3M General Offices

3M Center
St. Paul, MN 55144-1000
612 733 1110

3M

May 18, 2000

VIA EXPRESS MAIL

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

Re: **Information On Perfluorooctane Sulfonates And Related Compounds**

Dear Charlie:

Pursuant to our recent communications, 3M is enclosing additional information on perfluorooctane sulfonates and related compounds. The enclosed information supplements information submitted to you previously under cover of our April 21, 2000 and May 4, 2000 letters. Again, we are providing this information on a voluntary basis as part of our continuing discussions with EPA regarding fluorochemistry. Please note that some of this information qualifies as confidential business information (CBI); we also have enclosed a sanitized version of CBI documents.

The enclosed information covers perfluorooctane sulfonates and certain related compounds listed in Table 1 of the document entitled: "Sulfonated Perfluorochemicals In The Environment: Sources, Dispersion, Fate And Effects", at 12 (March 1, 2000). Specifically, the information covers the following chemicals:

⇒ Perfluorooctane sulfonates, including CAS numbers 1763-23-1 (acid); 29081-56-9 (ammonium salt); 70225-14-8 (DEA salt); 2795-39-3 (potassium-salt); 29457-72-5 (lithium salt).

⇒ Perfluorooctanesulfonyl fluoride

⇒ Perfluorooctanesulfonamide

⇒ Perfluorooctane sulfonylamido (ethyl) acetate

⇒ Perfluorodecanesulfonate

⇒ Perfluorohexane sulfonate

⇒ N-ethyl perfluorooctanesulfonamide

⇒ N-methyl perfluorooctanesulfonamide

⇒ N-ethylperfluorooctane sulfonamidoethanol

⇒ N-methylperfluorooctane sulfonamidoethanol

⇒ N-ethylperfluorooctanesulfonamidoethyl acrylate

⇒ N-ethylperfluorooctanesulfonamidoethyl acrylate

⇒ N-ethylperfluorooctanesulfonamidoethyl methacrylate

⇒ N-methyl perfluorooctanesulfonamidoethyl acrylate

3M has provided you with information on perfluorooctane sulfonates previously under cover of our April 21, 2000 and May 4, 2000 letters. We are enclosing some additional information on perfluorooctane sulfonates located as part of our continuing file search. For each of the foregoing related compounds, the enclosed information includes the following:

⇒ Copies of post-1976 studies and certain other information relating to the following environmental science areas: (i) physical and chemical properties; (ii) environmental fate and transport; (iii) environmental monitoring; and (iv) ecotoxicity. For each study, 3M has prepared a summary in the HPV "robust summary" format. 3M already has provided you with a general executive summary addressing each of these areas under cover of our May 4, 2000 letter.

⇒ Copies of post-1976 studies and certain other information relating to the following health effects areas: (i) acute toxicity; (ii) genotoxicity; (iii) repeated-dose toxicity; (iv) pharmacokinetics; (v) teratology; and (vi) medical surveillance and epidemiology. 3M has included a detailed index of this information subdivided by each compound.

⇒ Lists of all studies in progress and planned studies, along with study protocols or study plans, where available.

⇒ A bibliography of pre-1976 studies subdivided by each compound.

⇒ A bibliography of acute toxicity studies subdivided by each compound, except that we are providing copies of key acute studies (with reference to the HPV guidance).

⇒ A bibliography of published studies in 3M's possession.

⇒ An index of studies in 3M's possession believed to be in the FIFRA docket. Please note that this index has been submitted as CBI. 3M already has provided the Agency with a list of all fluorochemical-related submissions made by 3M to the TSCA Section 8(e) docket.

3M is continuing its file review and will supplement the enclosed information as appropriate. As you review this information, we ask that you bear several points in mind:

⇒ The enclosed information spans several boxes. We have organized the information in each box with labeled file folders and indices to aid EPA's review. To ensure that you and your staff are able to access the most pertinent information, we also are attaching to this letter the indices covering studies and other information.

⇒ Many of the studies refer to the test substance only by a 3M product identification number with a "T", "L" or "FC" prefix. Although analysis of the test substance has been included, where available, it is often not possible to determine from the study report itself the identity of the test substance. Thus, we have used the index to provide this information based on 3M's historical records keyed to the 3M product number to determine the composition of the test substance and have provided specific information on the index, such as percent composition, solvent context, salt form and purity grade. Please note that the term on the index "wide range" refers to a lower purity grade of the compound, and "narrow range" refers to a higher purity grade. Finally, it should be recognized that product formulations have evolved over the years, and thus, some of the test substances do not constitute current products.

⇒ We have included some additional studies on perfluorooctane sulfonates located as part of our continuing file review. As we have discussed, we plan to provide you with information on mixtures containing perfluorooctane sulfonates in the near future. Please be advised, however, that we already have provided you with studies and other information on aqueous and/or solvent solutions of

perfluorooctane sulfonates. As to the foregoing related compounds, the enclosed information likewise includes studies and certain other documents on both the compounds as well as on aqueous and/or solvent solutions of these compounds. We are not providing to you today, however, information on other types of mixtures containing these compounds and would like to discuss such information with you.

⇒ Consistent with the information previously provided on perfluorooctane sulfonates, 3M has not provided you with all analytical chemistry reports on these related compounds. Rather, we have enclosed certain analytical chemistry reports which may prove useful to EPA in interpreting certain studies; understanding the details of analytical chemistry methods; or verifying human and biomonitoring data.

⇒ We provided previously under cover of our April 28, 2000 letter to Oscar Hernandez a "Use And Exposure Information Profile" or "UEIP" for perfluorooctane sulfonates. Our present intention is to provide you with completed UEIP forms for these related compounds early next week. 3M needs additional time to clarify industrial hygiene and other release information to ensure that the data is accurate and placed in appropriate context.

⇒ The information on perfluorooctane sulfonates sent under cover of our May 4, 2000 letter included documents relating to ongoing mechanistic research by Dr. Ken Wallace of the University of Minnesota. Please note that this research also encompasses these related compounds. In addition, Dr. Marion Anders of the University of Rochester Medical Center is performing comparative metabolism research relating to perfluorooctane sulfonates and these related chemicals; there are not documents yet available relating to this research.

3M looks forward to discussing the enclosed information with you and other EPA staff. In the meantime, please do not hesitate to contact me with any questions.

Very truly yours

William A. Weppner

William A. Weppner, Ph.D
Director of Environmental, Health, Safety
And Regulatory Affairs
Specialty Materials Markets
3M
Bldg 236-1B-10
3M Center
St. Paul, MN 55144
(651) 733-6374 (phone)
(651) 733-1958 (fax)
E-mail: waweppner@mmm.com

Enclosures