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July 3, 1969

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PLASTICS

Mr. J. A. Riddle
Plant Manager
Union Carbide Corp.
P. O. Box K
King City, California 93930

Dear Mr. Riddle:

We are delighted by the interest that you and others have shown in the work being done at Mount Sinai Hospital through the Insulation Industry Hygiene Research Program, and we are most pleased to be able to send you the attached first two quarterly reports of the IIHRP and to place your name on the mailing list to receive future copies as they appear.

This program, we believe, is of vital importance to all those connected in any way with the asbestos industry and its problems. The support, encouragement and understanding of those in the industry is essential to the successful furthering of this and other programs being carried on throughout the world to identify and control asbestos-related diseases.

Very truly yours,

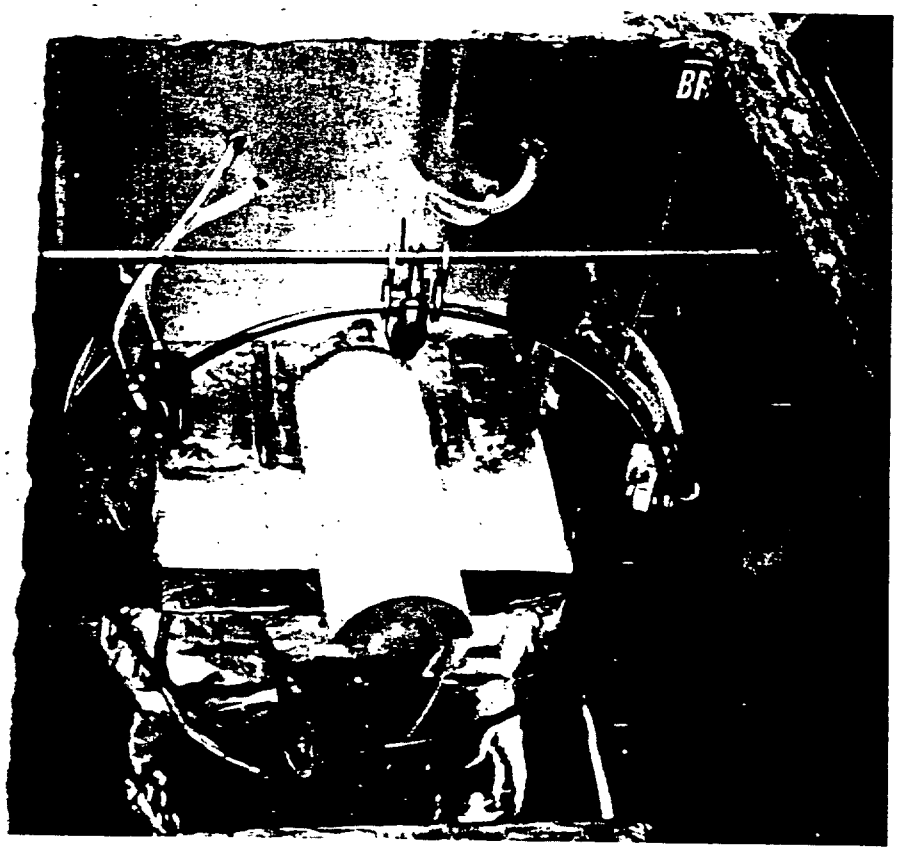
Matthew M. Swetonic

Matthew M. Swetonic
Public Relations Department

MMS:mvds
Attach.

A11923

Coating Process Developed to Control Product Dusts



Experimental chamber in which new coating process is applied to prevent dust from shaking loose from various asbestos-containing materials. A section of pipe covering is seen. Coating is sprayed out of nozzles on ring.

A new coating process has been developed to prevent dust from shaking loose from various asbestos-containing insulation materials as they are jarred during shipment or handled on the job.

The process consists of applying a microscopically thin coating of a wax-like material to open sections of such products as pipe covering, elbows and blocks. The coating is pressure-sprayed on the products before they are packed in shipping containers.

Developer of the new technique, which is still being improved, is Elmer B. Hurley, a research associate at the Research and Engineering Center of the Johns-Manville Corporation in Finderne, New Jersey. Development of the process resulted from the Insulation Industry Hygiene Research Program's overall effort to reduce sources of dust at construction job sites.

Dr. Hurley said the coating, which consists of a wax-like substance mixed with water, is easily and quickly applied through a unique gun-type device. It dries by itself within 10 seconds and contains no toxic materials, he said.

The material is slightly tinted to provide visual proof that the surfaces of the insulation products being shipped are covered, he said.

Originally developed as a corrosion inhibitor for various metals, the coating reduces abrasion between items in a shipping container. This further prevents production of dust.

Dr. Hurley said research was underway to package the coating material in aerosol containers for use on job sites where insulation products are cut.

A11932

Solid Waste Gets IIHRP Attention

Procedures for controlling and eventually eliminating possibly harmful dusts produced by solid waste materials on construction jobs are getting attention from the Insulation Industry Hygiene Research Program (IIHRP).

As a first step, IIHRP representatives met recently for a discussion of the problem with federal and New York City officials.

"The problem is more than one of controlling dusts from insulating materials," said Dr. Irving J. Selikoff, Director of Mount Sinai's Environmental Sciences Laboratory and also of the IIHRP. "We are concerned with the total population exposure to dusts that one sees from the great variety of material on every construction site."

Joint Study Discussed

The March 20 meeting saw agreement on the desirability of a cooperative federal-IIHRP project to study and recommend ways to collect, transport, and dispose of all construction wastes.

At the meeting for the U.S. Department of Health, Education and Welfare were Dr. Marcus Key, Acting Director of the Bureau of Occupational Safety and Health; Russell Cummings and Jan Campbell of the Bureau of Solid Waste Management; K. L. Johnson of the National Air Pollution Control Administration, and Gerald Hansler of the Bureau of Consumer Protection and Environmental Health Sciences. Also participating were Austin M. Heller, Commissioner of Air Resources of New York City, Dr. Selikoff, and two members of the IIHRP's Advisory Council, J. B. Jobe and Dr. Fred L. Pundsack, both of Johns-Manville Corporation.

"I feel we have begun action that will bring significant results to this serious problem," Dr. Selikoff said. "In New York City alone 2,000 tons of waste a day arise from construction work. Four million men throughout the nation are involved with some phase of construction. The presence of federal and city officials at this meeting is indicative of the magnitude of the problem and the concern for it."

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Insulation worker Bill Sheppard gives IIHRP staff consultant Duncan Holaday his on-the-job reaction to new respirator.

Results of Union Survey

(Continued)

gardless of a mask's efficiency, it was too seldom worn, even on dusty jobs, primarily because of discomfort and interference with breathing. This particular finding stimulated the IIHRP effort to develop an efficient and acceptable mask that would be worn.

More than 12,000 members answered the questionnaire; nearly 8,700 of them replied to the specific questions about evaluation of the masks. About 5,000 men found the masks unsatisfactory; some 3,700 thought they were satisfactory. However, the fact is that those who said the masks were "satisfactory" did not use masks any more often than did those who did not find them "satisfactory." Only 4 percent of the workers said they always wore a mask at a dusty job and almost 30 percent said they never used such protection.

Here are some comments by union members that helped IIHRP scientists as they sought to develop an efficient and effective mask:

"On a hot job the gauze may become saturated with sweat very early in use and the dust particles soon adhere to the mask, making breathing difficult."

"There is condensation in cool weather and leakage around the mask."

"Most masks are designed to filter visible size dust particles. They are of no use in filtering dust of microscopic size."

"Awkward to breathe through and impossible to wear in some areas due to closeness of work. Also tends to obstruct full vision."

Worker dissatisfaction with available masks fell into these categories:

Discomfort	37%
Interference with breathing	21%
Problems with filters	14%
Unavailability of masks or replacement filters	7%
Inconvenient to work with	7%
Interference with vision	6%
Ineffectiveness	4%
Condensation problems	2%
No problems with existing masks	4%

Results of the survey have been analyzed by scientists and hygienists associated with the IIHRP. In designing the new mask, they realized two essential features were important: 1. The mask must be acceptable to insulation workers—in terms of comfort, breathing, vision, effective filtration, etc.; 2. Effectiveness must be measured in terms of keeping out fibrous dusts.

Hygienists Visit West Coast Sites

Two industrial hygienists associated with the Insulation Industry Hygiene Research Program have completed the second phase of a cross-country survey of insulation industry trade practices. Particular emphasis on the trip was given to observing conditions in shipyards.

William B. Reitze and Ralph D. Hindmarch visited private shipyards in Seattle and San Diego, and U.S. Naval Yards in San Francisco, Long Beach and San Diego. They also visited commercial and industrial sites in Detroit, Seattle, San Francisco, and Los Angeles to study how industry conditions and practices on the West Coast differ from those in other parts of the United States which had been previously visited. The application of insulation materials by unions other than the International Association of Heat and Frost Insulators and Asbestos Workers also was studied for possible health hazards.

IIHRP industrial hygienists have previously visited construction projects and fabricating shops in the east, midwest, south and southwest sections.

Wayne Kelley, International Organizer for the Western States Conference of the IAHFIAW, and local union and industry representatives accompanied the IIHRP team. Dr. William Nicholson, IIHRP Program Coordinator, and Duncan Holaday, a staff consultant, joined the team in the Los Angeles area.

Field Tests of Mask

(Continued)

out improvements for the disposable-type respirator. When this has been done, further field tests are planned.

"We are trying to develop a mask that is both acceptable and effective, because one factor is no good without the other," said Dr. Irving J. Selikoff, Director of the Environmental Sciences Laboratory at Mount Sinai School of Medicine in New York City and Director of the IIHRP. "No mask is effective if it remains in the tool box or clothes locker."

The field trial was under the direction of Duncan Holaday, a consultant to IIHRP. Assisting him was Dr. William J. Nicholson, Program Coordinator of the IIHRP, and George Reimschussel of Johns-Manville Research and Engineering Center, who is working on the mask design.

A11931

Insulation Hygiene Progress Reports

Vol. 1, No. 2—Summer 1969

from the

Insulation Industry Hygiene Research Program

Editor: W. J. Nicholson, Ph.D., Published at the Environmental Sciences Laboratory (Irving J. Selikoff, M.D., Director), Mount Sinai School of Medicine of the City University of New York, New York, N.Y. 10029

Advisory Council of IIHRP

Irving J. Selikoff, M.D. Program Director and Chairman

E. Cuyler Hammond, Sc.D. Vice President, American Cancer Society, New York, N.Y.

Albert Hutchinson, General President, International Association of Heat and Frost Insulators and Asbestos Workers, Washington, D.C.

J. B. Jobe, Vice President, Johns-Manville Corporation, New York, N.Y.

Fred L. Pundsack, Ph.D. Vice President, Research and Development, Johns-Manville Corporation, New York, N.Y.

George W. Wright, M.D. Director of Medical Research, St. Luke's Hospital, Cleveland, O.

PURPOSES OF THE INSULATION INDUSTRY HYGIENE RESEARCH PROGRAM

1. To develop improved methods for minimizing exposure of insulation workers to dusts and fumes encountered in their work.

2. To disseminate knowledge of these improved methods of dust control wherever they may be applied advantageously and to offer cooperation, advice and assistance toward their universal adoption.

Scientist and Occupational Health Expert Join IIHRP

William J. Nicholson, Ph.D., has been appointed Program Coordinator for the Insulation Industry Hygiene Research Program. Announcement of the appointment was made by Dr. Irving J. Selikoff, Program Director.

Dr. Nicholson will supervise overall coordination between on-site sampling conducted by industrial hygienists, the laboratory analysis of field samples, and the task forces organized to seek solutions to the particular problems of the insulation industry. He also will serve as editor of *Insulation Hygiene Progress Reports.*

Dr. Nicholson joined the program this year after having served for eight years on the staff of the Watson Laboratory of Columbia University where he directed research in molecular biology and also worked on instrumentation for the automatic detection of abnormal and cancerous tissue cells. He is a graduate of the University of Washington where he held Atomic Energy Commission and University Graduate Fellowships.

In referring to his appointment, Dr. Nicholson emphasized that it is particularly important for academic scientists to become involved in the direct needs of society. "The ivory tower of the university no longer exists. To me, this program is important and exciting because it offers the opportunity to apply the tools and knowledge of the sciences to the practical health problems of construction workers and the general population."

Duncan A. Holaday, a veteran in occupational health work, has joined the Insulation Industry Hygiene Research Program as a consultant to several task forces studying specific health problems of the insulation industry.

Among his first responsibilities are the directing of field tests of respirators developed for use by insulation workers, and the selection and testing of a feasible, self-contained air supply mask.

Mr. Holaday comes to the IIHRP from the U.S. Public Health Service where he served for 25 years with the Bureau of Occupational Safety and Health. During this time he was Chief of the Occupational Health Field Station in Salt Lake City for 14 years and later served as Deputy Chief of the Bureau.

His experience has included the organization and direction of intensive studies of health hazards in specific industries, particularly those associated with uranium mining. He is a recipient of the Meritorious Service Medal of the Public Health Service and the Distinguished Service Award of the Health Physics Society.

"Occupational health problems created by the use of insulating materials are manifold and their solutions will not be simple," Mr. Holaday said on assuming his appointment. "However, the fact that industry, labor and scientific groups are concerned and are cooperating to reduce the hazards is assurance that practical answers will be found."



Dr. Nicholson



Mr. Holaday

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Environmental Sciences Laboratory

MOUNT SINAI MSM SCHOOL OF MEDICINE

of The City University of New York

INSULATION HYGIENE PROGRESS REPORTS

FROM THE INSULATION INDUSTRY HYGIENE RESEARCH PROGRAM

Irving J. Selikoff, M.D., Program Director
Vol. 1 No. 2 Summer 1969

New Mask Undergoes Field Test



They're not Martians, just members of Local 17 of IAHFIAW field testing a new type mask. Each mask is slightly different though they look alike. From left to right: Alan Miller, Edward R. Grant and James Hupp.

Science moved out of the laboratories and onto construction sites in April when insulation workers, members of Local 17 (IAHFIAW) in the Chicago area, were called upon to play a key role in testing a new type of respiratory mask to protect against on-job dusts.

Union members were asked to give their personal evaluation of the acceptability of three variations of a face mask especially designed by scientists and technicians associated with the Insulation Industry Hygiene Research Program (IIHRP). The project was given top priority when it was learned from a unionwide survey that presently available masks were not much used on the job.

The survey showed union members had many many good reasons for not liking—and therefore not wearing—present masks. Responses offered many suggestions that were incorporated into the design of the new mask. (See story at left.)

Although the long-run objective of IIHRP is to eliminate the generation of asbestos and other dusts on job sites, it was considered important meanwhile to develop better protection against breathing dusts unavoidably created by working with insulating materials. It is hoped the newly developed mask, already checked out for its filtering efficiency with the U.S. Bureau of Mines, will have broad application in other industries where dusty work is unavoidable.

Three Models of Mask Tested

Three models of the experimental mask were worn on three successive half-day work periods by Local 17 members working on the $100-million addition to Commonwealth Edison Company's Dresden Nuclear Power Plant at Morris, Illinois. Each worker gave his evaluation of each mask, and IIHRP scientists then began analyzing these comments to work

(Continued on center spread.)

Union Survey Shows Current Masks Have Drawbacks

"HELP!"

"Try to convince the men the mask is all important."

"A good respirator can aid our program greatly."

These comments pretty much sum up the feelings that thousands of insulation workers have about respiratory protection equipment. Most workers find major drawbacks in currently available masks.

Because of this reaction to present respirators, scientists of the Insulation Industry Hygiene Research Program gave priority to development of a new mask that would be both effective and acceptable to insulation workers. Such a mask is now in the field-testing stages of development. (See story at right.)

The quotations were among responses to a survey of the nearly 18,000 members of the International Association of Heat and Frost Insulators and Asbestos Workers. Union members were asked by questionnaire about their personal use of masks and how they rated their effectiveness.

An important finding was that re-

(Continued on center spread.)

A-11929

Joint Research Effort

(Continued from page 7)

importance of the research program to the Union membership, he said the Union's contribution to it is financed by a special assessment rather than through regular dues payments.

Dr. Selikoff explained that much of the research is being conducted in the field by a team of industrial engineers and hygienists, while analytical work is conducted at the Environmental Sciences Laboratory.

Dr. Selikoff said the program consists of a national survey of current trade practices, primarily among insulators in the building construction field; quantitative measurements of dust exposure to determine how much inhalable dust is released into the air by various operations: qualitative analyses of mixed dust samples to determine what types of dusts are released, and their comparative effects on health. Specific aims of the program reviewed by the panelists included: the development of improved work practices for the industry to minimize dust exposure, design of appropriate ventilating and exhaust devices, improved respiratory masks. better housekeeping procedures, and definite work rules and methods of personal protection.

Dr. Selikoff explained that, like all workers exposed to a dusty occupational environment, those in the insulation trades in the construction industry run a risk of contracting respiratory disease. However, there is no precise information on what constitutes a dangerous concentration of mixed dusts, or of any particular dust. In recent years the greatest attention has been focused on asbestos dust as a health hazard when inhaled in excessive quantity over a protracted time period. The most common disease hazard is abestosis, one of the class of diseases known as pneumoconioses. Excessive inhalation of almost any type of dust can cause a type of pneumoconiosis. Additionally, it has been reported that the inhalation of asbestos dust increases the risk of lung cancer.

"The problem is a serious one for insulation workers at present. However, since we have discovered and defined this risk, it has also become evident that it can be removed. That is the purpose of this new program. Moreover, analysis of the problem made it evident that today's solution is the proper one," said Dr. Selikoff

IIHRP Hygienists Study 30 Construction Sites

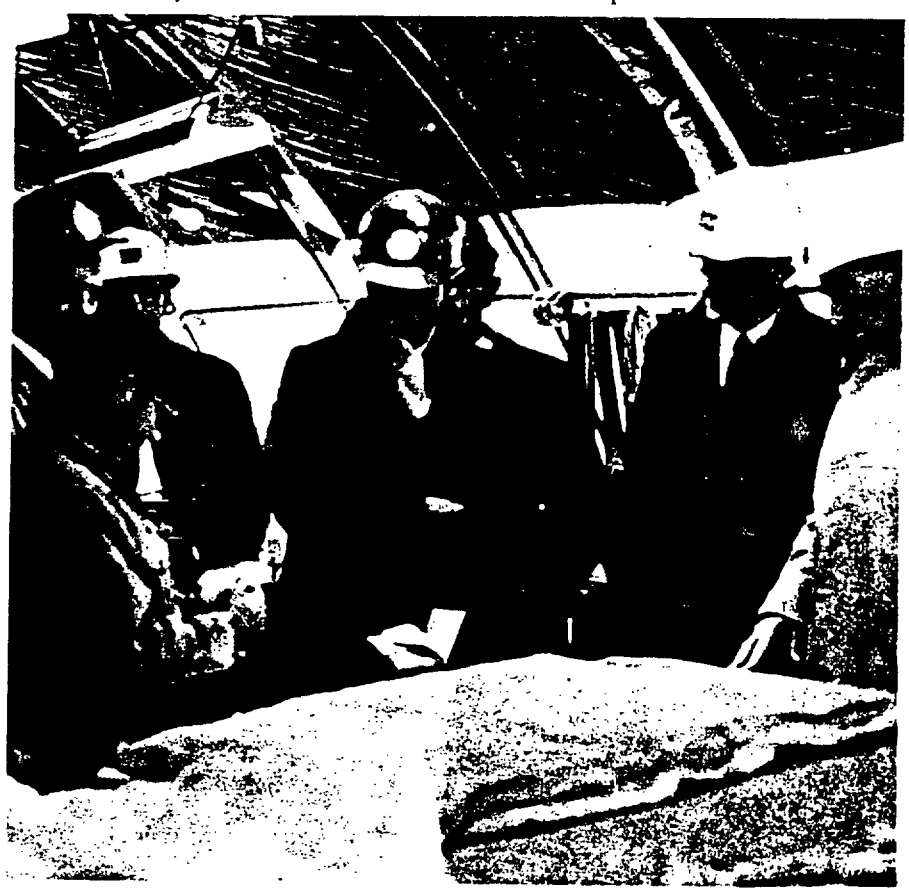
Industrial hygienists Ralph D. Hindmarch and Alfred Spenney have completed on-site inspection studies at 30 construction projects and fabricating shops in the east, midwest, south, and southwest sections of the country.

Samples of mixed dusts were collected and information was gathered about work procedures, Mr. Hindmarch reported to the IIHRP Advisory Council, adding that he and Mr. Spenney received full cooperation from both union and management representatives.

On the basis of their observations, the Council is now moving ahead with plans for more detailed sampling and analyses in regard to various field operations in the beginning phases of insulation and fabrication. It is expected that two sites in the New York-New Jersey area will be selected for close study.

Mr. Hindmarch said he and Mr. Spenney studied these job operations during their field trip: installation of block and pipe covering; installation of fiber glass blanket and pipe covering; installation of mineral wool blanket; cutting of pipe covering, block and blankets (including calcium silicate, fiber glass, mineral wool, and foam glass); mixing and applying various cements; opening cartons of insulation of all types; cutting and installing polyurethane; installing spray-on insulation.

The hygienists made on-site studies in the following locations: New York City, Long Island. New Jersey (Jersey City, Toms River), Texas (La Porte, Houston, Texas City), Missouri (St. Louis, Kansas City), Louisiana (Baton Rouge, New Orleans), and Illinois (Naperville, Kincaid, Wood River. Alsip).

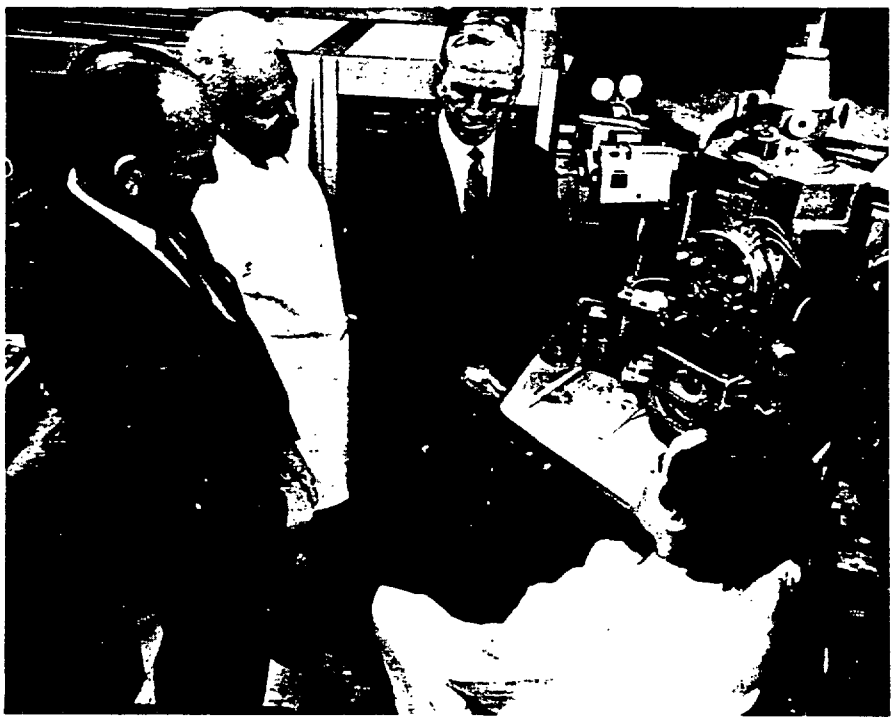


Members of IIHRP Advisory Council joined hygienist team in visit to Oyster Creek generating station construction site in Toms River, N. J. Observing a sawing operation are Drs. Selikoff, Hammond and Pundsack.

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Union Carbide trial exhibit UC-153: M. M. Swetonic (Johns-Manville) to J. A. Riddle on Sending the Insulation Indust… Published by AsbestosClaims.Law
ACL Doc 15424 · Page 6 of 13 asbestosclaims.law/library/15424/6

Science, Labor, Industry on IIHRP Advisory Council



Mr. Hutcninson (left), Dr. Selikoff and Mr. Jobe, three of the six members of IIHRP Advisory Council, discuss function of electron microprobe equipment with Dr. Arthur Langer (seated), staff mineralogist at Mount Sinai's Environmental Sciences Laboratory.

A six-man Advisory Council, representing science, labor and industry, will meet regularly to provide consultation and leadership for the Insulation Industry Hygiene Research Program. Dr. Irving J. Selikoff, Program Director, is chairman.

Other members of the Advisory Council are: Albert E. Hutchinson, General President, International Association of Heat and Frost Insulators and Asbestos Workers; J. B. Jobe, Vice President, Johns-Manville Corporation; Dr. E. Cuyler Hammond, Vice President, American Cancer Society; Dr. Fred L. Pundsack, Vice President, Research and Development, Johns-Manville Corporation; Dr. George W. Wright, Director of Medical Research, St. Luke's Hospital, Cleveland.

Joint Research Effort

(Continued from page 1)

Participants in the panel discussion October 14, 1968, included Dr. Selikoff; Dr. George James, Dean of Mount Sinai School of Medicine; J. B. Jobe, Vice President of Johns-Manville Corporation; Albert E. Hutchinson, General President of the Asbestos Workers Union, and Dr. Murray C. Brown, then Director, Bureau of Occupational Safety and Health, USPHS.

Dr. James, former New York City Health Commissioner, said the research "will produce knowledge and benefits that can be applied far beyond the particular occupations represented by the insulation workers union."

Dr. Brown defined the role of the Public Health Service as that of "catalyst for this precedent-making program. The federal government can provide leadership. Much of the actual work can and should be done by industrial concerns, unions and private establishments such as Mount Sinai's Environmental Sciences Laboratory."

Discussing industry's part, Mr. Jobe cited experience in manufacturing which shows that effective health and safety practices depend on cooperation between management and labor. Such practices cannot be imposed by management on workers who are not interested, nor imposed by organized labor on management unwilling to make them part of standard working procedures, he said.

Mr. Hutchinson of the Union hailed the program as "a welcome culmination of our continuing consultations and meetings with scientists, Public Health Service officials and industry representatives." As evidence of the

(Continued on page 8)



Dr. Hammond



Dr. Pundsack



Dr. Wright

A11928

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2. To disseminate knowledge of these improved methods of dust control wherever they may be applied advantageously and to offer cooperation, advice and assistance toward their universal adoption.

Help Wanted!

Current work practices in the insulation industry were adopted at a time when it was not suspected that dust exposures in this trade might involve some risk. It is now known that health hazards have been present, under certain conditions, in association with such practices.

Although these problems are recognized, there is also evidence that as dust exposures are sharply decreased, health hazards can be minimized or eliminated. It is therefore entirely logical that work practices now be re-examined, and so modified or altered as to reduce dust exposure, and still preserve their industrial effectiveness.

This will require hard work, diligence and persistence. But above all, it will require ideas and ingenuity!

We want your comments, your suggestions, your advice. A good start has already been made; almost 14,000 workmen in the International Association of Heat and Frost Insulators and Asbestos Workers have written about their observations concerning dusty work conditions. Their suggestions are now being analyzed. Contractors and manufacturers are adding the results of their practical experiences—these will be invaluable to our industrial hygiene engineers.

There is vast knowledge and skill in this industry, among its craftsmen, its supervisory personnel and its leaders. We need the help of all. *INSULATION HYGIENE PROGRESS REPORTS* invites your thoughts now, at the outset of the Insulation Industry Hygiene Research Program. From time to time, as the engineers make suggestions for the consideration of the industry, we will welcome your analyses of the proposals, to ensure that they are practical and to everyone's benefit, labor and contractor alike. At other times, those of you who are able will be asked to serve on special advisory groups to study particular problems and suggest solutions—your participation will be valuable.

In the next several years, all of us —Industry, Labor, Science, Government—must contribute the unique resources which we each have, so that health hazards will be removed from this important and essential trade—I.J.S.



Joseph R. Shrode (pointing) of Pasadena, Tex., international organizer for the Asbestos Workers Union, and Johns-Manville contract manager C. E. Foster of Houston inspect asbestos-sprayed girders and insulated duct-work at Houston construction site. They helped the IIHRP team's on-site survey. (See story on page 8)

A11925

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Environmental Sciences Laboratory

of The City University of New York

INSULATION HYGIENE PROGRESS REPORTS

FROM THE INSULATION INDUSTRY HYGIENE RESEARCH PROGRAM

Irving J. Selikoff, M.D., Program Director
Vol. 1 No. 1 Spring 1969

Joint Health Research Effort Starts For Insulation Men



Panel of experts meets in New York to discuss Insulation Industry Hygiene Research Program. From left to right: Mr. Jobe, Dr. Selikoff, Dr. James, Dr. Brown, Mr. Hutchinson.

The Insulation Industry Hygiene Research Program (IIHRP), already well under way, represents the nation's first cooperative effort by an international labor union, industry, and science, consulting with government to undertake a health research program for industrial workers. This fact emerged at a public discussion of the program by a panel of experts at Mount Sinai School of Medicine, New York. (See page 4 for excerpts from the discussion.)

The program is budgeted at $362,500 for the first year and is jointly financed by the International Association of Heat and Frost Insulators and Asbestos Workers, and Johns-Manville Corporation. The Sprayed Mineral Fiber Manufacturers Association also is supporting and cooperating in the venture. The program is expected to run five years.

Dr. Irving J. Selikoff, Director of Mount Sinai's Environmental Sciences Laboratory and Director of the IIHRP, said the primary purpose of the combined industrial hygiene and preventive engineering research program is to develop improved methods that will minimize exposure of insulation workers to dust and fumes encountered in their jobs. The U.S. Public Health Service's Bureau of Occupational Safety and Health will provide consultation and technical assistance.

(Continued on page 7)

IIHRP Advisory Council Sees New Masks, Hears Other Progress

Rapid progress on important projects to reduce on-job dust exposure was reported at recent meetings of the Advisory Council of the Insulation Industry Hygiene Research Program.

Council members were given details of on-site inspections at 30 construction sites and fabricating shops in various parts of the country by an industrial hygiene team (see story on page 8).

New Respirator Developed

Dr. Fred L. Pundsack reported development of prototypes of a new face mask respirator that is efficient, comfortable and disposable. He showed Council members some of the new masks. Tests at the U.S. Bureau of Mines laboratory in Pittsburgh, Pa., showed the masks to be efficient in filtering dusts of the type encountered in some insulating work.

The mask, samples of which are being field-tested in February, is in

(Continued on page 3)



Dr. Pundsack shows new mask

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Discussion Excerpts

(Continued from page 5)

will reduce and eliminate these hazards. We are confident that knowledge acquired through this program will be applicable to other industries and other occupations. We hope the trail-blazing program being inaugurated here today will encourage other segments of industry to provide needed support for such research.

Question: Dr. Selikoff, are you going to be mainly concerned with asbestos dust, or will you be looking at other kinds of dust? And I see the word fumes used here.

Dr. Selikoff: We are going to insure that the insulation workers, whether of this union or of others, will be free of exposure to all dust and fumes, so far as it is possible, because some of the other insulation materials used contain materials which we now know to be hazardous. And we think it's safer that a foreign material not be inhaled by anyone even if we do not at this point recognize a significant hazard.

Question: Dr. Selikoff, will part of this study deal with others in the areas of this construction?

Dr. Selikoff: In a sense, yes. But in another sense: We feel that when we successfully control the dust produced by the insulation workers in the process of applying insulation, we will simultaneously remove any hazard which might occur as a result of any dissemination of these dusts beyond their immediate confines. So that solving this immediate problem, we simultaneously solve any potential problem which may exist even though these are less well defined.

Dr. James: What about the others in the construction industry, carpenters, plumbers, steam fitters, welders, and laborers, the architects?

Dr. Selikoff: We are not sure that the dusts which subject the insulation worker to hazard might not also have some slight hazard or additional hazard to other workmen in the construction industry. Again, we feel that as we control the insulation worker's dust we simultaneously control any potential exposure to any of the other trades in the construction industry. And we feel, too, as Mr. Hutchinson mentioned, that the measures we will be able to design and apply for the construction worker are going to be later applied and adopted by many other trades that produce dust in their work.

Dr. Brown: We've been puzzled for a number of years by the fact that the Bureau of Old Age and Survivors Insurance data indicate excessive deaths for construction workers, a very high risk trade, quite apart from accidents. We have puzzled over this. We've speculated too that these people are exposed to unusual stresses. They work in climatic conditions which are rough, and they are under all sorts of stresses that the rest of the population aren't. But it is a significant portion of our total population.

Certainly we can't lose anything by improving the control of dusts of all kinds to which they're exposed.

Question: I would like to know what is being done now to keep dust levels down, especially with the workers who work in direct contact with a lot of dust and things?

Dr. Brown: Well, Dr. Selikoff has some very positive steps planned. We want to emphasize there's a great deal of research going on. But what we're talking about here is the practical method of how you control dust.

We think the industry in general has done a rather good job of reducing dust levels in the manufacturing process. This is done primarily by ventilation techniques, which is what we do in the dusty trades generally. Because we have lacked knowledge as to the exact amount of asbestos dust that can be tolerated we have had to go blindly here on the assumption that the dusty trade standard was somewhere about right and was a good thing to use.

Dr. Selikoff: I'll add a little bit to what Dr. Brown says. We are not really concerned with dust counts, and we're not really concerned with getting it down to 100 million particles or 50 million particles or one million per cubic foot. We want to so reorganize trade practices so that as far as possible no dust is created.

Dr. James: If 7 or 8 percent, which is about one out of twelve, of the working force is in the construction industry, and therefore is potentially exposed, this goes a long way to making this a general matter. Also there is the fact that more and more of our environmental hazards seem to be acting in concert. If you have cigarette smoking and you have air pollution and you have asbestos dust and you have respiratory virus illness, all added together, this can mount up to a significant degree and cause much serious illness and disability. Whereas, if you can reduce one or the other of them you can then reduce the hazard.

And so we can attack the things we know how to attack as we learn how to do it. Certainly diseases like lung cancer and pulmonary emphysema are two of the most rapidly growing diseases in the United States, two of the real epidemics, if you want to call them that, in the recent decades, with no indication that the peak has been turned. Anything that can be done to reduce the insult to the lungs and reduce the incidence of respiratory diseases should be done.



Members of the Asbestos Workers Union install pipe covering in Oyster Creek generating station now being built at Toms River, N. J. Site was visited by IIHRP team. (See story on page 8)

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Excerpts From Panel Discussion by Experts On Insulation Industry Research Program

(Continued from page 4)

This didn't pack any wallop at the time. People doubted it. They said to me. "Well, labor's more interested in hazard pay than they are in protecting their workers. Industry is more interested in profits than they are in helping their workers and protecting them." They didn't see any basis for the statement.

Well, we're sitting here today, a short three years later, and here you see the partnership in effect as we laid down in our report. We said that every level of government could find common cause with industry, labor, the academic community, and with the professions.

Here we see these groups put together. This is not talk anymore. We aren't just saying what we're going to do. Labor has put its money on the line. Industry has put its money on the line. Mount Sinai has put its facilities on the line. And we, to the extent the expertise of our shop can be used, are putting ourselves on the line. We're doing everything we can to encourage this action program. And, please remember it is action-oriented. This is a program designed to protect workers by reducing the amount of dust, by immediate application of what we know, and by developing knowledge as rapidly as possible which will lead to this.

Now there's been a great reduction in asbestos dust exposure throughout industry over the last twenty-five or thirty years. But what is being said here is that this isn't fast enough or good enough, and that the evidence is beginning to pile up that we must go to lower levels than we have achieved so far. And to do so in this particular trade is going to be hard, but nevertheless there are practical things already in sight which I hope Dr. Selikoff is going to mention before he's through here today.



Dr. Brown

Dr. James: It's appropriate to hear from Mr. Albert Hutchinson, the President of the International Association of Heat and Frost Insulators and Asbestos Workers.

Mr. Hutchinson: Thank you, Dr. James. Our Union once again is pioneering to achieve better health protection for our members. The importance to Union members of this new Insulation Industry Hygiene Research Program is shown by members' contributions which amount to some $150,000. This, with similar industry funds, provides monies for the engineering and scientific research necessary to understand and prevent on-the-job exposures that can create health risks.



Mr. Hutchinson

One of our problems is that we only represent about 25 percent of the people who actually apply insulations. And this is one of the reasons why I think that this program will be of great benefit; what we find here can be shared not only with the other trades, basic trades and the subtrades that work with us on these jobs every day, but can also be taken into the non-union element.

It is our hope that, as this program progresses at Mount Sinai's Environmental Sciences Laboratory, other unions in related trades will join with us in supporting such important practical research.

Dr. James: Now we'll hear from J. Burt Jobe, who is the Vice President of Johns-Manville Corporation, without question the largest producer of insulating material in the United States.



Mr. Jobe

Mr. Jobe: We in the asbestos industry have long been carrying out our responsibilities in our mines and plants for reduction of worker exposure to excessive dusts and other hazards that are inevitable consequences of an industrial society. In this new and unique undertaking with an international union and with medical science, we are extending our concern to those who work with asbestos and other products under conditions that may generate unnecessary and undesirable exposures.

We know from a great deal of study carried on in our own plants and mines that effective controls can be devised, and that when these environmental controls are accepted by both management and labor that the hazard can be greatly reduced. Effective health and safety practices cannot be imposed by management on workers who are not interested in observing them. Neither can they be imposed by organized labor on a management unwilling to adopt them and make them part of standard working procedures. For maximum effectiveness the controls have to be usable and accepted by all concerned. We think that this is a real opportunity for the workers and the industry to join hands and we're very glad to be a part of it.

We are impressed by Dr. Irving Selikoff's proposals that will combine the science of medicine with the skills of the engineers to identify and define health hazards associated with insulation work and to develop technical and working procedures that

(Continued on page 6)

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Experts Discuss Insulation Industry Research Program

The reasons for, and objectives of, the new Insulation Industry Hygiene Research Program were discussed by principals in the program at a meeting at Mount Sinai School of Medicine during October (see story on page 1). Dr. George James, Dean, Mount Sinai School of Medicine, chaired the discussion, and other participants included Dr. Selikoff, Program Director; Dr. Murray Brown, then Director, Bureau of Occupational Safety and Health, U.S. Public Health Service; Mr. Hutchinson of the Union, and Mr. Jobe of Johns-Manville Corporation.

Following are relevant comments by participants at the panel discussion:

Dr. James: Representing the Mount Sinai School of Medicine, I would like to say that in this era, medical institutions and universities must be relevant to their times. They not only have to do educational programs, service programs, research programs, but they have to do them in fields which are significant to the life and health of America.

In this particular instance, we have the problem. We feel that we in this institution have the ability to develop solutions. And under Dr. Selikoff's leadership, I feel pretty sure we will. With the excellent cooperation of these gentlemen who are up here, I think he will have every opportunity to achieve success in the near future.

We might ask Dr. Selikoff to tell about some of the steps which he hopes to take in the very near future to implement this program.



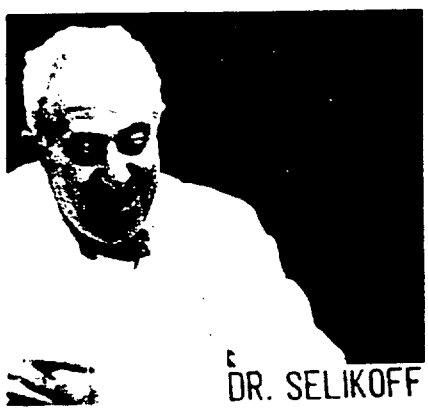
Dr. James

Dr. Selikoff: For the last six months we have already been working diligently in initiating the appropriate steps that have to be taken. For example, Dr. Fred Pundsack, who is in charge of Research and Development at Johns-Manville's research laboratory, together with some of our scientists, Dr. A. M. Langer, Mr. C. Berkley, has been concerned with the development of a new type of respiratory device for those circumstances in the insulation trade in which other methods will be inadequate and where personal protection will be required.

Mr. Ralph Hindmarch has joined our laboratory staff as an industrial hygiene engineer and is now regularly visiting various construction sites in New York and other parts of the country to carefully review all the trade practices which will have to be corrected. Mr. Duncan A. Holaday, one of the country's leading industrial hygiene experts, will be joining us shortly. Dr. W. J. Nicholson is coming to us from the Watson Laboratory of Columbia University, and other scientists and engineers are being recruited. We have organized an advisory committee to our laboratory, and have laid out the outline of this program.

All of this adds up to the fact that we are looking very carefully at every single thing that an asbestos worker does in the construction industry in the United States. The exposures to which these men are subjected are being defined and the trade conditions which make for dust in this occupation are being reviewed. And we are undertaking the necessary engineering program to eliminate the dust hazard and make the trade safe. There are about 18,000 union insulation workers in the country. There are probably the same number of non-union insulation workers. But there probably are around 75,000 other workmen in the construction trades who also apply insulation as part of their work, such as bricklayers, roofers, and others.

We are looking at the entire insulation problem so that we will end up with a program that will allow protection and safe work not only for Mr. Hutchinson's union men, but for all people in the construction industry.



Dr. Selikoff

Dr. James: Thank you very much. Dr. Brown, since you have played a major role in getting this program underway, and since the United States Public Health Service as part of the Department of Health, Education and Welfare has a responsibility for the investigation of health problems in the nation, would you tell us about the events leading up to this program and what you hope might come from it?

Dr. Brown: We should all be proud of this day. In 1965 we prepared a report for the Surgeon General, which was done partially by staff and partially by outside consultants. It has been labeled the Frye Report, because Bill Frye, the Chancellor of LSU's medical campus in New Orleans, was the leader of the group. In the prologue to that document, we said that we thought we'd arrived at a point in this society where the labor movement and industry are characterized by maturity, and we don't believe that either party wants anybody hurt as part of the conditions of work. We stated rather melodramatically that no longer could we be satisfied to have a man pay with his health or his life for the privilege of earning a living.

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Advisory Council Sees New Masks, Hears Other Progress

(Continued from page 1)

effect a total filter, he said. Further, he added, the exhalation valve on old-type masks probably will not be necessary on the new mask.

Dr. Pundsack said the prototype was designed following a survey of union members who complained that old-type respirators were too heavy, blocked vision, caused excessive sweating and made breathing difficult. For these reasons, the survey showed, respirators were infrequently used. Dr. Pundsack said the new mask was designed not just for efficient filtering, but to be comfortable, light in weight, to provide good visibility, reduce sweating and permit the wearer to breathe normally.

Field tests, he said, would reveal whether any further design adjustments have to be made before the mask goes into general production. He and other Advisory Council members expressed the hope that all union members as well as other workers in dusty trades, would use the masks as soon as they become available.

"Task forces," comprising skilled union craftsmen, supervisory personnel, contractors' representatives, company engineers, consulting engineers and manufacturers' representatives, are being organized to seek solutions to a number of problems:

- Design of a power saw for shop and field use, with self-contained exhaust and dust control.
- Improved materials packaging.
- Mixing of cement under field conditions.
- Respiratory protective equipment.
- Design of field shops with effective dust controls.
- Disposal of wastes.

The concept of the task force approach to hygiene problems in the insulation industry was defined by Dr. Irving J. Selikoff, Advisory Council Chairman.

"As sources of dust exposure are identified and studied by our engineers and scientists, task forces of industry-labor personnel will be formed to review the practices in question and to help propose suitable modifications," he said. "In some cases remedies will be readily evident and immediately at hand. In others, extensive design and development will be required. Both ends of the spectrum are anticipated and will be appropriately handled.

"Recommendations of the task forces will be carefully scrutinized when made. First, they will have to pass the test of effectiveness in significantly reducing dust hazards from the particular operation. Then they will be field tested under working conditions to ascertain whether they are feasible, economical and suitable for commercial application in the industry. Cost analyses will be made and considered, and no recommendation will be approved by the Advisory Council unless it is both effective and practical."

Dr. Selikoff said that task forces will be utilized in these other operational areas: Dust control in hand sawing operations; housekeeping on the job and in the shop; packaging and storage of materials; removal of old insulation; special problems of shipyards; personal protective clothing; personal hygiene facilities; health maintenance surveys.

Additionally, he said, appropriate industry-labor teams will be assigned as other important problems are identified and considered.



Herbert Levine (of the Asbestos Spray Corporation, Newark, N. J.), representing the Sprayed Mineral Fiber Manufacturers Association, Inc., presents check for support of the Insulation Industry Hygiene Research Program to Dean James of Mount Sinai School of Medicine. Dr. Selikoff is at left.

IIHRP Will Work Closely With PHS

As an essential part of the Insulation Industry Hygiene Research Program (IIHRP), close cooperative working arrangements have been initiated between scientists associated with the program and authorities of the U. S. Public Health Service (PHS).

Under the guidance and direction of the PHS Bureau of Occupational Safety and Health, the experience and facilities of the Bureau's National Center for Urban and Industrial Health in Cincinnati have been made available to the IIHRP. Scientists from the IIHRP and the PHS met at the research laboratories of Mount Sinai in New York on October 3 and October 28 and at the PHS facilities in Cincinnati on November 4. They reviewed and discussed the latest dust sampling equipment, methods and laboratory procedures for analyzing samples.

The IIHRP group visiting the Cincinnati center included Dr. W. J. Nicholson, Dr. James Leineweber, Carl Berkley, Alfred Spenney, Ralph D. Hindmarch and Donald Bailey. They met with Jeremiah Lynch, Howard Ayer and other PHS personnel.

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