

2-89 REV. 12-79



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON, DELAWARE 19898

POLYMER PRODUCTS DEPARTMENT

FINAL COMMUNICATIONS PACKAGE

April 6, 1981

PERSONAL AND CONFIDENTIALC-8 PERFLUOROCTANOATE

Attached is the final employee communications package that is being used to implement corporate actions relative to recent findings by 3M on the teratogenic potential of ammonium perfluorooctanoate.

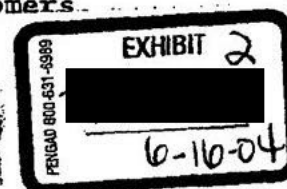
It contains the communications schedule, appropriate employee communications, questions and answers, media standby-statement, a letter outlining activities of the FC-143 Communications and Coordination Committee, and letters to customers.

Please destroy all previous drafts.

  
ENERGY & ENVIRONMENTAL AFFAIRS  
MANUFACTURING DIVISION

  
Attachments

\*Employee Communication for individual site only.



ALP002609

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There's a world of things we're doing something about

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\*Refers to number in upper right hand corner of page.

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PERSONAL & CONFIDENTIALC-8 - EMPLOYEE COMMUNICATION

## Timetable:

	<u>Initial</u>	<u>Communication E.S.T.</u>
<u>Washington Works</u>		
• Line Supervision through 2nd Line	3/31	09:00
• First Line Supervision	4/1	09:00
• Wage Roll	4/1	12:00
<u>Other Domestic Locations</u>		
• Supervision - Same as above		
• Wage Roll - Same as above		
<u>Foreign Locations</u>		
• Europe	4/2	A.M. (local)
• Japan	4/2	A.M. (local)

cadw  
3/30/81

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FINAL - 3/31/81 - WASHINGTON WORKS

EMPLOYEE COMMUNICATION

We have been informed by the 3M Company about the preliminary results of a new animal study involving the fluoro-surfactant, C-8, which is an essential material that has been used for more than 20 years in fluoropolymer resins manufacture at Washington Works. 3M is our principal supplier for this chemical.

We were advised on March 20, 1981 that C-8, also known as FC-143 or ammonium perfluorooctanoate, caused birth defects in the unborn when fed by stomach tube to female rats in a laboratory experiment. This was a preliminary study designed to determine dosage limits prior to a full-scale study on C-8's potential to cause birth defects in rats.

At this time, we do not know the significance, if any, of the preliminary animal experiment as it may relate to employee exposure. Further studies are planned to define possible reproductive effects.

As a precaution, based on the new study we have decided that until further information is obtained, all female employees will be removed from areas where there is potential for exposure to C-8 and loaned immediately to other divisions. These female employees will consult with our Plant Medical Division, and those of non childbearing capability will be given the option to return to the fluoropolymer area. Women of childbearing capability will be allowed to bid for other plant jobs after a permanent plant

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posting has been made. Present pay rates will be maintained and vacation selections previously made will be honored for those females reassigned.

During the period that C-8 has been used at Washington Works, there has been no known evidence that our employees have been exposed to C-8 levels that pose adverse health effects. A preliminary acceptable exposure limit of  $0.01 \text{ mg/m}^3$  (0.56 parts per billion) was established which we believe has adequately protected our employees. There is no evidence to suggest there is any impairment of the male reproductive function.

3M first notified us in 1978 that exposure to C-8 could result in elevated organic fluoride levels in the blood of its employees and that these elevated levels could persist for extended periods of time. At that time, we notified employees, embarked on an extensive program to reduce exposure levels, and began blood monitoring analyses. Employees have been kept advised on new developments and of blood test results.

We ask your cooperation with job reassignments and participation in a program for additional blood sampling.

We will inform you promptly as new information is obtained.

# # #

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QUESTIONS AND ANSWERS

(To be used as needed to answer questions)

If there are any questions not answered below they should be referred to plant management.

- Q01. How many female employees at your Parkersburg\* plant may have been exposed to C-8?
- A01. About (50)\* worked in areas where there is potential for exposure.
- Q02. Have you sampled the blood of these employees to determine if they have elevated organic Fluoride levels?
- A02. Some but not all employees have been sampled as part of our existing programs.
- Q03. Do they have levels of C-8 above normal?
- A03. Yes, some do.\*
- Q04. Are any of the fifty female employees pregnant?
- A04. Yes, two that we know of.\*
- Q05. Are there any former employees you know of who may have been exposed to C-8 and who are now pregnant?
- A05. Yes, one that we know of.\*
- Q06. What have you advised these pregnant women to do?
- A06. We have advised these employees to consult the plant physician for an explanation of the potential risks and will have them consult also with their personal physician. The exact significance of the animal test results to the human offspring is yet unknown. However, we believe it prudent to eliminate any further exposure that results in blood levels greater than background until additional data are obtained.

\*Adjust for other sites.

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Q07. What is the background level?

A07. In our experience with blood tests conducted among employees with little chance for potential exposure, organic fluoride blood levels ranged up to 0.4 PPM.

Q08. Have you attempted to locate former female employees to advise them of the 3M Company's animal study which indicated that C-8 may be teratogenic?

A08. We are in the process of reviewing our employment records and where appropriate, former employees will be notified.

Q09. Do you have any knowledge of Du Pont employees or former employees who have been exposed to C-8 whose children suffered birth defects?

A09. We know of no evidence of birth defects caused by C-8 at Du Pont. In light of 3M results, we will investigate further.

Q10. Do you have any knowledge of 3M Company employees or former employees who have been exposed to C-8 whose children suffered birth defects?

A10. No. We are not knowledgeable of the pregnancy outcome of any 3M employees or former employees who were exposed to C-8.

Q11. What is the possibility that employees or former employees of childbearing age with elevated organic fluoride levels may give birth to children with defects?

A11. We do not know, but we are taking appropriate steps to avoid further exposure.

Q12. Is there any indication that male employees or former male employees exposed to C-8 may have suffered loss of reproductive function?

A12. We have no indication that C-8 has an effect on the male reproductive system or its function. The reproductive organs of the male laboratory animals exposed to C-8 were closely examined and were normal, with no evidence of abnormalities attributable to C-8 exposure.

Q13. Are there any tests that can assure the fetus is all right?

A13. There are no tests which can assure that the fetus is all right. There are tests which can detect fetal abnormalities in some cases.

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Q14. What advice do we have for women of childbearing capability, who have been exposed, about becoming pregnant?

A14. This is a personal subject between the woman and her physician. Any questions of a personal nature will be handled on an individual basis.

Q15. Will elevated organic fluoride levels in the blood decrease in time?

A15. Yes.

Q16. How long does it take for these levels to fall to background levels?

A16. It is not known at this time. Blood sampling is continuing.

Q17. Can employees and former employees with elevated organic fluoride levels donate blood safely?

A17. Blood donating is a deferrable option. Persons who have elevated blood levels of C-8 or who have worked in areas of potential exposure to C-8 and the blood level has not been determined should not donate blood until the blood level of C-8 returns to background levels.

Q18. Have you resampled employees' blood recently? \*

A18. Yes, and we are taking additional samples in an ongoing program.

Q19. Were the levels lower in the recent blood samples? \*

A19. So far there is no obvious trend with the data available.

Q20. Is there danger to the families of employees who work in the area?

A20. By following the established practices and procedures, use of personal protection equipment and following good personal hygiene practices, there should be no hazard to the employee's family.

\*Adjust for other sites.

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Q21. What operating procedures were instituted by Du Pont after the first 3M report in 1978?

A21. We increased use of personal protective equipment, instituted blood monitoring and air sampling programs, improved housekeeping and made certain equipment modifications. Additional engineering programs are under way.

Q22. What additional changes in operations procedures do you plan now?

A22. This has not been determined. We are reviewing the situation.

Q23. Are you looking for a substitute for C-8?

A23. Yes, we have been for some time.

Q24. What are the possible substitutes?

A24. We have not identified one at present.

Q25. Why did the 3M Company test C-8 for teratogenicity?

A25. We understand that C-8 is chemically similar to other compounds made by 3M and that in earlier testing were found to be teratogenic.

Q26. When did Du Pont learn of the latest study results?

A26. March 20, 1981.

Q27. Has the appropriate Federal regulatory agencies been notified?

A27. Yes. It is our understanding that 3M, our supplier, has notified EPA of the study and its results.

Q28. What were the birth defects noted by 3M in the unborn fetus?

A28. Eye defects are reported but complete testing will be required.

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- Q29. What additional animal testing is planned?
- A29. C-8 teratology evaluations of laboratory animals to confirm 3M preliminary results will be conducted to identify a safe exposure level for females.
- Q30. What is Du Pont's policy on employing women around embryo-toxins?
- A30. Women of childbearing capability are allowed to work in areas of potential exposure to teratogens where a safe exposure level is known and the exposures can be maintained below these levels. Women of childbearing capability are not allowed to work in areas where safe levels are not known or where the potential exposures are above safe levels. Women who are not of childbearing capability can work in areas of potential exposure to teratogens.
- Q31. Has Du Pont ever required or suggested that an employee be sterilized?
- A31. No.
- Q32. Are there any other chemicals used at your Parkersburg plant that are embryotoxic?
- A32. Yes. DMF (dimethyl formamide) and HFA (hexafluoroacetone).
- Q33. Is there any problem involved with cookware which has been coated with fluorocarbon resin?
- A33. No.
- Q34. Will Du Pont be notifying its customers of the most recent findings reported by 3M?
- A34. Yes.
- Q35. Does Du Pont manufacture fluorinated surfactants at its Deepwater, New Jersey plant?
- A35. Yes, but these are manufactured by different technology and are chemically different from C-8 (FC-143).

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- Q36. Is it possible that people working with fluoropolymer dispersions may be exposed to fluorinated surfactants and develop high blood fluoride levels?
- A36. Du Pont employees working with fluoropolymer dispersion products have been tested and show normal background level of blood fluoride.
- Q37. If sintered fluorocarbon products do not contain C-8, what happens to the C-8 during sintering or other heating operations?
- A37. It is removed in processing.
- Q38. Does Du Pont monitor airborne exposure levels?
- A38. Yes.
- Q39. Have women been removed from areas with potential for exposure at all Du Pont locations?
- A39. Each site is taking appropriate action.

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Final - 4/3/81

STANDBY STATEMENT  
FC-143 EXPOSURE

We have been informed by the 3M Company about the results of a preliminary animal study involving the fluorosurfactant, ammonium perfluorooctanoate, also known as FC-143.

3M is our principal supplier for this chemical, which Du Pont uses in certain manufacturing processes.

We were advised that FC-143 caused defects in unborn rats when fed by stomach tube to female rats in a laboratory experiment. This was a preliminary study designed to determine dosage limits prior to a full-scale study on FC-143's potential to cause birth defects in rats.

We are considering all implications of the results of the preliminary 3M study. Additional test work is planned by 3M and Du Pont.

At this time we do not know the significance, if any, of this experiment as it relates to employees with potential for exposure. During the many years we have used FC-143, there has been no known evidence of adverse health effects from employee exposure.

As a safeguard, however, where appropriate, Du Pont has reassigned female employees of childbearing potential. Female employees of childbearing potential are not being reassigned at other locations where blood sampling and air monitoring indicate there is no cause for concern.

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# # #

NOTE: [REDACTED] of the Medical Division, will respond to media inquiries of a corporate medical nature. For inquiries to be addressed by [REDACTED] contact [REDACTED] Public Affairs ([REDACTED]). For nonmedical inquiries of a corporate nature, contact [REDACTED], Public Affairs ([REDACTED]).

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Q01. At which Du Pont plants have you reassigned female employees to avoid potential exposure to FC-143?

A01. At Parkersburg, West Virginia, and Circleville, Ohio.

Q02. How many female employees have been reassigned at each plant?

A02. About 50 at Parkersburg and 1 at Circleville.

Q03. Are any of these employees pregnant?

A03. Yes, two that we know of at Parkersburg.

Q04. Are there any former employees you know of who may have been exposed to FC-143 and who are now pregnant?

A04. Yes, one that we know of at Parkersburg.

Q05. What have you advised these pregnant women to do?

A05. We have advised these employees at Parkersburg to consult the plant physician for an explanation of the potential risks and, if they wish, to consult also with their personal physician. The exact significance of the animal test results to human offspring is yet unknown, but we believe the likelihood of risk is small. However, we believe it is prudent to eliminate any further exposure until additional data are obtained.

Q06. Have you sampled the blood of these employees to determine if they have elevated organic fluorine levels?

A06. Some but not all female employees have had blood samples taken and analyzed as part of our existing program.

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ATTACHMENT ITIME LINE FOR C-8 CONTROL PROGRAM

- March 20, 1981 ● Informed by 3M of embryotoxic effects observed in preliminary animal studies with C-8.
- March 27, 1981 ● 3M was visited by Du Pont personnel to verify validity of test results.
- March 27-31, 1981 ● Decision made to move all females from TEFLON® area and procedures developed for handling temporary moves (Attachment II - typed April 9, 1981).
- March 31, 1981 ● Standby Media Statement and Questions and Answers received (Attachment IV).
- April 1, 1981 ● Employees informed and all females temporarily removed from exposure area (Attachment III).
- Begin blood sampling of females involved. Completed April 10, 1981.
- Begin verbal contacts with contractors as needed to assure no females of childbearing capability in exposure area.
- April 6, 1981 ● Complete Company communications package issued (Attachment IV).
- April 8, 1981 ● Work begins on dispersion modeling to determine airborne exposures in other areas of the Plant. Initial data obtained June 3, 1981. Final results completed August 7, 1981 (Attachment XIV).
- April 12, 1981 ● With medical approval, females of non-childbearing capability allowed to return to TEFLON®.
- April 14, 1981 ● Second communication to answer questions raised by females after the initial Plant announcement (Attachment V).
- Supplemental Media Standby Questions and Answers issued (Attachment VI).
- April 15, 1981 ● Communication of procedure for permanent reassignments to all wage roll (Attachment VII).

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- Q07. Do they have above-normal organic fluorine blood levels?
- A07. Yes, some have above-background levels.
- Q08. Have you attempted to locate former female employees to advise them of the 3M Company's animal study which indicated that FC-143 may be teratogenic?
- A08. We are reviewing our employment records and, where appropriate, former employees will be notified.
- Q09. Do you have any evidence that Du Pont employees or former employees who have been exposed to FC-143 have had children who suffered birth defects?
- A09. We have no evidence of birth defects caused by FC-143 at Du Pont. In the light of the 3M study, we will investigate further.
- Q10. Do you have any knowledge that 3M employees or former employees who have been exposed to FC-143 have had children who suffered birth defects?
- A10. We are not aware of any adverse pregnancy outcomes among 3M employees or former employees with potential for exposure to FC-143.
- Q11. What is the possibility that employees of childbearing potential with elevated organic fluorine levels may give birth to children with defects?
- A11. There is very little likelihood that employees would bear children with defects due to exposure to FC-143, even if it

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is a teratogen, because their exposure was at relatively low levels. However, until more facts are known about FC-143 and higher-than-background organic fluorine blood levels, we believe it is prudent to remove females of childbearing potential from the risk of potential exposure.

Q12. Is there any indication that male employees or former employees exposed to FC-143 may have suffered loss of reproductive function?

A12. We have no indication that FC-143 has an effect on the male reproductive system or its function. The reproductive organs of male laboratory animals exposed to FC-143 were examined and were normal, with no evidence of abnormalities attributable to FC-143 exposure.

Q13. Are there any tests that can assure the fetus is all right in the case of an expectant mother who was exposed to FC-143?

A13. There are no tests which can assure the fetus is all right. There are some tests which can detect fetal abnormalities in some cases.

Q14. What will you advise females of childbearing potential who have been exposed about becoming pregnant?

A14. This is a personal matter between the woman and her personal physician. Du Pont physicians will give full cooperation to employees' personal physicians. Any other matters of a personal nature will be handled on an individual, confidential basis.

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Q15. What is the background level?

A15. In our experience with blood tests conducted among employees with little chance for potential exposure, organic fluorine blood levels have ranged from 0.0 parts per million to 0.4 ppm.

Q16. Will elevated organic fluorine levels in the blood decrease in time?

A16. Yes.

Q17. How long does it take for these blood levels to fall to background levels?

A17. We do not know at this time, but we believe the rate of decline is relatively slow.

Q18. Can employees and former employees with elevated organic fluorine blood levels donate blood safely?

A18. A person who has elevated organic fluorine blood level should not donate blood until the organic fluorine blood level returns to background levels. A person who has worked in an area of potential exposure to FC-143 and whose blood level has not been determined should not donate blood until the organic fluorine level has been determined to be no higher than background.

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Q19. I understand an employee at the Parkersburg plant suffered a miscarriage. Was this related to FC-143 exposure?

A19. We have no information that indicates a higher risk of miscarriage due to exposure to FC-143.

Q20. Have you resampled employees' blood recently?

A20. Yes, we have and are taking additional samples in an ongoing program.

Q21. Were the levels lower in the recent blood samples?

A21. So far, there is no obvious trend, with the data available.

Q22. What operations procedures were changed by Du Pont after you first learned that exposed employees may have elevated organic fluorine blood levels?

A22. We increased the use of personal protective equipment, instituted blood monitoring and air sampling programs, improved housekeeping, and made certain equipment improvements. Additional engineering programs are under way.

Q23. What additional changes in operations procedures do you plan now?

A23. This has not been determined. We are reviewing the situation.

Q24. Are you looking for a substitute for FC-143?

A24. Yes.

Q25. What are the possible substitutes?

A25. We have not identified one at present.

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Q26. Why did the 3M Company test FC-143 for teratogenicity?

A26. We understand FC-143 is chemically similar to other compounds made by 3M and that in earlier testing these other compounds (a perfluorosulfonic acid and a perfluoroalcohol) were found to be teratogenic.

Q27. What were the birth defects noted by 3M in the unborn fetus?

A27. Eye defects were noted, but complete testing will be required.

Q28. What additional animal testing is planned?

A28. FC-143 teratology evaluations of laboratory animals will be conducted to confirm results of the preliminary 3M study and to identify a safe exposure level for female employees of childbearing potential.

Q29. When did Du Pont learn of the preliminary teratology study results on FC-143?

A29. March 20, 1981.

Q30. Has the appropriate Federal regulatory agency been notified?

A30. It is our understanding that 3M, our supplier, has notified the Environmental Protection Agency of the study and its results.

Q31. What is Du Pont's policy on employing females around teratogens?

A31. Women of childbearing potential are allowed to work in areas of potential exposure to teratogens where a safe exposure level is known and the exposure can be maintained below these levels. Women of childbearing potential are not allowed to work in areas where safe levels are not known or where the

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potential exposures are above safe levels. Women who are not of childbearing potential can work in areas of potential exposure to teratogens.

Q32. Has Du Pont ever required or suggested that an employee be sterilized?

A32. No.

Q33. Are there any other embryotoxic chemicals used at your Parkersburg plant?

A33. Yes. DMF (dimethyl formamide) and HFA (hexafluoroacetone).

Q34. How is FC-143 used at Du Pont?

A34. This is a water soluble compound used for its ability to modify the wettability of materials.

Q35. What products are made by Du Pont using FC-143?

A35. Various fluoropolymer resins, perfluoroelastomers, and polyimide films.

Q36. Is FC-143 found in any of these products as supplied to the marketplace?

A36. Yes, fluoropolymer dispersions contain up to one-half percent of FC-143.

Q37. What are uses for the dispersion?

A37. Fluoropolymer dispersions are used to coat various fibers and metals. In most but not all of the coating operations, the FC-143 is destroyed by a sintering process. Sintering is a

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high-temperature curing process used in all fluoropolymer coating processes except in the manufacture of some fiber and fluoropolymer resin combinations.

Q38. Are there any applications where FC-143 is not destroyed?

A38. Yes, in packings, gaskets, and industrial filtration products.

Q39. Where are gaskets and packings used?

A39. We don't know all the places. However, we can assume that any operations where liquids are being transported might use pump packings, valve stem packings, and gaskets.

Q40. What industrial filtration products use dispersions?

A40. Some industrial power plants use filter bags to collect finely divided coal ash. Many filter bags are made of woven glass fibers coated with dispersions which are not sintered.

Q41. If packings and gaskets are used in systems to transport liquids, could they come into contact with liquids intended for human consumption?

A41. We believe most of the applications involving our dispersions in packings and gaskets are industrial operations. Du Pont does not recommend the use of unsintered dispersions in applications where the material would come into contact with food, beverages, or potable water.

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Q42. You said Du Pont does not recommend such uses, but has the Company ever communicated this caution to customers?

A42. Yes. We advise customers orally and in writing that articles coated with fluoropolymer dispersions which are sintered should be in compliance with the Food and Drug Administration regulation (21 CFR 177.1550) for food contact. We advise customers that coatings that are not sintered will not comply with the FDA regulation.

Q43. Are any consumer products made and sold by Du Pont involved in this concern?

A43. No. Based upon our experience in monitoring the blood levels of our employees who work in areas where formulated products containing FC-143 are used, we do not believe there is cause for concern. For our industrial customers for fluoropolymer dispersions, we have communicated safe handling procedures for these materials. We will, of course, review this subject in greater depth and update our advice if further study warrants any changes in recommended procedures.

Q44. Is there any problem involved with cookware which has been coated with nonstick finish?

A44. No, since cookware coatings are sintered, thereby destroying the FC-143.

Q45. Will Du Pont be notifying its customers of the most recent findings reported by 3M?

A45. Yes.

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AJP002629

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Q46. Does Du Pont manufacture fluorinated surfactants at its Deepwater, New Jersey, plant?

A46. Yes, but these are manufactured by different technology and are chemically different from FC-143.

Q47. Is it possible that people using fluoropolymer dispersions may be exposed to FC-143 and develop elevated organic fluorine blood levels?

A47. Du Pont employees using fluoropolymer dispersion products who have been tested show no elevation over background levels.

Q48. Are there other manufacturers of products competing with and similar to fluoropolymer dispersions?

A48. Yes, both in the United States and in other countries.

Q49. Are they aware of the 3M study of FC-143?

A49. We have suggested to 3M that it advise all of its FC-143 customers.

Q50. Is FC-143 used in the manufacture of fluoropolymer resins at any Du Pont plants other than Parkersburg?

A50. Yes, at Dordrecht, The Netherlands, and at a joint venture, Mitsui Fluorochemicals Company, Ltd., in Japan, which is managed by our Japanese partner.

Q51. Are female employees at Dordrecht and in Japan being re-assigned or relocated?

A51. There are no female employees at Dordrecht who have the potential for exposure to FC-143. We are advising our Japanese partner for appropriate action.

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Q52. Are there other Du Pont plants where FC-143 is used?

A52. (NOTE: Plant managers should mention only their sites and refer media inquiries of a corporate nature involving other sites to Public Affairs.)

Small quantities of FC-143 or FC-143-containing materials are used at the Chambers Works in Deepwater; Germay Park, Chestnut Run, and the Experimental Station in Wilmington, Delaware; Philadelphia; Toledo, Ohio; Parlin, New Jersey; Fairfield, Connecticut; Richmond, Virginia; Brevard, North Carolina; Rochester, New York; Mechelen, Belgium; and Ajax, Canada.

Q53. Why haven't you reassigned female employees of childbearing potential at these sites?

A53. Some of these sites do not employ females in areas of potential exposure to FC-143. In other instances, Du Pont employees using fluoropolymer dispersion products who have been tested show no elevation of organic fluorine blood levels above background.

# # #

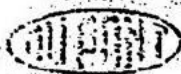
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CC: [REDACTED]

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E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
WILMINGTON, DELAWARE 19898

POLYMER PRODUCTS DEPARTMENT

March 31, 1981

[REDACTED]

[REDACTED]

- TF

FC-143 COMMUNICATIONS & COORDINATION COMMITTEE

Following are the committee members:

<u>DEPT.</u>	<u>NAME</u>
PPD	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	E. [REDACTED]
C&P	[REDACTED]
F&F	L. [REDACTED]
FIBR	[REDACTED]
INTL	[REDACTED]
LEGAL	[REDACTED]
CR&D	[REDACTED]
ER	[REDACTED]
PA	[REDACTED]

This committee will meet each day at 10:00 a.m. in D-12015 to review status.

Industrial Department Committee members will direct all questions to [REDACTED] (in his absence, [REDACTED]) for documentation and development of consistent answers. He will keep all committee members informed.

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There's a word of things we're doing something about

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March 31, 1981

[REDACTED] will be prime advisor on media related questions. However, such questions and answers should also be communicated to [REDACTED]

[REDACTED] will serve as the corporate spokesperson for all medical questions.

Each site should designate a principal spokesperson to avoid conflicting comments.

[REDACTED]  
ENERGY & ENVIRONMENTAL AFFAIRS  
MANUFACTURING DIVISION

EID079463

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**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED

WILMINGTON, DELAWARE 19898

POLYMER PRODUCTS DEPARTMENT  
PERSONAL & CONFIDENTIAL

April 1, 1981

FPD PERSONNEL

CUSTOMER ADVISORY LETTER -  
AMMONIUM PERFLUOROCTANOATE

The enclosed letter is being mailed to all domestic customers (List 5062) on Thursday, April 2.

The purpose is to advise our customers of experimental findings obtained by the 3M Company on the surfactant used in the manufacture of our fluoropolymer resins and dispersions. The information supplied by 3M has resulted in the reassignment of female personnel located in our direct resin manufacturing areas.

The information obtained to date indicates that our customers who use resins and dispersions in subsequent processing steps should continue to follow their existing good manufacturing procedures.

All questions or inquiries which may be generated as a result of this advisory letter should be referred to:

[REDACTED]

or in my absence:

[REDACTED]

[REDACTED]  
NATIONAL SALES MANAGER  
FLUOROPOLYMERS DIVISION

[REDACTED]  
Enclosure

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There's a world of things we're doing something about



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED

WILMINGTON, DELAWARE 19898

April 2, 1981

POLYMER PRODUCTS DEPARTMENT

Dear Customer:

On March 20, 1981, the 3M Company, our supplier of the surfactant ammonium perfluorooctanoate, also known as FC-143, advised us that this material has been found to cause birth defects in the unborn when fed by stomach tubes to female rats in a laboratory experiment. Du Pont uses FC-143 in the manufacture of most of its fluoropolymer resins.

Much more testing must be conducted to determine the significance of the 3M experiment. As part of the ongoing program to determine the safety of our materials, both Du Pont's Haskell Laboratory and 3M are now planning more detailed experiments.

With the exception of aqueous dispersions, there is no significant residual FC-143 in any of the fluoropolymer resins which we sell. Aqueous dispersions may contain up to 0.45% by weight FC-143. Analysis of the organic fluorine content in the blood of Du Pont personnel who use aqueous dispersions in fabricating finished products shows no elevation over typical levels measured in non-exposed employees. Female personnel in these areas are not being reassigned. However, we have taken the precaution of reassigning female personnel in the areas where our resins are manufactured and FC-143 itself is handled.

At this time, if you are following the Safe Handling Procedures previously given to you, it does not appear that changes in your processing operations are warranted. We do recommend that you continue to follow the Safe Handling Procedures (attached). Further studies are being conducted and we will advise you if there are any changes in our recommendations.

Should you have any questions, please contact us at your convenience.

Yours very truly,

[REDACTED]  
National Sales Manager  
Fluoropolymers Division

[REDACTED]  
EID079465

AFP002635

DRAFT OF LETTER TO CUSTOMERS OF:

Textile Fibers - Products containing Teflon® dispersions in an unsintered state.

April 2, 1981

Dear

On March 20, 1981, the 3M Company, our supplier of the surfactant ammonium perfluorooctanoate (FC-143), advised us the material has been found to cause birth defects when fed by stomach tube to female rats in a laboratory experiment. Du Pont has used FC-143 in the manufacture of its fluoropolymer resins for many years and has not experienced any known human-related problems. Our manufacturing process is such that only the fluoropolymer dispersions contain any residual FC-143, ~ 0.45% by weight.

These dispersions are used as impregnants in the family of Teflon® and Kevlar® packing yarns sold by Du Pont. Residual levels of FC-143 are present in these packing yarns. Other forms of Teflon® fiber are not known to contain residual FC-143.

As part of Du Pont's ongoing program for determining the safety of the materials used in the manufacture of or contained in the products we sell, we have been monitoring the organic fluorine content of the blood of the personnel involved with producing fibers. Our findings are:

At Du Pont's facilities which use fluoropolymer dispersions containing FC-143 in a manner similar to yours, we have found no elevation of the organic fluorine content over that of unexposed people.

EID079466

AJP002636

We intend to conduct more testing to determine the significance of the 3M experiment as it relates to our employee exposure and the products we sell. We have reviewed our procedures for handling fluoropolymer dispersions in our plants and plan no changes.

At this point in time, it does not appear to us that changes in your operations are warranted when handling impregnated packings. We will keep you informed of any further developments.

EID079467

AJP002637



**E. I. DU PONT DE NEMOURS & COMPANY**

INCORPORATED  
WILMINGTON, DELAWARE 19898

FABRICS & FINISHES DEPARTMENT

April 1, 1981

Dear Sir:

As part of Du Pont's ongoing program to survey the safety of all our materials, we think you should be advised of a March 20, 1981 announcement from the 3M Company, our surfactant supplier. 3M informed us that based on preliminary laboratory experiments involving a pure surfactant, birth defects resulted when fed to female rats. This surfactant is used at low concentrations by Du Pont to manufacture fluoropolymers which, in turn, are one of the components in our non-stick finishes.

In-depth investigation of the presence of this surfactant in coatings determined that the 3M surfactant was destroyed at normal curing temperatures and no detectable residue remained. As such, your coated products pose no health hazards to your customers.

If you are following our recommended "Safe Handling Practices" guide, changes in your manufacturing operations are not required. A copy of the guide is attached. Changes may be advisable if you are not following these recommended practices and our representatives will be available to discuss them with you.

Should you have any questions, please contact us at your convenience.

Very truly yours,

[REDACTED]  
Sales Manager  
TEFLON® FINISHES

[REDACTED]  
© TEFLON is Du Pont's registered trademark.

EID079468

ALP002638

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

77-316 REV. 10-81

**E. I. DU PONT DE NEMOURS & COMPANY**  
INCORPORATED

WILMINGTON, DELAWARE 19898

FABRICS &amp; FINISHES DEPARTMENT



April 3, 1981

Dear Mr. President:

The 3M Company recently told us that a fluorosurfactant (FC-143) we buy from 3M has caused birth defects in rats in a laboratory test. This product is a minor (less than 0.5 percent) ingredient in dispersions used to make our impregnated fluorocarbon felt.

It is our belief that the FC-143 is destroyed in the normal heat treatment of our impregnated felts. We are now testing to see if any residue of the compound can be detected in our finished product. We will let you know as soon as we get definitive results.

Sincerely,

  
  
SALES MANAGER - INDUSTRIAL  
ELECTRONIC/INDUSTRIAL  
COMPOSITES & COATINGS  
SPECIALTY PRODUCTS DIVISION

EID079469

AJP002639