

FYI- 0500-1378
AR226-0378

May 23, 2000

3M

Dr. Charles Auer, Director
Chemical Control Division
Office of Pollution Prevention and Toxics
United States Environmental Protection Agency
401 M Street, Southwest
Room 403, East Tower (Mail Code 7405)
Washington, D.C. 20460

MR 36139

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Re: Information on Perfluorooctane Sulfonates
and Related Compounds – Additional Information

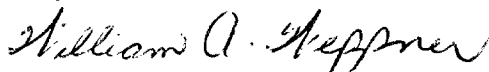
Dear Charlie:

I am enclosing additional information that did not get submitted with the recent May 18, 2000 submittal to you on perfluorooctane sulfonates and related compounds. This information includes:

1. An additional summary and report on N-ethylperfluorooctane sulfonamidoethanol (N-EtFOSE Alcohol) and a revised N-EtFOSE Alcohol Bibliography Sheet that includes this report.
2. Information on N-methylperfluorooctanesulfonamidoethyl acrylate (MeFOSEA).
3. Information on Perfluorodecanesulfonate, Ammonium Salt (PFDS).
4. Information on Perfluorooctane sulfonylamido (ethyl) acetate (PFOSAA) and a revised PFOSAA Bibliography Sheet that references FC-127 as another synonym for this compound.
5. Information on N-ethylperfluorooctanesulfonamidoethyl acrylate (EtFOSEA) and a revised EtFOSEA Bibliography Sheet that references a study not included on the bibliography sheet last week.

The Bibliography Sheets for MeFOSEA and PFDS were included as part of the May 18th submittal and remain unchanged.

Very truly yours,



William A. Weppner, Ph.D.
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And Regulatory Affairs
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This page added by Terry O'Bryan/EPA to expand index of FYI-0500-01378 submitted 5/23/00

1. **Information on N-ethylperfluorooctane sulfonamidoethanol (N-EtFOSE Alcohol):**
Summary and report of Octanol/Water Partition Coefficient
2. **Information on N-methylperfluorooctanesulfonamidoethyl acrylate (MeFOSEA):**
Summary and report of Stability in Water (Hydrolysis)
Summary and report of Octanol/Water Partition Coefficient
3. **Information on Perfluorodecanesulfonate, Ammonium Salt (PFDS):**
Two summaries and reports on each of the following:
Biodegradation; Acute Toxicity to Fish; Acute Toxicity to Aquatic Invertebrates;
Activated Sludge Respiration Inhibition Test; Microbics Microtox Toxicity Test.
4. **Information on Perfluorooctane sulfonamido (ethyl) acetate (PFOSAA):**
Several summaries and reports on each of the following:
Biodegradation; Acute Toxicity to Fish; Acute Toxicity to Aquatic Invertebrates;
Activated Sludge Respiration Inhibition Test; Microbics Microtox Toxicity Test.
Summary and report of Bioaccumulation (analytical only)
Summary and report of Acute Toxicity to Aquatic Plants (Algae)
5. **Information on N-ethylperfluorooctanesulfonamidoethyl acrylate (EtFOSEA):**
Summary and report of Physical/Chemical Properties
Two summaries and reports on Biodegradation
Summary and report of Acute Toxicity to Fish
Summary and report of Activated Sludge Respiration Inhibition Test
Summary and report of Bioaccumulation

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N-EtFOSE Alcohol Bibliography

Synonyms: FM 3422, FM 3923, FM 4635, FM 4120, F 9353, FC-10

Physical/Chemical Properties

Title	Laboratory or Author	Date Completed	Type
Water solubility	3M Env. Lab	11/15/77	Robust summary, relevant pages from "Analytical Methodology on FM 3422"
Letter Report. Boiling Point Information	ASCI	11/30/98	Robust summary, letter report
Determination of Vapor Pressure Curve by Dynamic Method for U1463 (Et FOSE)	ASCI	11/6/98	Robust summary, final report
Internal Memo - Melting Point of FM-3923 N-Ethyl FOSE Alcohol	3M SMMD Analytical Lab	11/22/99	Robust summary, letter report

Environmental Fate and Transport

Title	Laboratory or Author	Completion Date	Type
Tech Report - Biodegradation Studies of Fluorocarbons, Request for Laboratory work - BOD/COD, Memo - Chronological Review of Biodegradation Studies on FM3422, Tech Report - Biodegradation Studies of Fluorocarbons - II. (Robust summary for 4 documents)	3M Env. Lab	8/12/76, July, 1977, 8/12/77, 1/9/78	Robust summary, 2 technical reports, work request, review document
Tech Report - Bioconcentration of FM3422 in Bluegill Sunfish and in Channel Catfish, Tech Report - Aquatic Fate of a Fluorochemical: FM 3422	3M Env. Lab	5/17/1977, 10/14/77, 3/8/93	Robust summary, 2 technical reports, critique by J.W. Gillett (Cornell)
Tech Notebook copies - Analytical from fish bioconcentration studies	G. Vraspir	1/15/76 - 2/1/78	???
Alkaline hydrolysis	3M Env. Lab	11/15/77	Robust summary, relevant pages from "Analytical Methodology on FM 3422"
Pilot studies on soil adsorption	3M Env. Lab	10,13,78, 5/19/93, 12/30/75, 3/7/77, 4/12/77, 5/9/77	Robust summary, page from technical notebook, critique from S. Boyd (MSU) and 2 pages of data summaries.
Evaluation of the Bioconcentration Potential of FM 3422	3M Env. Lab	8/16/78	Robust summary, critique from G.W. Gillett (Cornell), technical report
Tech Report - Adsorption of FM-3422 on Soil	3M Env. Lab	9/1/78	Robust summary, critique from S. Boyd (MSU), technical report

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Environmental Fate and Transport

Title	Laboratory or Author	Completion Date	Type
Tech Report - Analysis for Fluorochemicals in Bluegill Fish	3M Env. Lab	5/1/79	Robust summary, critique from J.W. Gillett (Cornell), technical report
Tech Report - Bioaccumulation of Fluorochemicals in Tenn. River, Tech Report - Fluorochemicals in Tennessee River Fish.	3M Env. Lab	5/22/79, 12/28/79, 3/8/93	Robust summary, 2 technical reports, critique from J.W. Gillett (Cornell)
Technical Report - Photolysis of FM 3422 on Soil	3M Env. Lab	12/10/79	Robust summary, technical report, critique from S. Boyd, MSU
Tech Report - FM-3422 Photolysis Study using Simulated Sunlight	3M Ag. Products Lab	8/11/81	Robust summary, technical report
Tech Report - Determination of the Partition Coefficient (N-Octanol/Water) of FM 3422	NOTOX Safety & Environmental Research	6/2/94	Robust summary, technical report

Summary Reports

Title	Laboratory or Author	Completion Date	Type
Tech Report - Analytical Methodology on FM 3422	3M Env. Lab	11/15/77	Technical report., Critique by S. Boyd (MSU) Exerpts from this report appended to solubility and alkaline hydrolysis robust summaries.
Tech Report - Analytical Methodology and Support	3M Env. Lab	1/17/79	Technical report. Exerpts from this report appended to solubility, alkaline hydrolysis, volatility, distribution coefficient, soil adsorption, biodegradation, and fish chronic toxicity robust summaries.
Tech Report - Final comprehensive Report on FM 3422	3M Env. Lab	2/7/1979, 3/8/93	Technical Report, critique by J.W. Gillett (Cornell)

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Ecotoxicity Elements

Title	Laboratory or Author	Completion Date	Type
The Effects of Continuous Aqueous Exposure to 78.01 on Hatchability of Eggs and Growth and Survival of Fry of Fathead Minnow (<i>Pimephales promelas</i>), Summary of Histopathological Examinations of Fathead Minnow (<i>Pimephales promelas</i>) Exposed to 78.01 for 30 Days..	EG&G Bionomics	June, 1978, Sept. 1978	Robust summary, 2 technical reports, exerpt from Tech Report - Analytical Methodology and Support (1/17/79)
Tech Report - Multi-Phase Algal Assay Test Method.	3M Env. Lab	12/30/81	Robust summary, technical report.

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**Perfluorooctane
sulfonylamido(ethyl)acetate =
PFOSAA**

Synonyms: FC-109, FC-109-X, FC-127, FC-128, FC-129, E2113, E2566-2, R1904

Physical/Chemical Properties

Title	Laboratory or Author	Date Completed	Type
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Environmental Fate and Transport

Title	Laboratory or Author	Date Completed	Type
Tech. Report - Fate of Fluorochemicals in the Environmental (sic) (Warburg respirometer method for biodegradation of FC-128)	3M Env. Lab	8/12/76	Robust summary, technical report
Ready Biodegradability of FC-128 - BOD/COD	3M Env. Lab	7/8/77	Robust summary, copies of data sheets
Tech report - Analysis for Fluorochemicals in Bluegill Fish	3M Env. Lab	5/1/79	Robust summary, technical report
Ready biodegradability of FC-127 - BOD/COD	3M Env. Lab	8/19/81	Robust summary, copies of data sheets
Ready biodegradability of FC-109-X - BOD/COD	Pace Laboratories, Minneapolis, MN	12/31/87	Robust summary, copy of computer results from archives

Summary Reports

Title	Laboratory or Author	Date Completed	Type
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Ecotoxicity Elements

Title	Laboratory or Author	Completion Date	Type
Acute toxicity of FC-128 to fathead minnow	3M Env. Lab	5/18/74	Robust summary, copies of data sheets
Acute toxicity of FC-128 to fathead minnow	3M Env. Lab	6/29/74	Robust summary, copies of data sheets
Acute toxicity of FC-128 to fathead minnow	3M Env. Lab	8/26/77	Robust summary, copies of data sheets
Acute toxicity of FC-127 to fathead minnow	3M Env. Lab	7/24/81	Robust summary, copies of data sheets
Toxicity of FC-127 to activated sludge respiration	3M Env. Lab	8/14/81	Robust summary, copies of data sheets

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Ready Biodegradability: "Modified OECD Screening Test" for Fluorad FC-129	RCC, Itingen, Switzerland	9/19/84	Robust summary, memo about study reliability, final report
Microbics Microtox Toxicity Test - FC-109-X	3M Env. Lab	10/15/87	Robust summary, copies of data sheets
Activated Sludge Respiration Inhibition - FC-109-X	3M Env. Lab	10/30/87	Robust summary, copies of data sheets
Acute Toxicity of E2566-2 to <u>Daphnia magna</u>	ABC Laboratory, Columbia, MO	1/9/88	Robust summary, final report
Acute Toxicity of E2566-2 to Fathead Minnow (<i>Pimephales promelas</i>)	ABC Laboratory, Columbia, MO	1/12/88	Robust summary, final report
Biodegradation (methylene blue active substance)	Pace Laboratories, Inc., Minneapolis, MN	2/15/89	Robust summary, computer report, copies of data sheets
Acute Toxicity of R1904 to <i>Daphnia magna</i>	ASCI Corporation, Duluth, MN	6/17/97	Robust summary, final report
Growth Inhibition of R1904 for Green Alga (<i>Selenastrum capricornutum</i>)	ASCI Corporation, Duluth, MN	6/18/97	Robust summary, final report
Acute Toxicity of R1904 to Fathead Minnow (<i>Pimephales promelas</i>)	ASCI Corporation, Duluth, MN	6/27/97	Robust summary, final report
Microbics Microtox Toxicity Test - FC-129	ASCI Corporation, Duluth, MN	7/9/97	Robust summary, copies of data sheets
Inhibition of R1904 for Activated Sludge Respiration	ASCI Corporation, Duluth, MN	7/10/97	Robust summary, final report
R1904 BOD Report for 3M Company	ASCI Corporation, Duluth, MN	Jul-97	Robust summary, final report

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Ethyl FOSEA

Synonyms: FX-13, B1228, D-1

Physical/Chemical Properties

Title	Laboratory or Author	Date Completed	Type
Determination of Physico-chemical Properties of Sample D-1	Mitsubishi Chemical Safety Institute Ltd., Yokohama, Japan	2/14/96	Robust summary, final report

Environmental Fate and Transport

Title	Laboratory or Author	Completion Date	Type
Ready biodegradability of FX-13 (BOD/COD)	3M Env. Lab	4/26/84	Robust summary, copies of data sheets
Ready Biodegradability Test of D-1	Mitsubishi Chemical Safety Institute Ltd., Yokohama, Japan	10/31/95	Robust summary, final report
Bioaccumulation Study of Sample D-1 with Carp (<i>Cyprinus carpio</i>)	Mitsubishi Chemical Safety Institute Ltd., Yokohama, Japan	11/30/95	Robust summary, final report

Ecotoxicity Elements

Title	Laboratory or Author	Completion Date	Type
Acute toxicity of FX-13 to fathead minnow	3M Env. Lab	4/1/84	Robust summary, copies of data sheets
Activated Sludge Respiration Inhibition Test - FX-13	3M Env. Lab	5/17/84	Robust summary, copies of data sheets

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