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EPA East -- Room 6428 Attn: Section 8(e)
Office of Pollution Prevention and Toxics
US EPA
1200 Pennsylvania Avenue NW
Washington DC 20460-0001

NO CBI

Re: TSCA 8(e) Substantial Risk Notice: Supplemental to Docket No. 8EHQ-0598-373;
Sulfonate-based and Carboxylic-based Fluorochemicals

To whom it may concern:

3M is submitting this notice to supplement its previous submissions on sulfonate- and carboxylate-based fluorochemicals.

3M recently received an abstract from a kinetic evaluation in mink (*Mustela vison*) conducted on perfluorooctane sulfonate (PFOS). The objective of this 84-day study was to assess the toxicokinetic profile of PFOS on wildlife species. Twenty adult male mink were administered 20 mg/kg/day of PFOS in their diet for 56 days. This was followed by a 28-day recovery period during which all animals were fed an untreated control diet. Five animals were sacrificed from the PFOS treated group on study days 28, 56 and 84. Five control animals were sacrificed on study days 56 and 84. At sacrifice, the heart, spleen, kidneys, adrenal glands and thyroid were collected for histological assessment.

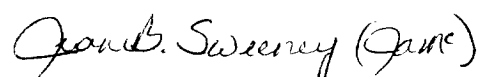
Body weights of mink fed diets containing PFOS were significantly less compared to controls on study days 42, 49 and 56. Within seven days (study day 63) of being fed the untreated control diet, body weights of the PFOS animals were equivalent to control animal body weights. Absolute and relative (% of body weight) spleen weights of PFOS animals were significantly less than control weights at study days 56 and 84. There were no histological changes in the tissues examined. On study day 28, a maximal serum PFOS concentration was reached. This was followed by a statistically significant drop in concentration by study day 42 that remained constant through study day 56. During the 28-day elimination phase of the study, serum PFOS concentration declined approximately 40% from serum concentrations observed on study day 56. Hepatic PFOS concentrations were approximately half of respective serum concentrations and did not change between study days 28 and 56. During the 28-day elimination, hepatic concentrations decreased by approximately 30%.

The observation of body-weight reduction effect in mink on dosing with PFOS is not completely unexpected based on the observations of body-weight reduction effects in other species. Since mink have not been previously used as laboratory animals in the testing of PFOS, 3M is placing the results of this kinetic evaluation in the 8(e) docket as a supplement to previous submissions.

The in-life portion of this study is complete and an abstract has been produced. It is unknown at this time when a final report will be issued. The final report will be forwarded to the EPA once it is received.

If you have any questions or need additional information, please contact Jeanette McCauley at (651) 733-9384.

Sincerely,

A handwritten signature in cursive script that reads "Jean B. Sweeney (Jane)".

Jean B. Sweeney
Staff Vice President, Environmental, Health and Safety Operations

Enclosure

Kinetic Evaluation of Perfluorooctane Sulfonate (PFOS) in Mink (*Mustela vison*)
J. L. Newsted¹, S.J. Bursian², J.E. Link², M.M. Al-Jawad², A.E. Drow², Scott Fitzgerald²,
Stephanie Smith-Edwards², D.J. Ehresman³, and J.L. Butenhoff³
¹Entrix, Inc., ²Michigan State University, ³3M Company

Perfluorooctane sulfonate (PFOS), the ultimate degradation product of sulfonated fluorochemicals derived from perfluorooctane sulfonyl fluoride, is widespread in the environment. PFOS has been detected in water, soil, fish, birds and mammals, including mink (*Mustela vison*). Hepatic concentrations of PFOS in mink consuming fish from Saginaw Bay, MI were as great as 4.0 µg/g. Because relatively great hepatic PFOS concentrations have been detected in mink, assessment of the its toxicokinetics is an important step in the evaluation of the impact of PFOS on wildlife species. Twenty adult male mink were fed a diet containing 20 mg PFOS/kg feed and 10 mink were fed a control diet. The PFOS diet was provided for 56 d and then animals on that treatment were provided control feed for the remaining 28 d of the 84-d trial. On d 0, blood and liver samples were collected from five animals for determination of PFOS concentrations. In addition, the heart, spleen, kidneys, adrenal glands and thyroid were removed, weighed and processed for histological assessment. All animals were weighed weekly and blood samples were collected every two weeks. On d 28, five PFOS mink and on d 56 and d 84, five PFOS and five control mink were sampled as described above. Body weights of mink fed diets containing PFOS were significantly less compared to controls on d 42, d 49 and d 56. Within 7 d of being provided control feed (d 63), body weights of PFOS animals were equivalent to control body weights. Absolute and relative (% of body weight) spleen weights of PFOS animals were significantly less than control weights at d 56 and d 84. There were no histological changes in the tissues examined. A maximal serum PFOS concentration was reached at d 28, followed by a statistically significant 25% drop in concentration by d 42 that remained constant through d 56. During the elimination phase of the study, serum PFOS concentrations declined approximately 40% from concentrations observed on d 56. Hepatic PFOS concentrations were approximately half of respective serum concentrations and did not change between d 28 and d 56. During the 28-d elimination phase, hepatic concentrations decreased by approximately 30%.