



INTER-OFFICE CORRESPONDENCE

To: F. C. Dehn

Date: November 2, 1977

From: Z. G. Bell, Jr.

Location: 10 West

Subject: ~~EEH~~ Proposal
Epidemiological Study
VLM

I have reviewed the EEH proposal for a historical prospective mortality study submitted for our consideration.

Without being extremely critical of the proposal, I agree that many of the chemical agents encountered at the Natrium plant were not mentioned. This is understandable in that Dr. Utidjian was not familiar with the plant's operation now or in the past. There were a number of departments not mentioned which may present some questions as to their inclusion or exclusion. For example: (1) What do you do with the research and development group? (2) The power house workers? (3) The office and engineering personnel? These groups represent a large number of people employed in the past but no longer are at Natrium.

In Dr. Utidjian's cover letter he states that the mortality study of only benzene workers would be meaningless and I contend that the same would apply to the carbon disulfide, barium, and titanium tetrachloride and oxide operations. I do not see how the results can be more meaningful by studying multiple subsets which each is meaningless independently.

While there may be a large number of people that fit into the chloro-alkali group at Natrium, this type of study would be more meaningful if it were done for the entire chloro-alkali industry similar to the Wayne State (W. S.) Chlorine Institute sponsored study. No mortality determinations were made as part of the W. S. study.

It appears the protocol design has the major objective to follow all of the plant people and determine if any causes of death appear unusual, irrespective of the chemical involved, length of exposure or latency period.

It is acknowledged that the work population is very mobile, especially the maintenance group at the plant. Just how one would make any definitive conclusions with reference to this data is unclear.

Based on the experience with the elaborate study of vinyl chloride workers by the industry, the epidemiological report was very uninformative, time consuming, and expensive.

The objectives outlined on page 3 of the protocol are not well defined or specific with reference to malignancies by sites. Chronic obstructive pulmonary disease has many etiologies and to show a significant increase without a correlation with some agent would not be especially productive or informative.

We must recognize that whatever the result, further details will have to be developed to understand the reason for an increase in any single cause of death.

If there are fewer deaths due to heart disease in a given number of deceased individuals, doesn't it seem reasonable that some other causes of death have to be increased?

With reference to exposure indexes, page 5 (D), this effort will further divide the group into at least three subsets, and if the number of individuals in the entire group are too small, then the individual findings in the subsets (cells) will be even less meaningful.

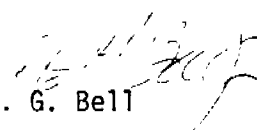
The cohort group (within or outside) of the plant was not detailed. The mortality rates of the states will not be as meaningful or indicative as the mortality rates from the four countries from which our workforce is obtained. I do not know if each county compiles its own mortality rates. Further, yearly, or at least every 5 years, tables must be reviewed to reflect changes in causes of death if such changes do occur.

In a small study population (page 9), a 95 percent follow-up is not adequate. The cost of a follow-up of 99 percent rises exponentially.

After review of the proposal, I feel that the results well raise more questions than they answer. The proposal is too general and a projection of the types of data forthcoming from this effort should be elaborated more by EEH before we decide to undertake this contract.

What are we attempting to show? What else will have to be done after we receive the data, and who will interpret or defend the study?

I feel that we must look at the benzene workers and this will at least give us some insight in EEH performance, problems and costs. If at the completion of the study we decide to go further, we can leave this an option. Let's look before we jump in over our heads.


Z. G. Bell

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Attachment

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