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(Attn: Section 8(e) Coordinator)  
Office of Toxic Substances  
US EPA  
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Re: TSCA 8(E) SUBSTANTIAL RISK NOTICE ON: N-Ethyl Perfluorooctyl Sulfonamido Ethanol and Perfluorooctane Sulfonate  
Docket Numbers 8EHQ -1180-373, 1180-374 and 0381-0394

Dear Sir:

3M has received a verbal report of the preliminary results of two-generation rat reproduction studies that appear to meet the reporting criteria under EPA guidance for TSCA 8(e) on two different chemicals:

N-Ethyl Perfluorooctyl Sulfonamido Ethanol (N-EtFOSE)  
Perfluorooctane Sulfonate (PFOS)

The following description of interim results through the first-generation phase of the two-generation reproduction studies are based on preliminary, un-audited information received by 3M Corporate Toxicology from Argus Laboratories and may be subject to change. Copies of the final study reports will be forwarded to EPA when received.

**N-EtFOSE**

Dosing: In the N-EtFOSE study, groups of 35 male and 35 female rats were exposed to 0, 1, 5, 10 and 15 mg/kg by daily oral intubation four weeks prior to and during mating. For the females, treatment continued during gestation, parturition and lactation.

Effects through mating: A dose-dependent, pre-mating reduction in body-weight gain as compared to controls occurred in males and females at the three highest dose groups. At the 15 mg/kg dose level, male body-weight gain was 92 % of control and female body-weight gain was 89 % of control. There was no effect on the number of pregnancies.

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Effects through gestation: During gestation, high-dose females had a marked reduction in body-weight gain (80.3 % of control.) There was also a probable effect at the 10 mg/kg dose level (92.8 % of control.) A group of ten dams per dose group was sacrificed on day 10 of gestation. No early intrauterine death was noted as evidenced by no increase in resorptions. Implantations were reduced at the high dose, with mean of 11.1 as compared to 15.6 in the controls.

Perinatal effects: At parturition, there was a reduction in the mean number of pups delivered at the 10 mg/kg (12.8 pups) and 15 mg/kg (10.3 pups) dose levels as compared to controls (15.6 pups.) The percentage of stillborn pups was also increased with 4.8 % at 10 mg/kg and 32.4 % at 15 mg/kg as compared to 1.4 % in the controls. Survival of pups during days one through four of lactation was also severely affected at 10 mg/kg (30.2 % survival) and at 15 mg/kg (1.2 % survival). Most deaths at the high dose occurred within the first 24 hours after birth. It is this effect on pup survival which is the basis for this submission.

#### PFOS

Dosing: In the PFOS study, groups of 35 male and 35 female rats were exposed to 0, 0.1, 0.4, 1.6 and 3.2 mg/kg by daily oral intubation four weeks prior to and during mating. For the females, treatment continued during gestation, parturition and lactation.

Effects through mating: A pre-mating reduction in mean body-weight gain as compared to controls occurred in females and possibly in the males at the high dose level. At the 3.2 mg/kg dose level, male body-weight gain was 97.2 % of control and female body-weight gain was 91.5 % of control. There was no effect on the number of pregnancies.

Effects through gestation: During gestation, females showed a reduction in mean body-weight gain at the three higher dose levels, reaching 86.9% of the control at 3.2 mg/kg. A group of ten dams per dose group was sacrificed on day 10 of gestation. No increases in resorptions occurred, and there were no decreases in the number of implantations and number of live fetuses.

Perinatal effects: At parturition in the 3.2 mg/kg high-dose group, the mean number of pups delivered was decreased compared to the control (10 versus 14) and the percent of pups delivered stillborn was increased significantly (24.9 % as compared to 2.2 %.) Survival of pups during days one through four of lactation was severely reduced at 1.6 and 3.2 mg/kg (66 % and 0% survival, respectively.) Most deaths at the high dose occurred within the first 24 hours after birth. Surviving pups in the 1.6 mg/kg dose group showed severely depressed mean body-weight gains through day 21 of lactation (72.1 % of controls.) It is this effect on pup perinatal survival which is the basis for this submission.

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Please contact Dr. John Butenhoff, 3M Toxicology (651)733-1962, for further information.

Sincerely,



Dr. Charles Reich  
Group Vice President  
Chemicals Market Group