REPORT ON CURRENT STATUS OF ASBESTOS/HEALTH

SEAVIEW

SEPTEMBER 28, 1970

INTRODUCTION

Considerable adverse publicity has appeared in the media with regard to possible occupational and public health hazards associated with the manufacture and use of asbestos-containing products. Recently, much of this publicity has resulted from actions by the City of New York to curb what they consider potential hazards arising out of the use of asbestos-containing spray insulations in commercial high-rise building construction. The city Department of Air Resources issued in April strict regulations designed to prevent the release of free asbestos fiber into the ambient air. The issuing of these regulations and subsequent public hearings on the subject were widely publicized throughout the nation. Similar investigations, generated by the New York City publicity, have been held or are underway and regulations are being considered in a number of other cities and states, including Philadelphia, San Francisco, Cleveland, and the states of Illinois, Indiana, New Jersey, Massachusetts and Connecticut. Indications are that in at least two cities, New York and Philadelphia, the decision will be made to ban entirely the use of asbestos-containing spray materials because of the alleged public health hazard.

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Additional adverse publicity has been generated by environmentalists and consumer protection advocates such as Barry Commoner, Rene Dubos and Ralph Nader, who from time to time include asbestos in their list of public health hazards. Certain politicians, especially those from cities and states where the use of sprayed asbestos is under investigation, have sought to cash in on the current interest in the environment by attacking asbestos. New York Congressman Richard Ottinger is a prime example. Ottinger, who is making a strong bid for the U.S. Senate seat from New York, made a number of "scare" attacks on asbestos during his primary campaign and will probably do the same in the November election.

On the Federal level, many groups are at work on the problem of asbestos-related disease. The Bureau of Occupational Safety and Health (BOSH) of the Department of Health, Education and Welfare (HEW) is preparing a report on Federal dust standards for asbestos processing plants. A special committee of medical experts (including Dr. George Wright, Medical Consultant to Johns-Manville on asbestos/health matters) has been set up by the National Academy of Sciences under a grant from the National Air Pollution Control Administration (NAPCA) to draft recommendations for the control of asbestos emissions into the ambient air. An interim report from this committee is due before year end.

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Closer to home, possible asbestos-related health hazards to workers and to the general public at Manville have been raised by the striking union. The New Jersey press has given a great deal of coverage to these union allegations.

The following facts on asbestos/health and information on J-M activities in this important area will help you place the problem in its proper perspective.

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FACTS

Asbestos is recognized as a health hazard under certain conditions.

Asbestos is recognized as the cause of asbestosis, a non-malignant fibrosis of the lung, among some workers occupationally exposed to large quantities of asbestos dust over long periods of time.

Numerous medical studies have reported higher than normal frequencies of lung cancer and mesothelioma (a rare tumor of the chest and abdominal cavity) among asbestos industry workers exposed to large quantities of asbestos dust over long periods of time.

Asbestos fiber is not known to be a carcinogen (cancer causing agent) but is probably a co-carcinogen (co-cancer causing agent) among people industrially exposed to it. To date, the principal medical study of asbestos insulation workers -- men who apply and remove pipe and equipment insulations in buildings, industrial plants and ships -- has not shown a higher than normal rate of lung cancer among non-cigarette smokers.

Asbestos does not affect, to the same degree, all those who are occupationally exposed to it.

The effects of excessive inhalation of asbestos are both time-related and dose-related.

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The amounts of asbestos dust that can be fully tolerated by the human are presently unknown.

It has not been shown that all so-called "asbestos bodies" found in human lungs contain asbestos. Animal research has indicated that other fibrous materials, in addition to asbestos, are capable of producing "asbestos bodies" in test animals. The term "asbestos body" has for years been loosely applied to describe a tiny body of tissue in the lung containing a core of some inhaled particle -- asbestos, talc, man-made fibers or other common substances. Such bodies are frequently found in great numbers in the lungs of asbestos workers. Because the overgrowth tissue contains some iron, a better term being used by many specialists today is "ferruginous (iron-like) body." The finding of scant numbers of "ferruginous bodies" in the lungs of some city dwellers is being used by some doctors and politicians as evidence of dangerous asbestos air pollution.

The effect of asbestos on human health is probably limited to those who are exposed to heavy concentrations of asbestos dust in the mining, milling, fabricating and application of asbestos or asbestos-containing products and who are not properly protected for this work. There is still no evidence of any risk to the general public from exposure to the very small amount of asbestos known to exist in the ambient air, or from the use of finished asbestos products.

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Crocidolite asbestos fiber appears to be more hazardous to humans than either chrysotile or amosite asbestos fiber. New British regulations governing the handling of asbestos impose stricter controls on crocidolite than on other varieties of asbestos.

The Threshold Limit Value -- or standard of allowable dust in asbestos mining, milling and manufacturing operations in the United States -- has been revised twice in the past three years. In 1968, it was reduced from 5 million particles per cubic foot of air to 2 million particles per cubic foot, or 12 fibers (5 microns in length or longer) per cubic centimeter. In 1970, these standards were reduced even further, to a time-weighted average of 5 fibers (5 microns in length or longer) per cubic centimeter, with a ceiling of 10 fibers per cubic centimeter.

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PROGRESS REPORT OF J-M ACTIVITIES

Policy Committee

The responsibility for directing the total Johns-Manville environmental health program, establishing priorities in the health area, and setting corporate policy is centered in the Policy Committee of the Environmental Health Task Force. The members of this committee are:

C. B. Burnett
H. M. Ball
Dr. Thomas Davison - Corporate Medical Director
J. B. Jobe
K. V. Lindell
A. B. Marchant
F. L. Pundsack
Ivan Sabourin - Legal Counsel, QAMA
F. J. Solon, Jr.
W. L. VanDerbeek
Dr. G. W. Wright - Medical Consultant to J-M

The Policy Committee meets every two months to study current problems and programs and to review the progress of the four working Task Force Sub-Committees. These Sub-Committees and their Chairmen are:

Environmental Control Sub-Committee
W. L. VanDerbeek, Chairman

Public Relations Sub-Committee
F. J. Solon, Jr., Chairman

Scientific Relations Sub-Committee
Dr. G. W. Wright, Chairman

Legal Problems Sub-Committee
H. M. Ball, Chairman

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The membership of the various Sub-Committees consists of members of the Policy Committee plus members of the J-M Environmental Control, Public Relations, Industrial Relations and Legal departments, as well as representatives on the Public Relations Sub-Committee from Hill & Knowlton, Inc., J-M's outside public relations counsel for health matters.

The various Sub-Committees meet bi-monthly on their areas of expertise, report to the Policy Committee on these activities and recommend new programs and changes in policy as the situation demands.

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Environmental Control

Environmental Control activites, including air and water pollution abatement as well as asbestos dust control, hold a high priority at Johns-Manville.

In 1969, capital funding for environmental control projects underway, initiated or authorized totaled $8.5 million and covered 52 J-M plant and mine locations. During the year J-M actually completed and put into operation environmental control projects budgeted at $2.6 million.

In the first six months of 1970, an additional $1.46 million was allocated for environmental control projects. From December 1, 1969 to June 30, 1970, J-M completed and put into operation projects totaling $1.36 million.

Last year the membrane filter personal air sampler technique for measuring asbestos dust concentrations was introduced in J-M plants and mines. All locations with asbestos exposure have been re-surveyed by this method.

Continuing this year is a program to measure asbestos dust concentrations at the property line at selected J-M plants and mines, in adjacent communities, such as Nashua, Waukegan, Manville and Asbestos, and in certain large cities in the United States, such as New York Fort Worth and Los Angeles. All testing thus far has demonstrated some asbestos fiber in the ambient air, but not significant quantities.

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Working with Others in the Industry

Johns-Manville continually works to orient other asbestos producers, processors and customers to the potential occupational hazards of asbestos dust and encourages the adoption of packaging, handling and fabricating practices that will minimize exposure on the part of all who work with asbestos.

Some of these activities, past and present, include:

1. Presentations on the occupational hazards of asbestos and recommended safety practices have been made to such industry trade groups as: National Insulation Manufacturers Association, Asbestos Textile Institute, Asbestos Cement Products Association, National Insulation Contractors Association.

2. A presentation on the legal aspects of the asbestos/health situation was made last year at a meeting of the Health and Safety Council of the Asbestos Cement Products Association.

3. All asbestos fiber bags shipped into the United States and within Canada now carry a caution label that urges careful handling of the fiber to avoid unnecessary exposure to asbestos dust.

4. Advice and information on various aspects of the asbestos/health situation is given to numerous customers who inquire on this subject each year. This activity includes not only

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answering questions on the subject, but also providing technical advice and assistance on the safe handling of asbestos fiber. Some customers with whom J-M has dealt recently in this regard include the Inland Division of General Motors, Milton Bradley Co., French Eternit, Delta Airlines, Western Electric Co., and the American Oil Company.

5. A booklet, "Recommended Safety Practices for Handling Asbestos Fiber," was prepared by the J-M Public Relations Department in 1969 and sent to all overseas customers.

6. Exchange plant tours were arranged with Raybestos-Manhattan in 1969 so that each company could inspect the dust control techniques of the other.

7. Liaison is maintained with the British asbestos companies who are members of the Asbestos Information Committee (AIC) and the Asbestosis Research Council (ARC). This involves periodic exchange of medical papers and press clippings as well as personal visits by such J-M people as C. B. Burnett, E. M. Fenner, F. J. Solon, Jr., J. Goldfield and others to meetings and plants in the United Kingdom and by British officials to this country. In 1970, J-M has been visited in this regard by Alex A. Cross, Environmental Control Officer, Cape Asbestos Co., Chairman of the Environmental Control

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Committee of the ARC, and a member of the Working Sub-Committee of the AIC; Dr. Walter J. Smither, Medical Director, Cape Asbestos Co., and a medical consultant to the ARC; Michael F. Howe, Managing Director, Turner & Newall Asbestos Fibers, and Deputy Chairman of the AIC; and Dr. Stephen Holmes, Secretary of the ARC.

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Health Research

Johns-Manville is currently sponsoring, co-sponsoring or cooperating in twelve scientific research projects in the asbestos/health area, as well as conducting independent work at the J-M Research and Engineering Center. The current status of these asbestos/health projects, as well as a review of past and present J-M sponsored studies on the health effects of fibrous glass, diatomite and perlite are contained in the attached "History of Johns-Manville Health Research."

Two of the most important of these current studies are the Insulation Industry Hygiene Research Program (IIHRP) and the Epidemiological Study of the Canadian General Population.

The IIHRP (described on page 14 of the attached "History") is a major cooperative effort by labor, industry and science, consulting with government, to develop improved methods for minimizing the exposure of insulation workers to dust, primarily asbestos, and fumes encountered in their work. Under the direction of Dr. Irving J. Selikoff, Director of the Environmental Sciences Laboratory, Mount Sinai School of Medicine, New York, the program is jointly sponsored by Johns-Manville and the asbestos workers union. J-M scientists and engineers have developed, as part of the recommendations of the IIHRP, (1) a disposable respirator for protection against asbestos and other pneumoconiosis producing dusts, (2) factory scored Thermobestos insulations to eliminate dusty on-the-job hand scoring and (3) a plastic asbestos-cement mixing

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bag to which water can be added through a special nozzle to produce a dust-free slurry. J-M asbestos-cement compounds became available commercially in such bags as of September 1.

The second important program, the Epidemiological Study of the Canadian General Population (described on page 17 of the attached "History"), is under the direction of Dr. Corbett MacDonald, Chairman of the Department of Epidemiology and Health at McGill University in Montreal. The preliminary results of this study, while confirming the association between occupational exposure to asbestos and lung cancer and mesothelioma, nevertheless show that the risk to workers is virtually confined to levels of dust exposure which are controllable, if not already controlled, in most Canadian mines and mills.

Money spent or allocated by Johns-Manville for research projects currently underway or recently completed in the asbestos/health field totals more than $1.3 million. It should be pointed out that this does not include such items as consultants fees, production line employees' time (for the Public Health Service study, for example, employees were made available to take respiratory function tests as well as for filling out questionnaires), research activities undertaken by J-M people with J-M equipment, and other intangibles connected with the J-M research effort.

Medical Meetings

J-M personnel and consultants attend every medical meeting on asbestos

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deemed to be significant in studying the problem. F. L. Pundsack, Dr. S. Speil, B. M. Penner and Dr. G. W. Wright have all presented important papers on asbestos/health at medical meetings throughout the world. In recent months, J-M personnel have attended meetings in Johannesburg, South Africa; Cardiff, England; Tokyo and in the United States. K. V. Lindell, Ivan Sabourin and Dr. G. W. Wright have been most active in this regard.

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Public Relations

Over the past few years, the J-M Public Relations Department has collected, sorted, analyzed and studied a vast amount of material, both medical and otherwise, on all aspects of the asbestos/health problem, and has prepared a sizeable number of well-documented position and background papers, pamphlets, booklets, binders and other pieces and collections of material for use in dealing with adverse asbestos/health publicity, whenever and wherever it might arise.

J-M efforts in the public relations area have been aimed at (1) placing the asbestos/health problem in proper perspective for various publics, including the media, government officials and the general public, (2) publicizing the efforts being undertaken by industry, especially Johns-Manville, to identify and control asbestos/health hazards, and (3) pointing out through publicity and advertising the indispensability of asbestos in our modern technological society.

These objectives are being attained through various activities:

1. Since 1968, the J-M Public Relations Department has prepared position and background papers on the following health topics:
   a) "Asbestos and Human Health"
   b) "Asbestos and the General Public"
   c) "Asbestos -- A Family of Minerals "
   d) "Asbestos-Cement Water Pipe and Human Health"
   e) "History of Johns-Manville Health Research"

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"Asbestos and Human Health" and "Asbestos-Cement Water Pipe and Human Health" have both been revised since first issued as new information became available. These papers are used by J-M in dealing with newspapers, radio and television reporters, science writers, government officials, customers and others inquiring into the problems of asbestos related disease.

2. The P.R. Department has distributed to government health officials, science writers and others copies of medical papers and speeches which treat the problem of asbestos/health in its proper perspective. Examples of this type of distribution include (1) a reprint of an article entitled "Asbestos and Health in 1969" by Dr. George W. Wright, (2) a speech on the J-M Environmental Control Department delivered by E. M. Fenner at a medical meeting in Atlantic City last year and (3) an article by Dr. I. J. Selikoff of New York's Mount Sinai Hospital describing J-M participation in the Insulation Industry Hygiene Research Program. A mailing to science writers and editors of the above papers, plus selected J-M background and position papers, and other significant medical papers is planned for the near future.

3. During the course of the year, the Public Relations Department works with a sizeable number of writers investigating the asbestos/health problem. The following

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are some examples of the magazines and newspapers they represent:

a) F. Glen Loyd - TODAY'S HEALTH

b) Judith Ramsey -- FAMILY HEALTH

c) Carol Knapp-- ENVIRONMENTAL SCIENCE & TECHNOLOGY

d) Yvonne Thayer -- NEWSWEEK

e) Judy Price -- TIME

f) Ronald Kessler - THE WALL STREET JOURNAL

g) Myles Callum -- GOOD HOUSEKEEPING

h) Michael Fallon -- ENGINEERING NEWS-RECORD

i) Paul Brodeur -- THE NEW YORKER

In all of these examples, save one, the Public Relations Department was able to temper greatly the resulting story and to insert a sense of balance into what might otherwise have been disastrous articles. In the case of the totally damaging NEW YORKER article, despite many efforts, the author refused to see anyone from J-M and completely disregarded the material and information sent him.

4. The activities and accomplishments of the Insulation Industry Hygiene Research Program are publicized through wide distribution of quarterly progress reports and through contacts with writers and editors.

5. Stockholders, employees and members of the financial community have been kept informed of developments in the

asbestos/health area through sections on the subject in the last two annual reports, in the 1968 and 1969 annual meeting reports to stockholders, through frequent articles in NEWS/PIC, and through union-management bi-monthly meetings at the local plant level.

6. J-M cooperates with government officials at all levels who are looking into the actual and supposed hazards of asbestos. For example, J-M officials from Environmental Control, Research & Engineering, Public Relations and other company departments have cooperated with city health officials in New York and Philadelphia on the problems of sprayed asbestos insulation.

7. J-M replies to irresponsible or uninformed criticism in the press, on radio or TV and by politicians. Recently, letters signed by J-M Medical Director, Dr. Thomas Davison, were sent to the well-known Dr. Morris Fishbein concerning errors in an editorial in MEDICAL WORLD NEWS and to Dr.Bertram Carnow concerning an article in the SATURDAY REVIEW. A meeting was also held recently with members of Congressman Ottinger's staff to discuss his attacks on asbestos.

8. Beginning in August, J-M launched a new advertising campaign designed to point out the indispensability of asbestos. This campaign is being run in four publications: THE WALL STREET JOURNAL, NEWSWEEK, BUSINESS WEEK and U.S. NEWS & WORLD REPORT.

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9. The Public Relations Department also monitors selected medical meetings, evaluates and distributes important publicity clippings, medical papers, etc., and in general, keeps a close watch on all activities in the asbestos/health area and attempts to present industry's point of view whenever possible.

The Johns-Manville Public Relations Department is given valuable assistance in performing it varied functions in the health area by the Environmental Health Unit of Hill & Knowlton, Inc., J-M's outside public relations counsel. Besides advising Johns-Manville on public relations matters in the asbestos/health area, the H & K Environmental Health Unit also monitors medical meetings not attended by J-M personnel, keeps the company abreastof significant developments at the Federal level in Washington, reads and analyzes articles and papers on asbestos/health in the medical literature, prepares pieces of public relations health literature, and, in general, aids and assists J-M in its total public relations program on asbestos/health.

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levels will not be impossible to live with, asbestos is considered in certain Federal circles to be a serious health hazard, and there will be considerable pressure in future years for tighter standards to be set.

4. Johns-Manville is presently fighting a number of common law litigation cases related to asbestos/health. In addition to their potential cost, any one of these suits may trigger publicity about possible asbestos-related hazards, which in turn might trigger other adverse reactions.

5. Our Workmen's Compensation claims and costs for occupational disease cases over the past five years have been:

YEAR	NO. OF CASES	COSTS
1965	94	$ 500,000
1966	125	698,900
1967	141	809,700
1968	337	862,500
1969	681	2,043,200

The huge increase of claims and costs for 1969 resulted from some valid disability claims, extensive "mass" filing at the Manville location, and an increase in Workmen's Compensation statutory benefits in most of the states in which we operate. An increasing awareness of the asbestos/health problem in labor and legal circles could result in a large increase in common law and Workmen's Compensation cases in the near future.

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LOOKING AHEAD

Problem Areas

There are certain present or developing problem areas in the asbestos/health field that J-M must be prepared to deal with this year and in the future.

1. The growing concern in many areas about a potential hazard to the general public from exposure to asbestos in the ambient air is just now starting to gather momentum. Each month brings new reports of cities and states imposing strict regulations on the use of asbestos-containing spray insulations. J-M supports the position of the IIHRP that such spraying can be controlled and regulated so that asbestos will not escape into the ambient air.

2. There is some talk in certain cities, one being New York -- a leader in environmental protection legislation -- of banning the use of <u>any</u> asbestos-containing product in construction because of the danger of asbestos fiber escaping into the ambient air when the building is eventually demolished. The potential therefore exists for a loss of business in high-rise, commercial and other construction in cities where asbestos is under attack. We continue to monitor this situation.

3. While indications are that the upcoming BOSH and NAPCA standards on occupational and environmental asbestos dust

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6. Continuing attacks on asbestos by certain doctors, politicians, environmentalists, consumer activists, etc., stimulate public interest in this problem and consequently apprehension in many circles as to whether the use of <u>any</u> asbestos-containing product is safe. The prevailing philosophy in this country at the present time is that any product or material that has been called into question should be considered dangerous until proven safe.

For the record, J-M's position is summarized in the following corporate policy statement:

"In cooperation and in conjunction with other agencies, Johns-Manville will continue to seek new information about the biological effects of asbestos fiber, and to develop ways of assuring maximum possible protection from occupational hazards, for its employees in asbestos mines, mills and plants and among fabricators and applicators of this essential material."

Immediate Future Projects

In addition to continuing or expanding those programs and projects which have proven their worth in the past, J-M is planning new programs in the asbestos/health area.

1. Discussions have begun between J-M and other major

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United States asbestos manufacturing concerns for the purpose of establishing a Asbestos Information Committee - North America:

a) to provide an authoritative channel of communication to all publics.

b) to publicly rebut irresponsible and uninformed criticism.

c) to propagate the benefits and indispensability of asbestos through advertising, publicity, speeches, etc.

A similar committee, set up in Great Britain in 1967, has been very successful in handling the public relations aspects of the asbestos/health problem in the U.K. Hill & Knowlton, through their London office, was instrumental in the formation of the British AIC and has handled many of the functions of the organization ever since.

2. In the past few years, there has been growing concern in Washington governmental circles about possible hazards to industrial workers and to the general public from a wide variety of substances, including asbestos. The debate going on in Congress on the Occupational Safety and Health Bill and on the so-called Clean Air Act, President Nixon's recent decision to form an Environmental Protection Agency, and the work being done on asbestos and other substances by BOSH and

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NAPCA are indications of this concern. In many circles asbestos is considered to be a high priority pollutant. It is therefore essential that Johns-Manville establish and maintain working relationships in Washington with prominent officials in HEW and other Federal agencies dealing with occupational and environmental problems. Steps in this direction have already been taken by Dr. George W. Wright. However, because of the continually changing nature of the Federal bureaucracy and because of the large number of officials and departments involved in or concerned about the asbestos/health problem, J-M intends to substantially broaden its contacts with officials at the Federal level.

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SUMMARY OF POLICY STATEMENT

It is our considered opinion that:

1. The improper use of asbestos can create health problems.
2. Nevertheless, the conditions creating these health hazards are controllable or are being controlled.
3. Therefore, it would be totally unwarranted to think of banning this important material except when users of asbestos are guilty of gross abuses of elementary safety practices and standards.

There is evidence that employees in mines, mills, and processing plants, exposed to heavy concentrations of asbestos dust for long periods of time, are subject to hazards that tend to affect their health. This dictates that the following study and policy be adopted.

List by Division, Plants, and Shops ALL asbestos dust emission points, and classify as follows:

A. Controllable by known methods.

B. Satisfactory means of control not known.

In Controllable Points:

a) Now under control.

b) Not now under control but funds approved to correct condition.

c) Funds not approved to correct condition.

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In (b) - Not under control but funds approved to correct condition:

1. Timetable for completion.

In (c) - Funds not approved to correct condition:

1. Consider as of this date that funds are approved.
2. Timetable for completion.

In Uncontrollable Locations:

1. Conclude that there is no reasonable solution to problem by December 31, 1970.
2. Close down operations that are uncontrollable by April 1, 1971.

Attachement: "History of Johns-Manville Health Research"

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