history data was uneven. This was due partly to the design of the form, partly to the limited interviewing experience of the volunteer staff, but mostly to the inherent problem of asking people to accurately recollect the when and where of exposure to work hazards - many of them not perceived at the time, and many of them in the distant past.

B. Demographic Data

Demographic data, plus height and weight and reported exposure to hazardous substances, are included in Tables 1 through 8 of this Report.

The large percentage of persons over 60 years of age reflects the eligibility criteria established for the project.

C. X-ray Results

The percentage of radiographs in the three follow-up categories were as follows:

	<u>All Examinees (2244)</u>	<u>Longshore Only (208)</u>	<u>Women Only (186)</u>
Normal	24%	39%	39%
Questionable abnormality	30	20	35
Potentially serious abnormality	<u>46</u> 100%	<u>41</u> 100%	<u>26</u> 100%

Results are detailed in Tables 9 through 21. Although there are statistical techniques for reporting variances in the readings, we have chosen to list the evaluations by the two radiologists who read all of the films, with consensus figures added in Tables 10 through 13.

Tables 22 through 29 compare the BAASP results with those of the earlier pilot study, but these tables are omitted from this draft pending further analysis of comparability.

D. Other Data

The Occupational History responses (see Attachment D) did not justify systematic correlation with the X-ray data, but they do provide useful background information as well as a basis for subsequent up-dating and up-grading into an examinee profile.

IV. An Afterword

As with many, and perhaps most surveys of asbestos-exposed workers, the BAASP results provide some answers but continue to raise questions.

It seems fair to justify BAASP simply on the grounds that it has provided an individual identification, validation, and referral process for the exposed worker, and that it has increased family and community awareness and knowledge of the asbestos problem. Furthermore, the physical follow-up together with the physician outreach activities of the Resource Center, have initiated a growing understanding among medical practitioners of the roles played by asbestos and other hazardous substances in the work environment.

We should therefore consider the implications for further action not simply in terms of the X-ray data, but in terms of the changes which are taking place among this particular group of examinees.

There are several advantages to this approach. There is a sense of community among the examinees, and two years after the actual screening there continues to be a significant relationship between the examinees and their families and WIOES. The Resource Center affords an expanding vehicle for that relationship, drawing as it does upon the interest and participation of health professionals, lawyers, and union and management representatives.

It appears promising to pursue a study which would look at:

- (1) The social and economic changes in the population group over a 3-year period since screening. (This would include an up-dating and up-grading of the occupational histories, and the other questionnaires and interviews).
- (2) The legal position assumed by many of the examinees, and the effect of that position on the ways in which they approach health and medical care. (This would include a survey of compensation cases filed, and the extent, nature, and outcome of other litigation).
- (3) Changes in health status, with a primary objective of better defining the morbidity and mortality data for this population.
 - a. Mental Health. This might comprise an expansion of the information to be self-reported in the NIMH study, emphasizing the effect of asbestos-related disease on such conditions as anxiety and depression.
 - b. Physical Health. As part of the up-dating of the BAASP history and questionnaires, information would be sought on other family members. Screening protocols might include (i) a repeat of the radiological screening in

order to better evaluate the (cost) benefit of the PA/RAO/LAO technique in this type of surveillance, and (ii) perhaps field trials of such new developments as biological markers, B-enzymes, and immunological or chemoprevention techniques.

Whatever form of continued monitoring is decided upon, and to the extent financial resources permit, a minimum objective will be to maintain channels of communications that have been established; channels that are of current and immediate value to the examinees, as well as providing a potential for longer term research benefits.

TABLE 2 - SEX

	Shipyard Workers		Longshore Workers		Other Workers		Total All Workers		TOTAL
	Male	Female	Male	Female	Male	Female	Male	Female	
Male	1291		208		576		2075		2075
Female		163		2		22		187	187
									<u>2262</u>

(Percentages: male = 91.7, female = 8.3% of total number of examinees)

TABLE 3 - ETHNICITY

	Shipyard Workers		Longshore Workers		Other Workers		Total All Workers		TOTAL
	Male	Female	Male	Female	Male	Female	Male	Female	
Amerindian	6	1			1		7	1	8
Asian	44	1	11		13		68	1	69
Black	211	26	108	1	55	1	374	28	402
Hispanic	52	1	13		21		86	1	87
White	963	132	75	1	483	21	1521	154	1675
Other					1		.1		1
									<u>2242</u>

	(by percent)	
Amerindian	.5%	.6%
Asian	3.4	.6
Black	16.5	16.1
Hispanic	4.1	.6
White	75.5	82.0
Other		

	(by percent)	
Amerindian	.3%	.5%
Asian	3.3	.5
Black	18.2	15.1
Hispanic	4.2	.5
White	73.9	83.2
Other		

	(by percent)	
Amerindian	100.0%	100.0%
Asian	100.0%	100.0%
Black	100.0%	100.0%
Hispanic	100.0%	100.0%
White	100.0%	100.0%
Other	100.0%	100.0%

TABLE 7 - HIGHEST EDUCATIONAL GRADE (by percent)

grade	Shipyard Workers		Longshore Workers		Other Workers		Total All Workers		TOTAL
	Male	Female	Male	Female	Male	Female	Male	Female	
7 or less	8.4%	6.2%	14.2%	50.0%	4.7%	9.0%	8.1%	7.0%	8.0%
8	11.8	13.9	9.8		8.0	9.1	10.5	13.2	10.7
9 - 11	18.2	19.6	19.7		17.5	27.2	18.1	20.2	18.3
12	36.6	31.0	29.9	50.0	40.6	31.8	37.0	31.3	36.6
Post Sec.	4.1	2.5	3.4		4.5		4.1	2.2	3.9
Some College	15.7	19.0	15.7		18.7	22.7	16.5	19.2	16.7
AA	1.4	1.9	2.9		1.6		1.6	1.6	1.6
Bach.	2.9	3.2	3.4		3.4		3.1	2.7	3.0
MA/PhD/Prof.	.5	1.9	.5		.7		.5	1.6	.6
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 8 - EXPOSURE TO TOXIC SUBSTANCES

	Shipyard Workers		Longshore Workers		Other Workers		Total All Workers		TOTAL
	Male	Female	Male	Female	Male	Female	Male	Female	
<u>Asbestos only</u>									
Smoker	117	36	33		52		202	36	238
Non-Sm	46	30	10		9	3	65	33	98
<u>Asbestos +</u>									
<u>Silica</u>									
Smoker	40	5	5		20	2	65	7	72
Non-S	10	3	2		5	1	17	4	21
<u>Coal</u>									
Smoker	3		2		3		8		8
Non-S	1						1		1
<u>Radiation</u>									
Smoker	505	14	42	2	193	5	740	21	761
Non-S	135	11	5		44	1	184	12	196
<u>Other</u>									
Smoker	79	26	34		54	4	167	30	197
Non-S	31	12	11		8	2	50	14	64
<u>+ 2 Other</u>									
Smoker	246	15	44		137	3	427	18	445
Non-S	59	9	7		25		91	9	100
<u>+ 3 Other</u>									
Smoker	21	1	13		22	1	56	2	58
Non-S	2	1			4		6	1	7
Total Smoker	1011	97	173	2	481	15	1665	114	1779
Total Non-S	284	66	35	2	95	7	414	73	487
	<u>1295</u>	<u>163</u>	<u>208</u>	<u>2</u>	<u>576</u>	<u>22</u>	<u>2079</u>	<u>187</u>	<u>2266</u>

TABLE 9

	<u>Reader #1</u>	<u>Reader #2</u>
ax Coalescence of small rounded pneumoconiotic opacities	0	0
bu Bullae	85	44
ca Cancer of lung or pleura (suspected)	23	78
cn Calcification in small pneumoconiotic opacities	0	0
co Abnormality of cardiac size or shape	169	358
cp Cor pulmonale	6	2
cv Cavity	2	3
di Marked distortion of the intra-thoracic organs	2	3
ef Effusion	0	10
em Marked emphysema	26	67
es Eggshell calcification of hilar or mediastinal lymph nodes	1	1
hi Enlargement of hilar or mediastinal lymph nodes	1	1
ho Honeycomb lung	8	15
k Septal (Kerley) lines	0	16
px Pneumothorax	4	7
rL Rheumatoid pneumoconiosis (Caplan's Syndrome)	0	0
tba Tuberculosis, probably active	12	3
tbu Tuberculosis, activity uncertain	29	54
Grade 1 pneumoconiosis		469
Grade 2 pneumoconiosis		23
Progressive massive fibrosis		2
Pleural thickening (diaphragm, walls, and other sites)		1459
Pleural calcification (diaphragm, walls, and other sites)		190
Pleural plaque (uncalcified)		805

NOTE: These prevalence data are based on 2238 cases.

TABLE 10 - LARGE OPACITIES

	<u>Reader #1</u>	<u>Reader #2</u>	<u>Agreement</u>
Not present	2233	2216	2213
Category A	1	6	1
" B	0	2	0
" C	0	0	
Unreadable	4	14	0
	<u>2238</u>	<u>2238</u>	<u>2214</u>

TABLE 11 - SMALL OPACITIES

Not present	1731	1714	1508
Category 1	479	464	250
" 2	24	29	7
" 3	0	17	0
Unreadable	4	14	1
	<u>2238</u>	<u>2238</u>	<u>1766</u>

TABLE 12 - PLEURAL THICKENING OF THE WALL & DIAPHRAGM

Not present	839	1394	810
Right Lung	43	43	4
Left Lung	93	73	21
Both Lungs	1259	714	682
Unreadable	4	14	1
	<u>2238</u>	<u>2238</u>	<u>1518</u>

TABLE 13 - PLEURAL PLAQUE (UNCALCIFIED)

Exists	813	615	504
Does not exist	1421	1609	1305
Unreadable	4	14	1
	<u>2238</u>	<u>2238</u>	<u>1810</u>

TABLE 14 - PLEURAL THICKENING OF COSTROPHENIC ANGLE

	<u>Reader #1</u>	<u>Reader #2</u>
Not present	2011	2059
Right lung	68	57
Left lung	60	50
Both lungs	95	58
Unreadable	4	14
	<u>2238</u>	<u>2238</u>

TABLE 15 - PLEURAL THICKENING WIDTH

Not present	840	1394
Grade a	976	404
" b	250	227
" c	168	199
Unreadable	4	14
	<u>2238</u>	<u>2238</u>

TABLE 16 - PLEURAL THICKENING EXTENT

Not present	840	1394
Grade 1	948	468
Grade 2	446	362
Unreadable	4	14
	<u>2238</u>	<u>2238</u>

TABLE 17 - ILL-DEFINED DIAPHRAGM

Not present	2225	2210
Right lung	5	2
Left lung	4	6
Both lungs	0	6
Unreadable	4	14
	<u>2238</u>	<u>2238</u>

WIOES CONSENT FORMI. Project Description

1. Project Title: Study of Asbestos-Related Disease
2. Project Director: Phillip L. Polakoff, M.D.
3. Project Purpose and Benefits: This study is a continuing effort to determine the prevalence and incidence of asbestos-related disease and other respiratory diseases in shipyard and longshore workers and to relate these conditions to various other work environments. During the course of this study, our examinations may identify diseases or conditions (which may or may not be related to asbestos) which should have further medical attention or treatment. With your permission we will notify both you and your private physician of such findings. This is one way in which you may personally benefit from the tests. In addition, all workers may benefit from the research into all areas of respiratory ailments afflicting the asbestos-exposed work force.

II. Consent

- I, _____, hereby voluntarily agree to cooperate in the above named study and to undergo the tests listed in this Part II. The study has been discussed with me; I have been furnished a copy of this form, and I understand the following:
1. The procedures to be followed are as noted in Attachment A.
 2. Attendant discomforts and risks are minimal, and provision has been made for any necessary medical support to cover unforeseen conditions.
 3. Benefits are as indicated in the project description in Part I.
 4. If alternative procedures are available, the procedure most advantageous for me will be indicated and used or an explanation given to me as the use of any other procedure.
 5. My inquiries concerning any procedure used with me will be answered by Dr. Phillip L. Polakoff, Western Institute for Occupational/Environmental Sciences, Inc., 2001 Dwight Way, Berkeley, California, 94704. Telephone number: (415) 845-6476.
 6. I am free to terminate my consent and to discontinue participation in the project at any time without prejudice to myself.
 7. Confidentiality of information will be maintained as stated in Part III, which I have read and understand.
 8. If my medical records are required, a separate written consent for release of the records will be requested.
 9. My participation in this study will not affect my employment except as required by law for the protection of the health and safety of myself or others.
 10. There will be questions that I will be asked to answer, and my inquiries concerning the questions will be answered by Dr. Phillip L. Polakoff, Western Institute for Occupational/Environmental Sciences, Inc., 2001 Dwight Way, Berkeley, California, 94704. Telephone number (415) 845-6476.

11. A report of any significant information from the study that specifically concerns me, including medical information, will be furnished to me or my designated physician(s) upon completion of the study or earlier if appropriate.

SIGNATURE _____ DATE _____

SIGNATURE _____ DATE _____
(parent or guardian)

WITNESS _____ DATE _____

III. Use of Information

Your identity and your relationship to any information in our possession (1) disclosed by you in completing any project questionnaire and (2) reported by you or derived from you during your participation in the above-named project shall be kept confidential and will not be disclosed without your written consent except as required by law and except that such information will be used for statistical and research purposes in such a manner that no individual can be identified.

IV. Request and Authorization for Release of Information

I, _____, hereby request and authorize the Project Director to inform the following physician(s) whose names and addresses I have entered below of any significant findings from the above-named study concerning me. (Do not leave blank. Write "NO" in any block where you do not wish to give a name and address.)

(1) My personal physician:

DOCTOR: _____

STREET: _____

CITY, STATE, ZIP CODE _____

(2) (Other) physician:

DOCTOR: _____

STREET: _____

CITY, STATE, ZIP CODE _____

SIGNATURE _____ DATE _____

V. If a project questionnaire is required, it will constitute this Part V as a separate attachment to be retained by the Project Director. A copy of the questionnaire is not retained by the participant.

ATTACHMENT A

- A. Project Title: Study of Asbestos-Related Disease
- B. Procedures and tests which involve human subjects in conduct of this project are as follows:

(1) Questionnaire:

You will be asked a series of questions by a trained interviewer. The questions will concern your occupational history, your present and past smoking habits, and possible health problems.

(2) Chest X-rays:

Three chest x-rays will be taken; one from the back and two from a side angle. These are primarily to see if you have any signs of disease.

(3) Measurement of blood pressure, height, and weight.

These tests are standard hospital procedures and involve essentially no risk.

- C. Right under the Privacy Act of 1974, Title 5, United States Code, Section 552(a)(e)(3).

The information required to be given to me under the Privacy Act of 1974 is as follows:

- (1) The authority for collecting information is the Occupational Safety and Health Act of 1970.
- (2) The principal purpose of collecting this information is to define positive factors involved in occupational respiratory diseases and to determine the prevalence of respiratory diseases in asbestos-exposed workers.
- (3) Routine use of this information is for research purposes and to inform you of your test results.
- (4) I do not have to furnish any information I do not wish to. Nothing happens to me as a result of my not providing information, whether all or in part of that requested, except that I may be terminated from the project.

The risks associated with all of these procedures have been described in each case and are regarded as minimal. However, should you have any reactions that you think are a result of the test procedures, contact the project director, Dr. Phillip L. Polakoff (415) 845-6476, or the designated physician identified in the following:

DOCTOR: _____

STREET: _____

CITY, STATE, AND ZIP CODE _____

TELEPHONE: _____

WESTERN INSTITUTE FOR
OCCUPATIONAL/ENVIRONMENTAL
SCIENCES, INC.

STUDY OF ASBESTOS RELATED DISEASE
Shipyard and Longshore Workers

Identification Number	Interviewer Code
Place of Examination	Date

B A

Q

X

P

IDENTIFICATION NUMBER

A. IDENTIFICATION

1. NAME (last) (first) (middle initial)		3. PHONE NUMBER	4. SOCIAL SECURITY NUMBER*
2. CURRENT ADDRESS (number, street, or rural route, city or town, county, state, zip)		5. BIRTHDATE (mo/day/year)	6. AGE LAST BIRTHDAY
		7. SEX 1 <input type="checkbox"/> MALE 2 <input type="checkbox"/> FEMALE	10. STANDING HEIGHT _____ (cms)
8. RACE 1 <input type="checkbox"/> AM. INDIAN 2 <input type="checkbox"/> ASIAN 3 <input type="checkbox"/> BLACK 4 <input type="checkbox"/> HISPANIC 5 <input type="checkbox"/> WHITE	9. MARITAL STATUS 1 <input type="checkbox"/> MARRIED 2 <input type="checkbox"/> WIDOWED 3 <input type="checkbox"/> DIVORCED 4 <input type="checkbox"/> SEPARATED 5 <input type="checkbox"/> NEVER MARRIED	11. WEIGHT _____ (kgs)	12. BLOOD PRESSURE _____
13. What was the highest grade of regular school you completed?			

* Furnishing your Social Security Number is voluntary. Your refusal to provide your Social Security Number will not affect any right, privilege or benefit to which you should be entitled if you did not provide your Social Security Number. Use of the Social Security Number will permit us to include you in future follow-studies and will permit future determination of vital status.

B. OCCUPATIONAL HISTORY (continued)

IDENTIFICATION NUMBER

1. Year first exposed to asbestos (occupationally).

[]

2. Year last exposed to asbestos (occupationally).

[]

3. Total number of years and months exposed to asbestos:

[] []
YRS MOS

4. Dates employed as shipyard worker:

FROM [] []
MO YR

TO [] []
MO YR

5. Dates employed as a longshore worker:

FROM [] []
MO YR

TO [] []
MO YR

6. Dates employed as asbestos-exposed worker other than shipyard or longshore:

FROM [] []
MO YR

TO [] []
MO YR

7. Have you ever been exposed regularly to other dusts?

YES []
NO []

If "NO", go to question B-11.

8. Silica

a. Year first exposed:

[]

b. Year last exposed:

[]

c. Total number of years and months exposed:

[] []
YRS MOS

9. Coal

a. Year first exposed:

[]

b. Year last exposed:

[]

c. Total number of years and months exposed:

[] []
YRS MOS

Total years underground:

[]

10. Other

a. Year first exposed:

[]

b. Year last exposed:

[]

c. Total number of years and months exposed:

[] []
YRS MOS

3. OCCUPATIONAL HISTORY (continued)

IDENTIFICATION NUMBER

RESPIRATORS:

11. Do/did you wear a respirator?

1 YES 2 NO

If "NO", go to question 14.

12. What type is/was it, mainly?

- 1 FILTER
- 2 CARTRIDGE
- 3 AIR SUPPLY
- 9 NA

13. Do/did you wear it?

- 1 USUALLY
- 2 OCCASIONALLY
- 3 INFREQUENTLY
- 9 NA

HYGIENE:

14. Do/did you eat at your work site?

1 YES 2 NO

If "NO", go to question 16.

15. Do/did you wash your hands before eating?

1 YES 2 NO 9 NA

16. Do/did you smoke at your work site?

1 YES 2 NO 3 NONSMOKER
EX-SMOKER

If "NO", or nonsmoker or exsmoker go to question 18.

17. Do/did you wash your hands before smoking?

1 YES 2 NO 9 NA

18. Do/did you change your clothes and shoes before going home?

1 YES 2 NO

19. Do/did you shower before going home?

1 YES 2 NO

RADIATION:

20. Are/were you required to wear a film badge or pocket dosimeter during your work?

1 YES 2 NO

21. Have you ever worked near nuclear fuel elements or near radioactive metal?

1 YES 2 NO

If "NO", go to question 23.

22. During what period?

FROM TO
MO YR MO YR

B. OCCUPATIONAL HISTORY (continued)

IDENTIFICATION NUMBER

Radiation, continued

23. Have you ever worked with or near x-ray metal testing devices?

1 YES 2 NO

24. Did you have any other radiation exposure:

1 YES 2 NO

Specify: _____

25. Were you ever told that you had an overexposure to radiation:

1 YES 2 NO

26. Were you ever prohibited from working in radiation areas because of excess past exposure?

1 YES 2 NO

If yes, how many times? _____

27. Have you ever participated in a nuclear weapons test program at the Nevada test site or in the Pacific?

1 YES 2 NO

28. Have you ever had radiation therapy?

1 YES 2 NO

IDENTIFICATION NUMBER

C. FAMILY AND FELLOW WORKERS

1. Prior to becoming an asbestos-exposed worker, did any member of your immediate family work with asbestos?

1 YES 2 NO

If Yes, who?

employed from

employed from

employed from

MONTH	YEAR	to	MONTH	YEAR

2. Have any of your fellow workers died of lung disease (i.e., asbestosis, mesothelioma, lung cancer, pneumonia, tuberculosis, etc.)?

1 YES 2 NO

Do you have their names and addresses?

3. Have any of your fellow workers died of cancer of any body organ (stomach, rectum, kidney, etc.)?

1 YES 2 NO

Do you have their names and addresses?

ALSO LIST SITE OF CANCER.

IDENTIFICATION NUMBER

D. RESPIRATORY SYMPTOMS

I am now going to ask you some questions, mainly about your chest. I would like you to answer "YES" or "NO" whenever possible.

COUGH

1. Do you usually cough first thing in the morning (on getting up*)?

1 YES 2 NO

Count a cough with first smoke or on first going out of doors.

Exclude clearing throat or a single cough.

2. Do you usually cough during the day (or at night*)?

1 YES 2 NO

Ignore an occasional cough.

If "NO" to both questions 1 & 2, go to question 4.

If "YES" to either question 1 or 2:

3. Do you cough like this on most days (or nights*) for as much as three months each year?

1 YES 2 NO 9 NA

PHLEGM

4. Do you usually bring up any phlegm from your chest first thing in the morning (on getting up*)?

1 YES 2 NO

Count phlegm with first smoke or on first going out of doors.

Exclude phlegm from the nose. Count swallowed phlegm.

5. Do you usually bring up any phlegm from your chest during the day (or at night*)?

1 YES 2 NO

Accept twice or more.

If "NO" to both questions 4 & 5, go to question 8.

If "YES" to either question 4 or 5:

6. Do you bring up phlegm like this on most days (or nights*) for as much as three months each year?

1 YES 2 NO 9 NA

* for night shift employees

D. RESPIRATORY SYMPTOMS, (continued)

IDENTIFICATION NUMBER

7. What color is your sputum or phlegm?

- 1 - whitish
- 2 - yellow and/or green
- 3 - grey and/or black
- 4 - don't know
- 5 - NA

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

1 YES 2 NO

If "NO" to question 8, go to question 10.

If "YES" to question 8:

9. Have you had more than one such period?

1 YES 2 NO 9 NA

10. Have you ever coughed up blood?

1 YES 2 NO

If "NO" to question 10, go to question 13.

If "YES" to question 10:

11. Was this in the past year?

1 YES 2 NO 9 NA

12. How often?

- 1 only occasionally
- 2 only occasionally (with a severe cold)
- 3 frequently -- streaking
- 4 other (specify)
- 9 NA

13. Are you troubled by shortness of breath when hurrying on level ground or walking up a slight hill?

1 YES 2 NO DISABLED***

If "NO" or "DISABLED" to question 13, go to question 16.

If "YES" to question 13:

14. Do you get short of breath walking with other people of your own age on level ground?

1 YES 2 NO 9 NA

If "NO" to question 14, go to question 16.

If "YES" to question 14:

15. Do you have to stop for breath when walking at your own pace on level ground?

1 YES 2 NO 9 NA

** For individuals who usually have phlegm.

*** Disabled from walking by any conditions other than heart or lung disease.

D, RESPIRATORY SYMPTOMS (continued)

IDENTIFICATION NUMBER

WHEEZING

16. Does your chest ever sound wheezing or whistling?

1 YES 2 NO

If "NO" to question 16, go to question 18.

If "YES" to question 16:

17. Do you get this most days - or nights*?

1 YES 2 NO 9 NA

18. Have you ever had attacks of shortness of breath with wheezing?

1 YES 2 NO

If "NO" to question 18, go to question 20.

If "YES" to question 18:

19. Is/was your breathing absolutely normal between attacks?

1 YES 2 NO 9 NA

WEATHER

20. Does the weather affect your chest?

1 YES 2 NO

Only record "YES" if adverse weather definitely and regularly causes chest symptoms.

If "NO" to question 20, go to question 23.

If "YES" to question 20:

21. Does the weather make you short of breath?

1 YES 2 NO 9 NA

22. What kind of weather?

- 1 heat
- 2 cold
- 3 dampness
- 4 dryness
- 5 any extreme
- 9 NA

NASAL DRAINAGE

23. Do you usually have a stuffy nose or drainage at the back of your nose in the winter?

1 YES 2 NO

24. Do you have this in the summer?

1 YES 2 NO

If "NO" to both questions 23 & 24, go to question 26.

If "YES" to either question 23 or 24:

25. Do you have this on most days for as much as three months each year?

1 YES 2 NO 9 NA

* for night shift employees

D. RESPIRATORY SYMPTOMS (continued)

IDENTIFICATION NUMBER

CHEST ILLNESSES

26. During the past three years have you had any chest illness which has kept you from your usual activities for as much as a week?

1 YES 2 NO

If "NO" to question 26, go to question 29.

If "YES" to question 26, ask question 27.

27. Did you bring up more phlegm than usual in any of these illnesses?

1 YES 2 NO 9 NA

If "NO" to question 27, go to question 29.

If "YES" to question 27:

28. How many illnesses like this have you had in the past three years?

_____ 9 NA

29. Do you have a heart condition for which you are under a doctor's care?

1 YES 2 NO

If "YES", specify conditions and drug therapy:

IDENTIFICATION NUMBER

E. TOBACCO SMOKING

1. Do you now smoke cigarettes:
If "YES" to question 1, go to question 4.
If "NO" to question 1:
2. Have you ever smoked cigarettes?
If "YES" to question 2, go to question 4.
If "NO" to question 2:
3. Have you smoked at least as many as five packs of cigarettes, that is, 100 cigarettes during your entire life:
If "YES" to question 3, go to question 4.
If "NO" to question 3, go to question 10.
4. How old were you when you started smoking cigarettes regularly?
If an ex-cigarette smoker, ask:
5. How old were you when you last gave up smoking cigarettes?
6. During the years that you smoked, did you ever quit for a year or more?
If "YES", how long? _____
7. How much do/did you smoke on the average?
8. Do/did you inhale the cigarette smoke?
9. What do/did you mostly smoke?

<input type="checkbox"/>	1 Filters	<input type="checkbox"/>	1 Regular
<input type="checkbox"/>	2 Non-filters	<input type="checkbox"/>	2 King Size
		<input type="checkbox"/>	3 100 Millimeter
10. Do you now smoke a pipe?
If "YES" to question 10, go to question 12.
If "NO" to question 10:
11. Have you ever smoked a pipe?
If "YES" to question 11, go to question 12.
If "NO" to question 11, go to question 13.
12. How many bowlsful a week do/did you smoke?

1 YES 2 NO

1 YES 2 NO 9 NA

1 YES 2 NO 9 NA

AGE IN YEARS

AGE IN YEARS

1 YES 2 NO

CIGARETTES A DAY

1 YES 2 NO

1 YES 2 NO

1 YES 2 NO 9 NA

9 NA

E. TOBACCO SMOKING, continued

IDENTIFICATION NUMBER

13. Do you now smoke cigars?

1 YES 2 NO

If "YES" to question 13, go to question 15.

If "NO" to question 13:

14. Have you ever smoked cigars?

1 YES 2 NO 9 NA

If "YES" to question 14, go to question 15.

If "NO" to question 14, go to question F-1.

15. How many cigars a week do/did you smoke?

_____ 9 NA

16. Have you ever tried to quit smoking?

1 YES 2 NO 9 NA

17. Would you like to quit smoking?

1 YES 2 NO 9 NA

IDENTIFICATION NUMBER

F. TOBACCO CHEWING

1. Do you regularly chew tobacco?

1 YES 2 NO

If "YES" to question 1, go to question 3.

If "NO" to question 1:

2. Have you ever chewed tobacco?

1 YES 2 NO 9 NA

If "NO" to question 2, end interview.

If "YES" to question 2:

3. What type:

- | | |
|--------------------------|---------|
| <input type="checkbox"/> | 1 Plug |
| <input type="checkbox"/> | 2 Pouch |
| <input type="checkbox"/> | 3 Snuff |
| <input type="checkbox"/> | 4 NA |

4. Do you regularly swallow the juice:

1 YES 2 NO 9 NA

STUDY NO _____

QUESTIONNAIRE

The purpose of this questionnaire is to add to our general knowledge of asbestos and other occupational health risks.

Representatives from unions, industry, government, and the health professions have made important contributions towards the solution of some occupational health problems. But equally important, we need to draw upon your knowledge, experience, and feelings about the subject.

Your answers to these questions will be held in strict confidence. The information you provide will appear only as part of general, over-all project reports. No one will have access to your questionnaire other than immediate members of the study staff.

After completing your questionnaire, please leave it with the person who gave it to you, or return it in the enclosed stamped envelope.

* * * *

1. How did you hear about the asbestos check-up project? (check one or more)

- | | |
|--|---|
| <input type="checkbox"/> On TV | <input type="checkbox"/> From a member of my family |
| <input type="checkbox"/> On the radio | <input type="checkbox"/> From my physician |
| <input type="checkbox"/> At work | <input type="checkbox"/> Read about it in the newspaper |
| <input type="checkbox"/> From a friend | <input type="checkbox"/> From my union |
| | <input type="checkbox"/> Other (How? _____) |

2. Why did you decide to come in?

3. Which of these influenced you to make an appointment for your check-up?
(check one or more answers)

- My own concern about my health
- The concern of members of my family
- The concern of friends
- Haven't felt well recently
- Have felt well, but thought check-up was a good idea
- My physician
- Other (_____)

4. How did you decide to call the "hot line"? (Check one or more)

- Decided on my own
- Influenced by spouse or other relative
- Influenced by a friend or work associate
- Influenced by others (Who? _____)

5. Were you satisfied with the way in which the screening project (check-up) was run?

- YES NO

Do you have some suggestions or comments on how the project might be improved? (Use back of page if you need additional writing space)

6. If you were concerned about your general health, who is the first person you would talk to? (check only one)

- | | |
|---|---|
| <input type="checkbox"/> Husband or wife | <input type="checkbox"/> A friend at work |
| <input type="checkbox"/> Son or daughter | <input type="checkbox"/> A friend outside of work |
| <input type="checkbox"/> Another relative | <input type="checkbox"/> Your physician |
| <input type="checkbox"/> A neighbor | <input type="checkbox"/> Other (Who? _____) |

7. With what other persons do you usually discuss your health? (Check as many as apply to you)

- | | |
|---|--|
| <input type="checkbox"/> Husband or wife | <input type="checkbox"/> A friend at work |
| <input type="checkbox"/> Son or daughter | <input type="checkbox"/> A friend outside work |
| <input type="checkbox"/> Another relative | <input type="checkbox"/> Your physician |
| <input type="checkbox"/> A neighbor | <input type="checkbox"/> Other (Who? _____) |

8. Do you ever find that you have no one to discuss your health problems with?

- YES NO

If you answered yes, what do you do when a health worry comes up?

9. In your judgement, what is the over-all condition of your health?

- Excellent
- Good
- Fair
- Poor

10. If you were at home and suddenly became sick or had an accident, who do you feel you could get to take you to a hospital or doctor's office? (Check as many as apply to you)

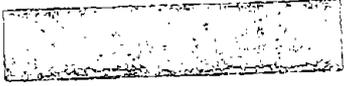
- | | |
|---|---|
| <input type="checkbox"/> Husband or wife | <input type="checkbox"/> A friend from work |
| <input type="checkbox"/> Son or daughter | <input type="checkbox"/> A friend outside of work |
| <input type="checkbox"/> Another relative | <input type="checkbox"/> Other (Who? _____) |
| <input type="checkbox"/> A neighbor | <input type="checkbox"/> No one |

11. For each of the following persons, how comfortable are you in discussing your personal health? (Check one space for each person listed)

	<u>VERY</u> <u>COMFORTABLE</u>	<u>SOMEWHAT</u> <u>COMFORTABLE</u>	<u>SOMEWHAT</u> <u>UNCOMFORTABLE</u>	<u>VERY</u> <u>UNCOMFORTABLE</u>	<u>HAVE</u> <u>NONE</u>
Husband or wife	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neighbor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friend(s) at work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work supervisor or employer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Union rep.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your clergyman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your physician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. If you were sick for an extended period and needed some chores done around the house or an errand run, who could you get to help? (Check as many as apply to you)

- | | |
|---|---|
| <input type="checkbox"/> Husband or wife | <input type="checkbox"/> A friend from work |
| <input type="checkbox"/> Son or daughter | <input type="checkbox"/> A friend outside of work |
| <input type="checkbox"/> Another relative | <input type="checkbox"/> Other (Who? _____) |
| <input type="checkbox"/> A neighbor | <input type="checkbox"/> No one |



13. How many visits to the hospital, doctor, or clinic did you make last year?

- None
- 1 - 5
- More than 5

14. When you are feeling low or depressed, which of the following persons do you talk to? (Check as many as apply to you)

- | | |
|---|--|
| <input type="checkbox"/> Husband or wife | <input type="checkbox"/> A friend from work |
| <input type="checkbox"/> Son or daughter | <input type="checkbox"/> A friend outside of work |
| <input type="checkbox"/> Another relative | <input type="checkbox"/> Employer or work supervisor |
| <input type="checkbox"/> A neighbor | <input type="checkbox"/> Other (Who? _____) |
| | <input type="checkbox"/> No one |

15. When you are feeling low, is there anything else you do? If so, what?

16. Have you or a member of your family ever used any of the following services in your community? (Check "yes" or "no" for each)

	<u>YES</u>	<u>NO</u>
Lawyer	<input type="checkbox"/>	<input type="checkbox"/>
Employment services	<input type="checkbox"/>	<input type="checkbox"/>
Counseling	<input type="checkbox"/>	<input type="checkbox"/>
Income tax preparation	<input type="checkbox"/>	<input type="checkbox"/>
Medical clinic	<input type="checkbox"/>	<input type="checkbox"/>
Visiting nurse services	<input type="checkbox"/>	<input type="checkbox"/>
Home health services	<input type="checkbox"/>	<input type="checkbox"/>

17. What other community services have you used? (Please list as many as you can think of)

18. What is your opinion of the following statements?

	<u>AGREE</u>	<u>DISAGREE</u>	<u>DON'T KNOW</u>
a. Most doctors are interested in occupational health problems	()	()	()
b. Most occupational disease symptoms are too complicated to be recognized by a family physician	()	()	()

19. Should there be special clinics for occupational (job-related) health problems?

() YES () NO

20. If your answer to the previous question was "Yes", who would you prefer to have run those clinics?

- () Unions
- () Employers
- () Unions and employers jointly
- () Government agencies
- () Community organizations
- () Medical schools
- () Private physicians
- () Other

21. Please indicate how or where you think exposure to asbestos usually takes place:

	<u>YES</u>	<u>NO</u>	<u>DON'T KNOW</u>
Vacuuming a dusty house	()	()	()
Installing and replacing brake linings	()	()	()
Fating certain packaged foods - such as cereals	()	()	()
Working in certain jobs - such as construction, mining, or shipbuilding	()	()	()
Any other	()	()	()

22. Do you think that a person exposed to asbestos has an increased risk of:

	<u>YES</u>	<u>NO</u>	<u>DON'T KNOW</u>
Headaches	()	()	()
High blood pressure	()	()	()
Respiratory illnesses	()	()	()
Diabetes	()	()	()
Lung cancer	()	()	()
Heart attack	()	()	()

23. Is enough research being done to find out about health problems related to work?

() YES

() NO

24. How should this kind of research be paid for?

	<u>YES</u>	<u>NO</u>
Through union dues	()	()
By government	()	()
Through a union-management collective bargaining agreement	()	()
By the employer(s)	()	()
Through private research foundations	()	()
Through some combination of the above	()	()
Don't know	()	()

25. Occupational health hazards in the U.S. are: (check one)

- () Increasing
- () About the same as ten years ago, but there is now more publicity about them
- () Decreasing

26. Do you think the reports in the newspapers and on TV about the dangers of chemical additives in foods are: (check one)

- () Reasonably accurate or true
- () Make the problem appear worse than it really is
- () Under-estimate the problem

27. Do you think the reports in the newspapers and on TV about the dangers of air and water pollution: (check one)

- Are reasonably accurate or true
- Make the problem appear worse than it really is
- Under-estimate the problem

28. Do you think the reports in the newspapers and on TV about the risk of asbestos exposure: (check one)

- Are reasonably accurate or true
- Make the problem appear worse than it really is
- Under-estimate the problem

29. Please tell us whether you agree or disagree with the following statements

	<u>AGREE</u>	<u>DISAGREE</u>	<u>DON'T KNOW</u>
A. It is difficult to reduce occupational health hazards because:			
People don't want to change their work habits	()	()	()
Strict health and safety regulations could cause a loss of jobs	()	()	()
The government can not afford enough field inspectors	()	()	()
The government's enforcement process is too slow	()	()	()
It costs too much money to make factories really safe	()	()	()
The government doesn't want to offend employers	()	()	()
Employers put their own interests before those of their employees	()	()	()
B. Older workers care more about occupational health problems than do younger workers	()	()	()

30. How do you feel about each of the following methods for reducing risk to health and injury on the job? (check one for each method listed)

	<u>NEED MUCH MORE</u>	<u>NEED ABOUT THE SAME</u>	<u>NEED LESS OR FEWER</u>	<u>INDECIDED OR DON'T KNOW</u>
Employer education	()	()	()	()
Pressure on employers from unions	()	()	()	()
New government health and safety regulations	()	()	()	()
Better enforcement of existing regulations	()	()	()	()
Education of workers	()	()	()	()
Newspaper and TV coverage of job-related health problems	()	()	()	()
Employee law-suits	()	()	()	()
Research on occupational health and safety	()	()	()	()

31. Please tell us if you agree or disagree with the following statements:

	<u>AGREE</u>	<u>DISAGREE</u>	<u>DON'T KNOW</u>
The government shouldn't interfere in occupational health problems; these are matters for the companies and workers (or their unions) to negotiate	()	()	()
There will always be occupational health risks. This is part of the price we have to pay to keep our country strong and productive	()	()	()
There are so many occupational risks that we should just concentrate on the most serious problems	()	()	()
Every worker knows there are risks when he takes a job	()	()	()

32. Please answer the following questions "Yes" or "No"

	<u>YES</u>	<u>NO</u>
If an employec is fired for not using safety equipment, should the union intervenc on his or her behalf?	()	()
Should union funds be used to employ health and safety inspectors?	()	()
If a safety problem or health hazard is ignored by a company, is this sufficient grounds for a strike?	()	()
If a company does not tell you about health hazards at work, should you be zble to sue them?	()	()
If so, should the union pay for the lawyer?	()	()

THANK YOU VERY MUCH FOR FILLING OUT THIS QUESTIONNAIRE. PLEASE ADD ANY COMMENTS YOU WISH TO MAKE.

INTERVIEW SCHEDULE

Study No. _____

_____, 1978
date_____
LAST NAME_____
First Name

Age _____

Sex _____

Interviewer

"Thank you for taking the additional time for this interview. We would like to know how you, personally, feel about things concerning asbestos and occupational health.

1. Did you work on an asbestos-related job? When, and for how long? What kind of work was that?

/This is a "set the stage" question. Details have been given by examinee in his or her work history interview./

2. Do you feel there are risks in working with asbestos?

/Probe: risks or experience with other occupational health hazards.

Probe: Has knowledge of, or attitude towards, asbestos changed during the past year? During the past month?

As a result of this check-up?/

3. Have you noticed any effects from your own work with asbestos?

/Probe: Has your personal or family life been affected in any way? If "yes", what have you done about it?/

4. Do you have any worries about working with asbestos now, or having worked with it in the past?

5. If you had it to do over again, would you take a job working with asbestos? /Why, or Why not?/

6. Workers often do not get necessary and timely information about occupational health hazards. What are some ways in which we can get this information to the worker?

/Probe such examples as: public media - e.g. TV specials - newspaper articles, union newspapers and bulletins, house organs, safety inspectors as educators, union health and welfare or health and safety committees/

7. Is there a health hazard for families of asbestos workers? If so, what kind? And what should be done?

8. Is there a health hazard for people living near an asbestos factory or job site? If so, what kind? And what should be done?

9. Should workers be able to refuse risky jobs and still receive unemployment insurance?
 /Probe: How should standards of risk be determined, and by whom?/

10. Do you believe that there is a relationship between smoking cigarettes and asbestos? If so, what?

11. Should workers be permitted to smoke cigarettes during work hours on asbestos-related jobs? Why, or Why not?
 /Probe: OK if special smoking areas provided?/

12. If a person is a regular smoker (smokes cigarets off the job), should an asbestos company be able to refuse to hire him or her because of that? Why, or Why not?
13. Who should be responsible for occupational health problems, and for asbestos-related problems in particular?
- a. To begin with, what is the responsibility of the worker himself or herself, in doing something about the problem?
- b. In what ways do you feel that the union is responsible?
- c. In what way is the employer (private or government) responsible?
- d. What is the responsibility of the government when it is not the employer?

Probe such specific responsibilities as: employing health inspectors, paying for research, providing special industrial health clinics, setting safety standards, training, paying for medical care when worker becomes ill several years after leaving job/



14. Who should provide preliminary information on compensation and legal rights?

/Probe: Union, government agencies, private lawyers, bar associations, legal aid services/

15. If someone has a positive X-ray (showing a possible problem) at this check-up, what should be done about it?

/Probe: What should the individual examinee do? What should the Project try and do?/

16. What are some solutions to the asbestos problem?

/Probe: alternative or substitute materials, better safety equipment, new regulations, stricter enforcement, more research, more education/

ATTACHMENT C

- Letter 1 To participant with potentially serious abnormality
1a plus request for name and address of physician
2 To participant with questionable abnormality
2a plus request for name and address of physician
3 To participant with no significant abnormality
3a plus request for name and address of physician

Physician's Letter

2nd Notification Letter for name and address of physician

Announcement of Follow-up Seminars on "Asbestos Exposure: What it is, What to do".

WIOES Resource Center: Announcement of Open House, July 17, 1980

The Asbestos Newsline (Resource Center Newsletter, Vol. 1. No. 1)

WIOES

WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.
2001 DWIGHT WAY BERKELEY, CALIFORNIA 94704 (415) 845-6476

February 28, 1979

Study Number

Dear Participant:

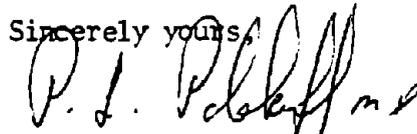
Last summer you participated in the Bay Area Asbestos Surveillance Project. The examination included three chest x-rays.

The results of your examination indicate that you have a potentially serious abnormality. This test, however, is not necessarily conclusive without further consultation. Accordingly, we strongly advise that you contact your physician immediately.

At the time of your examination you designated the physician listed below to receive the medical findings of your examination. A report is being sent to that physician.

I hope you and your family will be able to attend one of the follow-up seminars so that if you have any questions they might be answered. The follow-up seminars are described in the enclosed brochure.

Sincerely yours,



Phillip L. Polakoff M.D.
Director
WIOES

WIOES

WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.
2001 DWIGHT WAY BERKELEY, CALIFORNIA 94704 (415) 845-6476

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The results of your examination indicate that you have a potentially serious abnormality. This test, however, is not necessarily conclusive without further consultation. Accordingly, we strongly advise that you contact your physician immediately.

At the time of your examination you did not designate a physician to receive the medical findings of your examination. A report will be sent to the physician of your choice, once we, at WIOES, receive his/her name and address.

I hope you and your family will be able to attend one of the follow-up seminars so that if you have any questions they might be answered. The follow-up seminars are described in the enclosed brochure.

Sincerely yours,

Phillip L. Polakoff, M.D.
Director
WIOES

WIOES

WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.
2001 DWIGHT WAY BERKELEY, CALIFORNIA 94704 (415) 845-6476

February 28, 1979

Study Number

Dear Participant:

Last summer you participated in the Bay Area Asbestos Surveillance Project. The examination included three chest x-rays.

Although it is not thought to be an immediately serious problem, your x-rays show:

A questionable abnormality on your chest x-ray.

At the time of your examination, you designated the physician whose name appears below to receive any significant information found in the examination. A report is being sent to your doctor. We suggest that you consult him in the near future.

I hope you and your family will be able to attend one of the follow-up seminars so that if you have any questions they might be answered. The follow-up seminars are described in the enclosed brochure.

Sincerely yours,



Phillip L. Polakoff, M.D.
Director
WIOES

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WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.
2001 DWIGHT WAY BERKELEY, CALIFORNIA 94704 (415) 845-6476

February 28, 1979

Study Number

Dear

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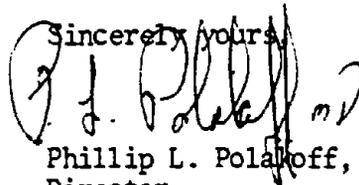
Although it is not thought to be an immediately serious problem, your x-rays show:

A questionable abnormality on your chest x-ray.

At the time of your examination you did not designate a physician to receive the medical findings of your examination. A report will be sent to the physician of your choice, once we, at WIOES, receive his/her name and address.

I hope you and your family will be able to attend one of the follow-up seminars so that if you have any questions they might be answered. The follow-up seminars are described in the enclosed brochure.

Sincerely yours,



Phillip L. Polakoff, M.D.
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2001 DWIGHT WAY BERKELEY, CALIFORNIA 94704 (415) 845-6476

February 28, 1979

Study Number

Dear Participant:

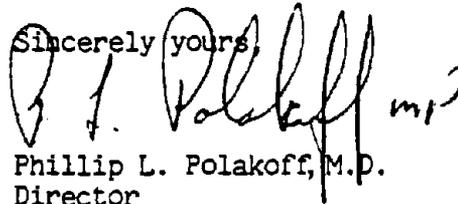
Last summer you participated in the Bay Area Asbestos Surveillance Project. The examination included three chest x-rays. We are sending you the following report of the results of the tests:

The x-ray results show no significant abnormalities.

At the time of your examination, you designated the physician whose name appears below to receive any significant information found in the examination. A report is being sent to your doctor.

I hope you and your family will be able to attend one of the follow-up seminars so that if you have any questions they might be answered. The follow-up seminars are described in the enclosed brochure.

Sincerely yours,



Phillip L. Polakoff, M.D.
Director
WIOES

WIOES

WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.
2001 DWIGHT WAY BERKELEY, CALIFORNIA 94704 (415) 845-6476

February 28, 1979

Study Number

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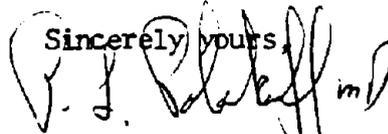
Last summer you participated in the Bay Area Asbestos Surveillance Project. The examination included three chest x-rays. We are sending you the following report of the results of the tests:

The x-ray results show no significant abnormalities.

At the time of your examination you did not designate a physician to receive the medical findings of your examination. A report will be sent to the physician of your choice, once we, at WIOES, receive his/her name and address.

I hope you and your family will be able to attend one of the follow-up seminars so that if you have any questions they might be answered. The follow-up seminars are described in the enclosed brochure.

Sincerely yours,



Phillip L. Polakoff, M.D.
Director
WIOES

WIOES

WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.
2001 DWIGHT WAY BERKELEY, CALIFORNIA 94704 (415) 845-6476

Study Number

Dear Doctor:

The individual whose name and address appear below obtained a chest x-ray examination for asbestos-related disease during the Bay Area Asbestos Surveillance Project which was conducted July and August, 1978. This person designated you as the physician to whom any results should be reported.

One or more of the government certified "B" readers who interpreted the x-rays gave us the following report of his findings:

Unfortunately, the original x-rays are not available for dispersal. However, if deemed necessary, they certainly can be reviewed at WIOES. Further I would be most willing to discuss their significance.

Sincerely yours,

Phillip L. Polakoff, M.D.
Director
WIOES

WIOES

WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.
2001 DWIGHT WAY BERKELEY, CALIFORNIA 94704 (415) 845-6476

November 16, 1979

On February 28, 1979, we sent you a letter stating the results of your chest xrays which were taken during the Bay Area Asbestos Surveillance Project conducted in July/August 1978. Further, we requested that you furnish us with the name of your personal physician so that we could send him/her the exact medical findings of your xrays.

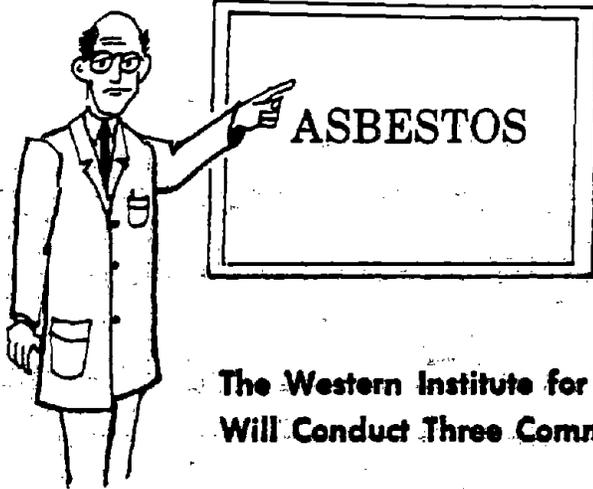
To date we have not received your physician's name and address. Could you please furnish us the information as soon as possible so that we can furnish your physician with this information?

Please contact Ms. Laretta Higgins at WIOES, 2520 Milvia Way, Berkeley, California 94710; (415) 845-6476.

Sincerely,

Phillip L. Polakoff, M.D.
Director, WIOES

PLP:tnl



**WILL YOU SPEND A
SATURDAY IN MARCH
LEARNING HOW TO PROTECT
YOURSELF AND YOUR FAMILY
FROM ASBESTOS ?????**

**The Western Institute for Occupational/Environmental Science, Incorporated
Will Conduct Three Community Seminars Featuring Phillip L. Polakoff, M.D.**

ON

Asbestos Exposure: What It Is, What To Do

**BRING YOUR
FAMILY AND
FRIENDS
AND A LUNCH**

**Saturday, March 10, 1979
at
Teamsters Local 70 Hall
70 Hegenberger Road
Oakland, California**

**Saturday, March 24, 1979
at
Solano County Fairgrounds
McCormack Hall
Vallejo, California**

**Saturday, March, 31, 1979
at
ILWU Local 10 Hall
Fisherman's Wharf
San Francisco, California**



**FOR FURTHER
INFORMATION,
CALL
(415) 845-6476**



Program

9:30 - 10:00 a.m. WELCOME AND INTRODUCTION

10:00 - 11:00 a.m. GOVERNMENT REGULATION OF ASBESTOS

*Featuring representatives from:
Cal/OSHA, U.S. Department of Labor — OSHA,
Elected Officials, EPA, NIOSH*

11:00 - 12:00 p.m. MEDICAL INFORMATION ON ASBESTOS

*Featuring Board certified medical specialists and
industrial hygienists*

12:00 - 1:00 p.m. LUNCH (Open)

1:00 - 2:00 p.m. COMMUNITY SUPPORT SERVICES

*Featuring representatives from:
American Cancer Society
American Lung Association
Mental Health Association*

2:00 - 3:00 p.m. HEALTH CARE REIMBURSEMENT

*Featuring representatives from the:
Federal Workers' Compensation Programs
California Workers' Compensation Appeals Board
California Applicants Attorney's Association
Defense Attorney's Association*

3:00 - 3:30 p.m. REVIEW AND WRAP-UP

◇ IN KEEPING WITH WIOES POLICY, THERE WILL BE NO SMOKING
IN MEETING ROOMS USED FOR THIS CONFERENCE. ◇

SEMINAR GOALS

- To heighten the participants awareness of employer, employee and government responsibilities in controlling asbestos exposures.
- To expand the participants working knowledge of the medical, legal and scientific implications of asbestos exposure.
- To report and comment on the results of the Bay Area Asbestos Surveillance Project.

SEMINAR FORMAT

A panel of experts will be available on each topic. Questions from the audience will be fielded by a panel moderator and answered by one or more of the panel members.

You are encouraged to write your questions down prior to attending the seminar nearest you.

ALL QUESTIONS WILL BE ANSWERED



Financial support and assistance for these seminars was provided by the following organizations:

California Labor Federation, AFL-CIO
International Assn. of Heat and Frost Insulators and
Asbestos Workers, AFL-CIO
California Department of Occupational Safety and Health
ILWU Local 10, San Francisco, California
Mare Island Metal Trades Council, AFL-CIO
National Cancer Institute
National Institute for Occupational Safety and Health
Teamsters Local 70, Oakland, California
U.S. Department of Labor — OSHA, Region IX

ATTACHMENT D

OCCUPATIONAL HISTORY RESPONSES

	<u>YES</u>	<u>NO</u>	<u>DK/NA</u>
<u>(Respirators)</u>			
(11) Do/did you wear a respirator?	962	1280	(43% - 57%)
(12) If yes, what type?			
Filter			32%
Cartridge			9
Air Supply			4
Don't know/ don't remember			55
(13) How often did you wear it?			
Usually			11%
Occasionally			19
Infrequently			15
Don't know/don't remember			55
<u>(Hygeine)</u>			
(14) Do/did you eat at your work site?	1743	495	(78% - 22%)
(15) Do/did you wash your hands before eating?	1566	459	205 (70% - 21% - 9%)
(16) Do/did you smoke at your work site?	1327	449	(59% - 20%)
475 examinees (21%) said they were non-smokers or ex-smokers			
(17) Do/did you wash your hands before smoking?	118	1353	761 (5% - 61% - 34%)
(18) Do/did you change your clothes and shoes before going home?	676	1568	(30% - 70%)
(19) Do/did you shower before going home?	85	2152	(4% - 96%)
<u>(radiation)</u>			
(20) Are/were you required to wear a film badge or pocket dosimeter during your work?	978	1265	(44% - 56%)
(21) Have you ever worked near nuclear fuel elements or near radioactive metal?	1095	1141	(49% - 51%)

	<u>YES</u>	<u>NO</u>	<u>DK/NA</u>
(23) Have you ever worked with or near x-ray metal testing devices	383	1366	(39% - 61%)
(24) Did you have any other radiation exposures?	425	1807	(19% - 81%)
(25) Were you ever told that you had an overexposure to radiation?	133	2104	(6% - 94%)
(26) Were you ever prohibited from working in radiation areas because of excess past exposure? 76% of those answering "yes" had been prohibited 1 to 4 times	199	2040	(9% - 91%)
(27) Have you ever participated in a nuclear weapons test program at Nevada or in the Pacific?	54	2193	(2% - 98%)
(28) Have you ever had radiation therapy?	136	2103	(6% - 94%)

(family & fellow workers)

(1) Prior to becoming an asbestos-exposed worker, did any member of your immediate family work with asbestos?	446	1780	(20% - 80%)
(2) Have any of your fellow workers died of lung disease?	816	1295	(39% - 61%)
(3) Have any of your fellow workers died of cancer of any body organ?	706	1393	(34% - 66%)

(respiratory symptoms - cough)

(1) Do you usually cough first thing in the morning?	840	1418	(37% - 63%)
(2) Do you usually cough during the day?	820	1426	(35% - 64%)
(3) If "yes" to (1) or (2), do you cough like this on most days?	794	289	1123 (36% - 13% - 51%)
(8) In the past three years have you had a period of cough and phlegm lasting for three weeks or more?	767	1479	(34% - 66%)

	<u>Yes</u>	<u>No</u>	<u>DK/NA</u>	
(10) Have you ever coughed up blood?	440	1792		(20% - 80%)
(11) (If "yes") In the past year?	214	271		
(13) Are you troubled by shortness of breath when hurrying?	1361	866		(61% - 39%)
(14) Short of breath when walking on level ground with people your age?	727	1090	421	(32%-49%-19%)
(15) Do you have to stop for breath when walking at your own pace on level ground?	502	1079	659	(22%-49%-29%)
(16) Does your chest ever sound whistling or wheezing?	1125	1127		(50% - 50%)
(17) On most days or nights?	687	472	1066	(31%-21%)
(18) Have you ever had attacks of shortness of breath with wheezing?	703	1496		(32% - 68%)
(20) Does the weather affect your chest?	634	1596		(29% - 71%)
(21) Does the weather make you short of breath?	470	519	1237	(21%-23%-56%)
(26) During the past three years have you had any chest illness which has kept you from your usual activities for as much as a week?	617	1634		(28% - 72%)
(27) Did you bring up more phlegm than usual in those illnesses	408	268	1542	(18%-12%-70%)
(29) Do you have a heart condition for which you are under a doctor's care?	445	1799		(20% - 80%)

(smoking)

(1) Do you now smoke cigarettes?	624	1629		(28% - 72%)
(2) Have you ever smoked cigarettes?	1198	417	600	(54%-19%-27%)
(6) During the years that you smoked, did you ever quit for a year or more?	582	1114		(34% - 66%)
(7) How much did you smoke on the average? 48% smoked 10 or more cigarettes per day				
(8) Do/did you inhale?	1459	250		(85% - 15%)

	<u>YES</u>	<u>NO</u>	<u>DK/NA</u>
(16) Have you ever tried to quit smoking?	908	148	1097 (42%-7%-51%)
(17) Would you like to quit smoking?	585	158	1380 (28%-7%-65%)

