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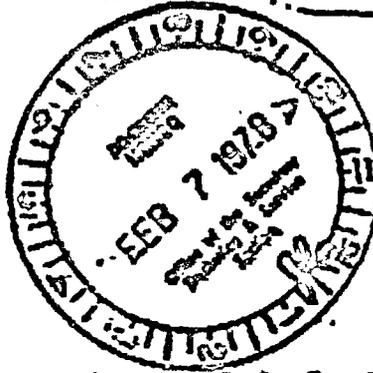
See p. 7

→ Dr. Edington
3/10/78

December 14, 1977

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To the Editor
Los Angeles Times
Times Mirror Square
Los Angeles, California 90053



Re: "Study on Nuclear Radiation Sparks Health Controversy" by Robert Gillette, 12/1/77.

Dear Editor:

Mr. Gillette has written a fine story, and has done a creditable job with such information as he had. In that the background of the "Health Controversy" spans almost 15 years and my personal files on it, since 1970 when I moved to La Jolla occupies close to 3 cubic feet of space. I believe it worthwhile to document at least partially who did the study.

There is no truth to Dr. Mancuso's assertion that he "has sweated over it [the data] for 13 years." Dr. Mancuso himself has acknowledged in writing that it was I who designed the study, compiled the basic data, designed my own methods of analyses and had been responsible for the findings at least up to the time when I insisted publishing some of these findings.

Quoting:

"For statistical analyses, Dr. Barkev Sanders has carried the entire responsibility of every aspect of the design, development, and statistical analyses since the inception of the project, and all the interpretation and analytical procedures and findings have been prepared by him. His keen analytical insights have developed methods of studying this problem which all other expert reviewers thought were not possible." (From p. 21, "Study of the Lifetime Health and Mortality Experience of Employees of ERDA Contracts." Progress Report #11, August 1, 1974 - July 31, 1975. Prepared for the U.S. E.R.D.A. Signed by Thomas F. Mancuso, M.D. and Barkev S. Sanders, Ph.D.).

BOX NO. 4 of 6
FOLDER MANCUSO

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2

1008265

Not only did I do all the work, I also carried on the negotiations with different agencies whose cooperation was essential for the continuation and the ultimate success of the Study. Dr. Mancuso's letter of 9/13/75 is an illustration of this.

Now let me give you the other side of the coin--what I said had been the role of Dr. Mancuso in the Study:

"Lately, it would seem, you not only have left me to carry completely the professional responsibilities for both of our studies, you have blocked my path, you have denied me the supporting services of the staff. This is the only inference that I can draw from my recent experience, sitting in my study awaiting for typed material or for tabulations which seldom arrive, and hoping that the studies would be continued." (From a letter, 11/23/74, Sanders to Mancuso, letter enclosed.) None of the assertions were challenged.

From the inception of the Study until early in 1976 Dr. Mancuso gave little if any time to the Study, even though in recent years he received all of his salary from the Federally funded projects. Throughout most of the years that I was connected with the Study, besides his University assignment Dr. Mancuso was managing a counseling service (incorporated I believe) to certain labor groups, one time he also did some work for G.E. but this was short lived. Besides, all along he has had two or three other projects, how these were financed I do not know; I do believe, however, that some of the staff, like Mancuso himself, working on these projects were paid from the Federal funds made specifically for the radiation Study. Finally, at least one member of the University staff received partial payment from the Federal funds in years in which he

page 3 - Editor of Los Angeles Times

contributed nothing to the Study.

In my letter of 11/23/74 the application referred to in the first paragraph was for funds from the National Cancer Institute to study the comparative claim rates from different diseases for cash disability benefits and also the age of withdrawal from gainful work as possible indexes of health with which to assess possible harmful effects from occupational radiation; This phase of the study exclusively was one that I developed because of my work in initiating the disability program when I was with the Social Security Administration. Unfortunately; very little progress was made in this, largely because Dr. Mancuso diverted much of the funds to projects that he was interested in; these had no relation to the radiation study. One of the papers, referred to in my letter that had not been typed, was my analysis of Dr. Milk's findings and his inferences based on these findings. In this connection I shall enclose another letter from Dr. Mancuso to Dr. Marks, 8/1/74. I might add that I received no remuneration. A later paper, later, because I could not get many of the tabulations in time and some I never got, I did submit to Dr. Mancuso for publication. I am enclosing my covering letter, 1/20/76, submitting this paper and Dr. Mancuso's reply, 2/2/76. That is the paper that is now being considered for publication, though it was submitted to Health Physics Journal on October 18, 1976.

I do not wish to spend much time to prove that I am a statistician. My biography in American Men and Women in

1008267

page 4 - Editor of Los Angeles Times

Science; my more than 180 publications, almost all of them statistical in nature; and my teaching of numerous courses in statistics in graduate schools should suffice to answer that. I could dwell on my outstanding contributions in several fields, but I shall refrain doing that. I would include one of these, however, because of its brevity: "Why Costly Government," an editorial from the Nation's Business, June 1968.

Those who unknowingly attribute the pains taken in assembling the data to Dr. Mancuso may not be aware that Mancuso questioned the reliability of these data. This is reflected in a letter of 2/2/76. A clearer assertion of such defects is found in Mancuso letter of 7/14/76, and Dr. Stewart's letter of 7/1/76. Dr. Mancuso refused to transmit to ERDA the 12th Annual Progress Report, for 1975-76, which I prepared because of these alleged deficiencies in the data. However, these alleged deficiencies did not deter Mancuso, et al. to use the data when they discovered that if only selected findings are shown the data could be used to demonstrate harmful effects from radiation.

The Study is not limited to causes of death as Mr. Gillette says, even though that is the only phase that Mancuso has used. The Study includes health and longevity as measured by age adjusted death rates, irrespective of cause and incapacitation preceding death.

It is incorrect to say nothing had been published prior to the Mancuso, et al. paper which is about to appear. We published a 196 pp. monograph, with minor exceptions this was

1008268

page 5 - Editor of Los Angeles Times

written by me: "Study of Lifetime Health and Mortality Experience of Employees of AEC Contractors; Part I: Methodology and Some Preliminary Findings Limited to Mortality of Hanford Employees." Sixth Annual Health Physics Society Topical Symposium, Vol. III, Mancuso, Sanders, Brodsky. The Symposium was in Richland, Washington, Nov. 2-5, 1971, the volume was published in 1972.

Mancuso is quoted saying that higher deaths from radiation causing cancer became apparent after 1960. For Hanford male employees with a record of exposure to occupational radiation the cancer deaths constitute 19.85% out of 524 representing all deaths for the period 1944-59 for whom death certificates have been found. The corresponding percentage for 1,633 deaths in the period 1960-72 was 20.27, not a statistically significant increase. The increase in cancer deaths in the general adult male population over this span of years was higher. If we were to limit our observation to male "exposed" workers hired for the first time at Hanford in 1944 and 1945, the overwhelming majority of whom had had their initial exposure to occupational radiation prior to 1950, for these the percentage of cancer deaths is 20.67 out of 358 deaths in the years 1944-59, and 19.10 out of 959 deaths in the years, 1960-72--notwithstanding the progressive aging of this population. These figures clearly contradict the assertion attributed to Dr. Mancuso, who actually is not familiar with the data.

1008269

6

For reasons which I never understood, Washington, after Dr. Dunham's departure from AEC, was never content with our work. In 1972 they required that we submit besides the Annual Progress Report two interim reports one in the spring and another in the fall. In October 1972, I prepared the first such interim report, but data were not forthcoming for subsequent interim reports. I believe these shortages were brought about at least partly by the fact that a significant portion of the time and facilities at our disposal were being used by Dr. Mancuso for his own use, not related to radiation Study. Also Washington wanted us to publish our findings, while Dr. Mancuso after our first publication, which may have had adverse effects on his consultation business, refused to publish any "negative" findings--and my findings were by and large "negative".

I was not aware that there was a change in the mood of Washington toward our study following Dr. Milham's findings. As my letter of 11/23/74 indicates Dr. Mancuso was reluctant to supply me with tabulations to test Dr. Milham's findings or to type and distribute any of my analyses questioning the inferences derived from these findings. Nevertheless, his letters to Marks and his other observations regarding my work give no indication that he had lost confidence in my work because of Milham's findings. It should be noted that in my letter I express fears, which we both shared all along that AEC may discontinue our Study. I have serious doubts therefore, about Dr. Mancuso's rendition as to why and when Washington decided

page 7 - Editor of Los Angeles Times

to discontinue the research contract with the University of Pittsburgh. "If one were allowed to speculate, possibly Dr. Mancuso got the Britishers to come up with apparent "positive" findings so that ERDA will not dare to carry out its planned discontinuation of the Study for fear it will be accused of... trying to prevent "positive" findings. It is, otherwise, difficult to understand Dr. Mancuso's conduct: from 1970 on each analysis of new data showed on balance superior health of Hanford employees with a record of exposure to occupational radiation compared with that of controls (applicants for Hanford jobs who declined the job, siblings of the same sex as the applicant who never worked in an atomic plant, other Hanford workers who had no record of exposure to radiation, and matched controls, matched by year of birth, sex, race, etc.); yet he refused the publication of any of these findings (after the initial publication) while in two months he rushed to present apparent "positive" findings without any of the caveats. For instance, the paper read by Mancuso, et al. last fall made no mention that for a number of types of cancers (not only for leukemia) the observed frequency was significantly lower for the deaths of "exposed" employees vis a vis the expected. If excess deaths are attributed to radiation, as these authors do, how is one to account for the deficits? Nothing was said that they had no measure as to how incomplete the cumulative life time dose was for "exposed" employees. It is plausible that if these excess deaths are truly attributable to radiation that

1008271

2

this may have been true only for a subpopulation of "exposed" workers whose exposure to occupational radiation exceed the "permissible" limit. Nowhere was there any mention of the higher longevity of "exposed" employees vis a vis the controls. As I have said, there could be scores of explanations that could account for these excesses and deficits, as well, not necessarily occupational radiation within "permissible" limits.. The authors do not consider any of these and many other possible alternatives that may explain their findings. For instance, the differential in socio-economic status of "exposed" employees could also be the underlying cause of the differences found in causes of death; the proportion of deaths in hospitals, or the differences in the proportion of "exposed" employees attended by specialists on their last illness. No attempt was made to check the consistency of the cause of death recorded on the death certificate against the post mortem findings where postmortem was made.

If there is a causal connection between certain cancers and exposure to radiation among Hanford workers then preference should have been given to all cancers reported on the death certificate, whether they were listed as the underlying cause or not. I am inclined to believe, if this were done, their results would be altered, since the excesses which they find I believe are happenstance as far as the association with recorded radiation is concerned. The use of all cancers would have increased the cancer deaths by as much as 40 percent.

page 9 - Editor of Los Angeles Times

Mr. Gillette is mistaken in saying that my paper which is to be published later is a dissenting paper, which carries the connotation that it was prepared to refute the Mancuso, et al. paper. My paper was prepared in 1975. Its purpose is to show that Dr. Milham's conclusion that higher cancer rates among Hanford employees is attributable to radiation is not borne out by the evidence which I present--especially radiation within "permissible" limits--were this available to us.

In conclusion let me say, even though seemingly the Milham and Mancuso, et al. analyses reach the same general conclusion, internally they are inconsistent with one another.

Sincerely,


Barkev S. Sanders

P.S. I shall gladly open my files to any one who is interested to pin down the facts in this controversy.

Enclosures: (1) Letter from Mancuso to Marks 9/23/75
(2) Letter from Sanders to Mancuso 11/23/74
(3) Letter from Mancuso to Marks 8/1/74
(4) Letter from Sanders to Mancuso 1/20/76
(5) Letter from Mancuso to Sanders 2/2/76
(6) "Why Costly Government" Editorial, "Nation's Business," 2/68
(7) Letter from Mancuso to Sanders 7/14/76
(8) Letter from Stewart to Sanders 7/1/76

1008273