CAMBRIDGE

PERSONAL AND CONFIDENTIAL

TO: R. W. Sterrett-Zonolite Chicago

DATE: January 5, 1968

FROM: Peter Kostic

SUBJECT: Dust Controls

CC: W. L. Taggart
E. L. Mears
C. J. Dugan
J. D. Kingery
J. P. Cahalane
J. F. Murphy, Jr.

On December 26, 1967, I met with E. Fenner, Director of the Johns-Manville Department of Environmental Control, and C. Sheckler, Manager of Occupational Environmental Control at the J-M Research and Engineering Center in Manville, New Jersey. The purpose of our meeting was to discuss dust problems and controls at Zonolite, and more specifically at Libby. Since I'd known Fenner professionally, and Sheckler, professionally and socially, rapport was quickly established. Prior to my setting up the appointment with them, they were apparently instructed by J-M's president, C. B. Burnett, to provide the advice and help I sought. Here are some of the things that came out of the meeting:

A. FOR IMMEDIATE ACTION

1. Conduct Industrial Hygiene Survey at Libby

Because of differences of opinion as to the actual content of the dust, it was their recommendation that a thorough Industrial Hygiene Survey be done as soon as possible at Libby. This would involve sampling the air in all work areas where there is exposure to dust, and laboratory analysis and count of the dust particles. I asked if such service might be available from the Division of Occupational Health, U. S. Public Health Service. They said that the best we could expect from them is a conference with a representative at one of their local offices. They are overloaded now with new and different problems such as that of Fiberglass which J-M has sought their help on for over two years. Since J-M has an Industrial Hygienist and laboratory about 50 miles up coast from Santa Barbara, California, I asked if it couldn't be arranged for him to do the job for us, D&A willing, of course. It was their opinion that if we make the request through channels (Burnett) J-M would comply with the request.

Such survey would tell us (1) composition of the dust, (2) number of dust particles in the air, (3) size of the particles (this is important since only those particles less than 10 microns in size are hazardous), and (4) sources and/or areas of air contamination. From this we will know if we have problems, specific problem areas and severity of the problems. If we get this service and information from J-M, we will then be on our own (at least this was the implication). The job of identifying defective ventilating equipment, designing new or improved equipment, etc., would be ours. Once their Environmental Control group detects hazardous areas the problem is turned over to their Central Engineering Department for correction. I suppose we could get some "non-field, non-shop" help from their engineers if we need it.

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2. Work Histories on 32 Employees

To provide examining physicians with all the information and help they may need, complete and thorough work histories should be done on each of the 32 employees referred to in Chuck Dugan's letter of 12-5-67. Such histories should contain information similar to the attached sample Work History. (Before a form for this purpose is finalized, I would suggest consulting with the physician as indicated in item 3, below. He may want to add a question or two.)

3. Physical Examinations and Studies

Regarding the 32 employees showing abnormal chest X-Ray pictures, it was recommended that they be given complete and thorough examinations and tests by a physician well versed in pulmonary diseases. This should include respiratory function tests and heart function tests as well as chest X-Rays. Purpose of such exams is to ascertain definitely what the lung abnormalities are. Then, if claims arise, we will be in a position to fight those cases which are deemed not to have risen out of employment with Zonolite. It is J-M's experience that the cost of such exams and tests is approximately $200.

B. POST SURVEY

After it is recognized that we do have dust problems and the problem areas are identified, we should move fast in doing whatever had to be done to remedy the situation. This is of course to minimize dust inhalation by all employees, but most important to arrest lung contamination by the 32 forementioned employees. These employees, so far as we know, are not presently disabled. If we minimize their exposure to a dust level not exceeding 5 mppcf chances are we may be able to keep them on the job until they retire, thus precluding the high cost of total disability. Although medical opinions differ, J-M's doctors and Industrial Hygienists feel that an asbestosis contaminated lung will remain status quo once further contamination is eliminated. It is interesting to note that asbestosis victims do not die of asbestosis as such but rather from complications such as secondary lung infections or heart disease.

C. DUST CONTROLS AND MAXIMUM ALLOWABLE CONCENTRATIONS

Regardless of the percentage of asbestos dust particles in the air, our goal should be to keep the total dust count below 5 million particles per cubic foot of air. This is to say that the total count of all dust particles less than 10 microns in size should not exceed 5 mppcf of air. (It should be noted in reviewing our files that the percentage of asbestos dust at Libby had been expressed at one time or other as 6.2%, 12%, 22.5%, 40% and 75%.)

Although the J-M people and two other authorities on the subject who I had contacted agree on the above mentioned 5 mppcf count, the maximum allowable concentration for asbestos dust is controversial. The Industrial Hygiene Foundation is currently circulating a communication which I have seen, proposing a 0.0 mppcf for asbestos dust. They apparently feel that any exposure to asbestos dust is hazardous. Many doctors are of the opinion that there is a definite relationship between asbestos dust and certain types of cancer. J-M anticipates

C. DUST CONTROLS AND MAXIMUM ALLOWABLE CONCENTRATIONS (Continued)

that every cancer case among their employees will be a potential Workmen's Compensation case. The chances of developing asbestosis at counts under 5 mppcf are minimum. The number of cases arising out of such exposures at J-M have been few in number over the years. At any rate, Fenner and Sheckler emphasized that Threshold Limits (MAC) should be used as guides in the control of health hazards and should not be regarded as fine lines between safe and dangerous concentrations.

D. L. P. WELSH CASE

The case involving former employee, L. P. Welsh, should be quickly settled out of court. Whenever it is proven to our satisfaction that an employee has developed an illness or disease while in our employ, especially in instances where a plant is located in a small town, public relations could be damaged if the employee is required to fight for his benefits through the courts. It was J-M's experience that a precedent setting out-of-court settlement of a case in a small town (Marshville, N. C) was not necessarily a signal that the employer's cash register is open for all comers. The settlement, in this case, prompted only two additional theugh justifiable claims.

E. AIR SAMPLING AND PARTICLE COUNTING

The accuracy and/or reliability in taking and counting dust samples by personnel attached to the local plant (as in the case of Libby) is questionable. If there is no alternative but to assign such responsibility to local personnel, an annual or semi-annual check should be made by someone else such as a private consultant or P. Kostic.

F. EMPLOYEE EDUCATION

Employees should be informed regarding the consequences of inhaling dust particles and the complications such as T-B, cancer, lung abcess, etc. which might develop. If they are familiar with the hazards involved, they are likely to make greater effort to protect themselves.

G. PERSONAL PROTECTIVE DEVICES

It has been J-M's experience that personal protective devices such as masks and respirators are only 50% effective. This type of equipment, therefore, should be used only in emergencies and for exposures of short duration.

H. DIAGNOSING ASBESTOSIS

In his letter describing the recent hearing in Kalispell, Montana, Chuck Dugan states "It seems that asbestosis cannot be definitely established unless a biopsy is done on lung tissue". Apparently this was brought out in the testimony. Both Fenner and Sheckler dispute this. It is their contention that an experienced physician could identify asbestosis in X-Ray pictures. (I also have a flyer from the Division of Occupational Hygiene, Massachusetts Department of Labor and Industries, which says "X-Ray films will show changes in varying extent which are considered characteristic for asbestosis.")

I. HOUSEKEEPING

Both Fenner and Sheckler repeated several times the necessity for good housekeeping in dust control programs. J-M's manual of Environmental Control Standards contains a rather substantial section on housekeeping.

J. ANOTHER MEETING

If we so desire, Fenner and Sheckler indicated they would be happy to meet with you, Ed Mears and all others concerned, here at Cambridge, for purposes of further discussing the problem. If we'd like to set up such meeting they suggested a date between January 15 and January 24, during which period they both would be available.

K. MY COMMENTS

It is my opinion, unless it is undesirable from a business-relation standpoint, that we should get J-M to do the survey for us. This should be done as soon as possible. You will have to make a request for such service of Burnett. I will accompany their man to Libby, coordinate the survey, observe and assist him, and if I feel there is justification for our (Central Engineering) getting suitable dust sampling equipment, I will make such recommendation. This would enable us to spot check Libby as well as expanding plants.

As indicated under item A-3, arrangements should be made with a physician, specializing in pulmonary diseases, for examination and testing of he 32 employees in question. For the names of competent doctors in this regard, I would suggest seeking the help of the Seattle office of Maryland Casualty. If Libby management so desires, I shall be glad to start the ball rolling on this.

After a physician has been contacted and tentative arrangements for examination and testing made, work histories on the 32 employees should be written up. As indicated in item A-2, the physician should be consulted before the work history form is finalized.

Peter Kostic

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