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E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED

WILMINGTON, DELAWARE 19898

CHEMICALS, DYES AND PIGMENTS DEPARTMENT

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For 422
Wilmington, Delaware
June 19, 1978

PERSONAL & CONFIDENTIAL

P. M. HUMANICK - CH. WKS.

Copy for: BAB-JRM
JWR

FLUOROCARBONS IN BLOOD

JC Leitinger - Parkers
for info - not an action
item

The attached memorandum describes a medical program recommended by Dr. B. W. Karrh to ensure a sound step-wise approach to determine if an occupational hazard exists to Du Pont workers exposed to certain fluorochemicals. After discussion with Wilmington Management, it has been decided to follow that program, with the following exceptions:

- Step 2 will be restricted to include only those who have handled the Telomer A-derived fluorochemicals line, and only currently (since 1/1/78).
- The program will be interrupted for Management review of the findings after the medical review in Step 6. This will occur after any findings in the study become statistically significant or after completion of the series of blood tests, whichever comes sooner.
- At that time, consideration will be given to accelerating the program, adding earlier workers, and adding workers involved with production of other fluorochemicals.

Will you please initiate this program as soon as practical. Dr. Karrh will supply additional details of physical examination procedures and G. H. Patterson's Division will carry out the blood analyses. John Coleman will coordinate the program and should be given copies of all memoranda and results.

In addition to the foregoing, the Product Center will initiate additional toxicity tests on representative fluorosurfactants in their line as well as on Telomer A, Telomer B alcohol, and on the fluoro-alkyl methacrylate.

F. E. French
F. E. FRENCH

FEF:lrq
Attachment

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E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
WILMINGTON, DELAWARE

EMPLOYEE RELATIONS DEPARTMENT

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June 16, 1978

F. E. FRENCH
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B 17264

FLUOROchemicals IN BLOOD

3M has reported finding FC143, plus other unidentified fluorochemicals in the blood of potentially exposed workers. As yet, no adverse health effect has been detected in these workers and the significance of these findings is unknown. These chemicals have also been detected by tests on the workers' urine, with good correlation with the blood test results but in very small quantities. Similar tests have not been done on the general population, although a few tests have been done on plant office workers.

The Medical Division recommends the following course of action for Du Pont employees whose jobs have potential for exposure to Telomer A and its non-polymeric derivatives.

1. Review all current operations and industrial hygiene controls to insure that the potentials for exposures are properly controlled.
2. Identify all employees who currently work or have worked jobs in which there is or was potential for exposure to fluorochemicals.
3. Review the medical records of all such persons still employed by Du Pont, looking for consistent or unusual health occurrences or trends.
4. Obtain blood fluorochemical levels on persons who have never had potential for occupational exposure to fluorochemicals to establish background levels for a baseline. These tests can be obtained on Wilmington office employees as a part of the periodic physical examinations given in the Nemours Medical facility.
5. Obtain blood fluorochemical levels on representative employees with various potentials for exposures to various fluorochemicals. If this is done at the same

*only Telomer A and
since 1/1/78*

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THERE'S A WORLD OF THINGS WE ARE DOING SOMETHING ABOUT

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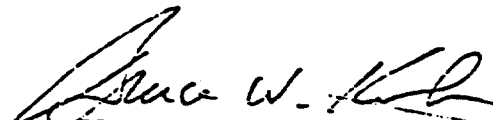
time as the employee's periodic physical examination, a comprehensive examination should be done with careful documentation of the results. A urine specimen should be obtained for later analysis for fluorochemical levels in the event the blood level is markedly elevated.

*Must discuss
to proceed with #7*

6. Review the physical findings of the workers examined for consistent or unusual health occurrences or trends. When such occurrences or trends are found and appear to be significant, consideration should be given to conducting similar physical and blood examinations on non-exposed controls for comparison.
7. If the period of potential exposure has been of sufficient duration and there is a sufficient number of employees, an epidemiologic study of the mortality of the cohort identified may be considered. A determination can be made of the likelihood of having a meaningful study after the number of previously exposed employees is determined.

The Medical Division recommends proceeding with this study in order as presented. However, we will need at least two days to obtain proper supplies and inform our technicians of the study and how to discuss the study with the employees.

BWK/ag


BRUCE W. KARRH, M.D.
MEDICAL DIRECTOR

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