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April 1, 1981

TO: R. L. RICHARDS

FROM: J. W. RAINES JWR

AMMONIUM PERFLUOROOCTANOATE (C-8)
RANGEFINDER STUDY

Dr. R. E. Staples, Teratologist, and Taisan Chiu, Pathologist, from Haskell Lab visited 3M on March 27 to review results of the Oral Rangefinder Study of perfluorooctanoate (C-8) in pregnant rats. They concluded that the study was valid and that the observed fetus eye changes were due to the C-8. Since the sole purpose of this test was to determine the upper dose level for a subsequent oral teratology study in rats, 3M did not examine the eyes of fetuses from unexposed (control) rats.

3M plans to start the new oral teratology study with rats on April 6 to determine a no-effect level. The top dose level will be 150 mg/kg/day, the same as the top dose level in the Rangefinder Study. Other dose levels will be 15, 5, 0.05 and 0 mg/kg/day.

3M are still planning to communicate to their employees the second week of April.

There has been some confusion of the concentration of C-8 in the blood of rats. Twenty-five ppm was quoted from memory as being the C-8 blood level for the female rats fed 25 mg/kg/day in the Rangefinder Study. This was in error. 3M told Dr. Staples during his visit that blood levels were in the range of 1-3 ppm for the low and high dosing levels, respectively.

It had been previously established with both 3M and Du Pont tests that the half life for decay of C-8 in male rat blood was 7-9 days (after exposure). Earlier 3M work with female (not pregnant) rats, suggested that the decay rate was much higher. In fact, in an intravenous injection test with radioactive C-8, all the C-8 material was accounted for in the female rat urine in a matter of

minutes. In a 90-day feeding test with 300 ppm C-8 in their diet (equivalent to dosing about 30 mg/kg/day), male rats had 38 ppm C-8 in their blood and female (not pregnant) rats had only 0.25 ppm.

The great difference between male and female rats in their reaction to dosing with C-8 is a very strange phenomenon. This is being considered by Haskell in designing newly planned studies.

JWR:ldr