



E. I. DU PONT DE NEMOURS & COMPANY

INCORPORATED

WILMINGTON, DELAWARE 19898

CENTRAL RESEARCH & DEVELOPMENT DEPARTMENT

HASKELL LABORATORY

FOR

TOXICOLOGY AND INDUSTRIAL MEDICINE

April 10, 1981

PERSONAL & CONFIDENTIAL

EID090081

MEMO TO: H. E. SERENBETZ
PPD, M-642

FROM : C. F. REINHARDT, M.D., CR&D, HASKELL *CFR*
B. W. KARRH, M.D., ERD, N-11400 *BWK*

FC-143

(Ammonium perfluorooctanoate; C-8; CAS-3825-26-1)

At your request, we have reviewed the information pertinent to whether FC-143 is a teratogen.

During the many years that Du Pont has used FC-143, there has been no known evidence of adverse health effects from employee exposure. However, our supplier of FC-143 (3M) informed Du Pont on March 20, 1981, that FC-143 caused defects (abnormal eye lenses) in rat fetuses when fed daily (days 6-15) to pregnant rats by stomach tube at doses of 25 or 150 mg/kg body weight. This observation was from a pilot study designed to determine the maximum dosage rate that pregnant females could tolerate in preparation for a full-scale study to assess FC-143's teratogenic potential.

On March 27 two Haskell scientists, Dr. R. E. Staples, Staff Teratologist, and Dr. T. Chiu, Senior Research Pathologist, visited 3M and reviewed the data with several 3M scientists. Staples and Chiu concurred with 3M that the lens defects were probably caused by FC-143.

Both Du Pont and 3M plan to start full-scale teratogenicity studies promptly. A major goal will be to determine a dosage or exposure concentration of FC-143 that does not cause birth defects and to relate this dosage to blood levels of FC-143. Until we have these data, we have no good basis for setting an acceptable exposure limit (AEL) for women of childbearing capacity. We recommend that women of childbearing capacity be removed from jobs where it has been demonstrated that there is potential for exposure to FC-143 and blood levels of FC-143 are above defined background levels (0-0.4 ppm). Areas where the employees have blood levels of organic fluorine in the background range and where the airborne concentration of FC-143 is in compliance with our provisional allowable exposure limit of 0.01 mg/m³ should present no significant risk to the fetus.

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J. R. Gibson, Director of Health and Safety, concurs with our conclusions.

CFR/BWK/bjd

cc's to:

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