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METALS DIVISION

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To (Name) Mr. J. L. Myers
Division UCC - Metals
Location Niagara Falls, NY

Date February 19, 1980

Originating Dept. "Calidria" Asbestos

Answering letter date

Subject Review of King City Plant Monitoring and Medical Records

Copy to Messrs.
T. W. Carmody
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This letter summarizes the status of the above-noted project following meetings at King City and with Dr. Lane and Mr. McDaniel in New York City.

The monitoring data files at King City have been assembled in one place. We have exposure information going back to 1963. The early data are by midget impinger and are sporadic in today's terms, but at least a modest number of facts seem to be available. Personal sampling started in 1970 and sampling detail, frequency and scope has increased substantially since that time. Examples of this type of data available at various points in time are attached for reference.

It also appears that Dick Marsden has good chronological records of changes that have been made in the plant equipment. These include changes affecting the levels of asbestos dust so we should be able to relate the changes to the observed levels of airborne asbestos dust.

The information available to relate workers to job locations is very extensive. Weekly time cards which show the hours spent in each plant department appear to be available for everyone who has ever worked in the plant. Examples of these cards are attached for reference. Medical records are also available for all past and present employees.

Based on this information two projects can be defined:

1. Summarize the exposure data and relate it to the corresponding changes made in plant equipment to reduce dust levels.

2. Put the exposure and work location information in a form where exposure histories and cumulative exposure can be obtained readily for each individual employee. This is obviously a computer program and storage task. Medical records would also be coded for prompt recall.

Regarding the first of these tasks, there are about 16 plant locations that are now monitored with some regularity. A substantial proportion of these have been tested to some extent back to 1963. Since monitoring seldom occurred more than once a month and often only once or twice a year, it is a substantial but still manageable task to prepare a graphical summary by month of all of the daily TWA data.

Bill DeAtley is now preparing such a summary. The mechanical changes relating to dust levels from Dick Marsden will also be shown. When completed, we will have a good historical picture of our efforts to control exposure and the results achieved. It will also show clearly the amount and kind of exposure data available.

The second task relating to individual exposure and medical histories is much more substantial. For epidemiology it would be most desirable to relate the time spent by each employee in each location to the corresponding exposure records to give a cumulative exposure. It appears that our ability to relate time-in-location far exceeds our ability to estimate exposure. Nevertheless, it appears that the total amount of information available substantially exceeds that used in most asbestos epidemiological studies published in the past.

It is well recognized that asbestos related diseases generally take a minimum of twenty years to develop and the latency period can be much longer than this for low exposures. Also, out of approximately 200 past and present employees at King City, only five have as much as 16 years exposure.

The medical records show no evidence of asbestos related disease. It can be concluded that the cohort here is too small and the exposure period has been too brief to make an epidemiological study worthwhile at this time.

On the other hand, however, there are several good reasons to put the data in "epidemiology" form now and store future data in the same form. These include:

1. In order to protect our employees it is very desirable to know their exposure history and cumulative exposure. Recent literature is providing estimates of risk based on cumulative exposure. We need to be sure that our employees are not being exposed to excessive risk.

2. The total records involved include only about 200 employees for a maximum time of employment of only about 16 years. It appears to be a reasonable sized effort to code this quantity of information now. Entry of future data annually would be quite simple.

3. We are faced with demands from EPA and other regulatory agencies for increasingly detailed exposure information. There is little doubt that such information will be required in the future. We are in the best position to interpret our data accurately. The alternative is likely to be the supplying of the "raw" data to NIOSH or EPA for their analysis.

The obvious question is how much time and effort would be required to write the programs and code the available information into the computer. I am pursuing this matter actively and hope to have definite information in the next several weeks.

H. B. Rhodes

Harrison B. Rhodes

/rmm
Attachments