

p-Dichlorobenzene Study/Worker Notification Letter
January 16, 1992

- Format of worker notification letter
 - rationale for conducting study
 - study results
 - medical contact

- Methods for obtaining employees' addresses
 - Monsanto pension file for 200 retirees
 - HCFA, IRS, and/or retail credit files for 200 *① HCFA ② Retail ③ Illinois* terminated employees
 - Costs?

- Coordination of this project
 - Who will sign the letter? *Friedman*
 - Who will mail letters? *Epstein*
 - Who will keep track of letters that are returned to us because of incorrect addresses? *Epstein*
 - Who will be responsible for telephone coverage, if employees have questions? *Epstein*

DSW 134233

STLCOPCB4034191

In 1987, the Monsanto Department of Medical and Health Sciences began a study of employees at the W. G. Krummrich Plant who were exposed to paradichlorobenzene (PDCB) to determine if any adverse health effects resulted from that exposure.

Based on the preliminary results from this study, Monsanto employees exposed to PDCB do not show any exposure-related health effects. However, the Department of Medical and Health Sciences plans to continue the study by expanding the number of workers. This will provide additional information on effects of PDCB exposure.

So far, the study examined the causes of death for production workers who worked in Department 224 between 1946 and 1975. This examination included approximately 650 present and former employees who have been successfully traced.

Preliminary study results show the employees exposed to PDCB have a lower death rate than the general population. There were 211 deaths among the employees. Using the population of St. Clair County, Illinois, for reference, there would have been 247 deaths expected. The number of deaths from all forms of cancer, accidents, and diseases of the circulatory, respiratory, digestive and urinary systems are either the same or fewer than expected for a group of this size.

There were five deaths in the study group from leukemia, which is one form of cancer. While this is somewhat more than expected, the leukemia does not appear to be related to PDCB exposure because (1) several different types of leukemia were involved, (2) the leukemia rate does not increase with higher PDCB exposures, and (3) the increase is not statistically significant.

The expanded study will include approximately 1,000 present and former employees exposed to PDCB at the Krummrich Plant between 1941 and 1989, including the 1946-75 group reviewed earlier. The 1941-89 period encompasses the years of highest PDCB exposure for Monsanto employees, including those who worked in the building where PDCB blocks were manufactured.

The expanded study will also include a more detailed exposure assessment for PDCB and other workplace chemicals to evaluate exposure-response relationships. It will provide additional information on whether PDCB exposure has any effect on the health of workers.

It is estimated that the expanded study will be completed in August, 1992. The results will be shared with employees and submitted to a peer-reviewed scientific journal.

For additional information, please contact Patrick R. Conner, M. D., Monsanto Department of Medical and Health Sciences, or Florence Levy, Supervisor, W. G. Krummrich Plant Medical Department.

Barry R. Friedlander, M.D.
Director, Medical and Health Sciences

James J. Collins, Ph. D.
Epidemiology Director

St. Louis
August 12, 1991

DSW 134235

REDRAFT WORKER NOTIFICATION LETTER
December 19, 1991

Dear X,

The results of two studies on the possible health effects of dioxin exposure are available and may be of interest to you. The first study conducted by the National Institute for Occupational Safety and Health (NIOSH) was completed in August 1990 and the second study conducted by Monsanto was just completed.

The study by NIOSH, a federal agency which researches industrial health, included employees at two Monsanto plants (Nitro and Krummrich) and 10 non-Monsanto sites. Monsanto provided NIOSH with information on employees who worked in departments with potential dioxin exposure. Among those exposed to dioxin, NIOSH did identify seven cases of a rare cancer called soft tissue sarcoma and reported elevated death rates for respiratory cancer.

Monsanto conducted a separate study which updated a 1980 report on employees involved in a 1949 trichlorophenol accidental at the Nitro plant which released an unknown level of dioxin. The results of this updated study indicate workers exposed only to dioxin do not have elevated death rates from cancer, including soft tissue sarcoma. In fact death rates among this group were no different from workers not exposed to dioxin, people living near the plant, or the general U.S. population.

Monsanto's updated study also confirmed earlier findings that employees who worked with p-aminobiphenyl (PAB) have an increased risk of bladder cancer. Monsanto stopped using PAB in 1955. A program has been in place for many years to inform workers of potential health hazards associated with PAB and to conduct medical surveillance of previously exposed workers.

Other preliminary findings in the Monsanto study are increased mortality rates for: (1) respiratory cancer in employees who developed chloracne from the accident and also were exposed to PAB, and (2) soft tissue sarcoma in employees who had PAB exposure. These findings, however, should be considered preliminary because of the small number of workers studied and the inability of the study to examine such factors as cigarette smoking and other workplace exposures. An additional study is currently underway at the Nitro, Krummrich and Queeny plants to reexamine these preliminary findings. When this study is completed in 1993, the findings will be reported to you.

DRAFT December 19, 1991

DSW 134236

STLCOPCB4034194

Monsanto's Medical Department advises that no individual action is believed to be necessary based on the findings of either the NIOSH or Monsanto study. Those who want further information may contact Dr. Patrick Conner in the Department of Medical and Health Sciences, Monsanto, 800 N. Lindbergh Blvd., St. Louis, Missouri 63167. You can call Dr. Conner collect at 314-694-8807.

Sincerely,

Barry R. Friedlander, M.D.
Director of Medical and
Health Sciences

DRAFT December 19, 1991

DSW 134237

STLCOPCB4034195

Monsanto

FROM (NAME, LOCATION, PHONE): Terry L. Leet, A2SL, 4-8845

DATE: October 1, 1991

cc: J.J. Collins

SUBJECT: Paradichlorobenzene Study/Worker Notification Letter

REFERENCE:

TO: T.L. Blank - 1740
K.S. Cahill - G4WD
E.D. McCormick - 1740
G.R. Penney - G5SL
L.W. Wassell - G4WF

We have received approval from the Internal Revenue Service (IRS) and the Health Care Finance Administration (HCFA) to use their databases for contacting former Monsanto employees about the preliminary results from our p-dichlorobenzene study. The IRS will assist us by sending our announcement in IRS envelopes to former employees who are included in their database. However, they will not provide us with any information concerning the number of letters that are returned because of incorrect addresses. The cost will be approximately \$1.00 per letter.

HCFA also has approved our request to use their database of eligible MEDICARE recipients to contact former employees about results from our p-dichlorobenzene study. HCFA will allow us to mail our announcement in Monsanto envelopes, as long as we include their standard disclaimer that participation in the study does not affect the status of the subject's MEDICARE benefits. However, their database only includes individuals 65 years of age or older, which may exclude some of our former employees. The cost for this service will be \$500. (W)

Please let me know if you wish to proceed with notification of former Krummrich employees who were included in the p-dichlorobenzene study, and if you wish to use either source to help us accomplish this goal.

T. Leet

DSW 134238