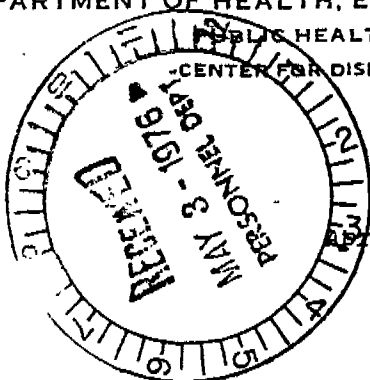




DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL



April 27, 1976

NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH
U.S. POST OFFICE AND COURTHOUSE
CINCINNATI, OHIO 45202

Xerox copy:

P.E. Bureau
W.E. Nessell, M.D.
J.A. Guidi - St. Louis
P.S. Park - St. Louis
G. Roush, M.D. "
G.L. Smith - "

hbl, 4/30

Mr. G. M. Ellsworth
Plant Manager
Monsanto Polymers and Petrochemicals Co.
730 Worcester Street
Indian Orchard, Massachusetts 01151

Dear Mr. Ellsworth:

I am responding to your letter of March 24, 1976, to Dr. John Finklea expressing your concern about certain issues relating to a study of cancer deaths among employees at your plant.

As you know, an investigation of deaths among former workers at your plant was conducted by Dr. John Lewis, an employee of the National Institute for Occupational Safety and Health (NIOSH) assigned to the Massachusetts Department of Labor and Industries. Preliminary data from his investigation was discussed with Monsanto officials on January 9. At this meeting, which you attended, the causes of death for 86 former Monsanto employees were discussed. At that time, preliminary information indicated that cancer, particularly pancreatic cancer, appeared to be an excessive cause of death. Since then, Dr. Lewis has gathered information on a total of 397 former employees from the plant. Review of this information indicated that cancer, and particularly pancreatic cancer, still appears to be an excessive cause of death.

As a result, NIOSH has determined that a more systematic study of deaths is needed to clarify the extent of cancer among the plant's employees. At this point, we cannot say whether a health hazard exists at your plant. That determination must await an indepth, comprehensive investigation of health effects as they relate to specific exposures. We would not be prepared to launch such an extensive study until all available death certificates have been collected and the results evaluated.

I am enclosing copies of letters which Dr. Lewis has prepared summarizing the information we have available on causes of death among Monsanto employees. The data shown in the letter to Dr. Decoufle are essentially

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Mr. G. M. Ellsworth - Page 2

an expanded version of the material discussed at the January 9 meeting and represent the efforts of Dr. Lewis in pursuing his earlier work. It is evident that the newspaper articles referred to this larger set of deaths in their stories.

I trust we can work cooperatively to complete the study so that we can determine whether or not there is, indeed, a significant increase in cancer deaths among the employees from your plant. We will keep you and other concerned parties informed of further developments.

Sincerely yours,



Bobby F. Craft, Ph.D.
Director, Division of Surveillance,
Hazard Evaluations and Field Studies

Enclosures

CC: Dr. John Finklea
Dr. Pierre Decoufle
Dr. John Lewis

To: John F. Finklea, M.D., Director, N.I.O.S.H.
From: John N. Lewis, M.D., N.I.O.S.H. physician assigned *YZ*
to the Division of Occupational Hygiene, Department
of Labor and Industries, Commonwealth of Massachusetts
Subject: Monsanto Polymers and Petrochemicals Company, Indian
Orchard, Mass.
Date: September 9, 1975

Since July of this year, this office has been informed of eighty-six deaths among past workers at Monsanto, Indian Orchard. This information was provided by K.O.S.H.A., Committee for Occupational Safety and Health Action, a group of workers formed at the time of the vinyl chloride alert to coordinate information on work-related health problems. This group has no official connection with the union.

The data were obtained from active and retired Monsanto workers who recalled fellow workers in the vinyl chloride and PVC operations who had died of any cause. Eighty-six of these deaths were confirmed by finding a Massachusetts death certificate, and the causes of death were tabulated. These diagnoses are shown in the table using the I.C.D. code numbers (eight revision). "Vinyl Chloride" workers were said to have worked in buildings 84, 88, or 92 in which vinyl chloride monomer was used. "P.V.C. fabrication" workers were said to have worked in building 85 in which V.C.M. was not used. "Maintenance" workers were said to have worked in any of the above buildings.

Among workers said to have worked in P.V.C. fabrication (building 85), 27.5% of the deaths, 14 of 51, were from cancer. This compares to 16.5% of deaths caused by cancer nationally. Furthermore, 4 of these 14 cancers were pancreatic. Cancer of the pancreas accounts for only 5.5% of cancer deaths nationally.

Officers of Monsanto, Indian Orchard have been informed of this apparent excess of cancer deaths, and they have expressed doubt about the reported employment history of some of the deceased workers. They have been asked to permit review by this office of the complete employment records for the P.V.C. fabrication area. Employment records of the deceased workers have also been requested. We propose to investigate the mortality experience among these workers by means of a cohort study.

JNL/mc

cc: Paul Alvarado, N.I.O.S.H.
Paul E. Bureau, Monsanto
K.O.S.H.A.
Electrical, Radio, and Machine Workers, Local 288

RSV0026953

CAUSE OF DEATH OF 86 MONSANTO CHEMICAL WORKERS

(I.C.D. Eighth Revision)

Cause of Death		Vinyl Chloride	P.V.C. Fabrication	Main- tenance	Total
Infectious diseases	000 - 136	0	1	0	1
Cancer:					
Esophagus	150	0	1	1	2
Colon	153	1	1	0	2
Bile system	156	0	1	0	1
Pancreas	157	0	4	0	4
Lung	162	2	3	1	6
Bone and connective	170 - 174	1	2	0	3
Prostate	185	0	1	0	1
Lymph and blood	200 - 209	0	1	1	2
Myxoma	215	0	1	0	1
Diabetes	250	0	1	0	1
Dementia	290	0	1	0	1
Polyneuritis	354	1	0	0	1
Rheumatic heart disease	394	0	1	0	1
Ischemic heart disease	410 - 414	7	20	6	33
Cerebrovascular disease	430 - 438	2	2	1	5
Aortic aneurysm	441	0	0	1	1
Pneumonia	486	1	0	0	1
Emphysema	492	1	2	0	3
Intestinal and peritoneal dis.	560 - 569	0	2	0	2
Liver necrosis and cirrhosis	570 - 571	1	1	2	4
Nephritis	582 - 583	2	0	0	2
Auto. accidents	800, 802, 864	0	3	0	3
Chemical toxins	968, 980, 986	2	2	0	4
Drowning	994	1	0	0	1
Total		22	51	13	86



NICHOLAS ROUSSOS
COMMISSIONER

The Commonwealth of Massachusetts

Executive Office of Manpower Affairs

Department of Labor and Industries

Division of Occupational Hygiene

39 Boylston Street, Boston 02116

IN YOUR REPLY
REFER TO FILE

February 3, 1976

Pierre Decoufle, Sc.D.
Office of Occupational Health Surveillance
and Biometrics
N.I.O.S.H.
Rockville, Maryland 20852

Dear Pierre:--

Here is a summary of my crude analysis of the death certificate data forwarded to me by K.O.S.H.A. I have double-checked the data and done some additional search of death certificates, and I can confirm that they represent a complete list of deaths in Springfield and Ludlow, Massachusetts, from 1960-1975, for which Monsanto is named as employer. The eighty-six death certificates for the VC-PVC areas are included, even though some of them did not come from the Springfield-Ludlow source.

The deaths of 397 Monsanto employees are compared to the U. S. deaths of white males in 1972. This is a crude comparison because (1) a few of the 397 were black or female and (2) there is no correction for age or for year of death. The I.C.D. 8th revision code numbers are used.

CAUSE OF DEATH	OBSERVED DEATHS	EXPECTED DEATHS
140-209 Cancer, total	85	66.5
410-413 Ischemic heart disease	163	148.8
E800-E999 Accidents, suicide, homicide	28	38.1
150 Cancer, esophagus	5	1.5
151 Cancer, stomach	3	3.3
153,154 Cancer, large intestine+rectum	12	8.7
155 Cancer, liver (primary)	3	0.5
156 Cancer, gall bladder	1	0.6
157 Cancer, pancreas	7	3.8
150-157 Cancer, digestive organs	31	18.4
162 Cancer, lung	19	20.8
170-173 Cancer, bone, skin	5	1.8
185-189 Cancer, genitourinary	11	10.7
200-209 Lymphomas & leukemia	10	7.1

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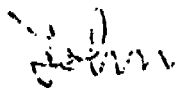
Pierre Decoufle, Sc.D.

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February 3, 1976

Hopefully, the company records will be helpful in producing many more deaths of employees who did not die in these towns or who did not have Monsanto specifically mentioned on the certificate.

Sincerely,


John N. Lewis
Occupational Hygiene Physician

JNL s

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