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MR 282218

DuPont Haskell Laboratory
for Health and Environmental Sciences
Elkton Road, P.O. Box 50
Newark, DE 19714-0050

Via Federal Express

Document Processing Center (Mail Code 7407M)
Room 6428
Attention: 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
1201 Constitution Ave., NW
Washington, DC 20460

8EHQ-0105-0394

CONTAINS NO CBI

Dear 8(e) Coordinator:

8EHQ-0381-0394
Ammonium Perfluorooctanoate

This letter is to inform you of the results of the analyses completed to date of the comparison of the serum PFOA levels with the results of the blood and urine medical analysis. Approximately 60 parameters have been analyzed. This sampling is part of an ongoing study, "Ammonium Perfluorooctanoate: Cross-Sectional Surveillance Of Clinical Measures of General Health Status Related to a Serum Biomarker of Exposure and Retrospective Cohort Mortality Analyses in a Polymer Production Plant" of over 1,000 employees at our Washington Works plant. All participants have received their individual exposure levels for serum PFOA and their personal test results. What we are reporting are the results of the grouped analyses of the health outcomes that are completed.

Median serum PFOA level of employees who work with PFOA was approximately 0.5 ppm with a maximum of approximately 10 ppm. Median serum PFOA level of employees that do not work with PFOA was approximately 0.1 ppm. The vast majority of parameters measured were within normal reference ranges and were not associated with serum PFOA levels. There were statistically significant but modest increases in some cholesterol fractions (total, and LDL) and triglycerides in the highest serum PFOA exposure group (> 1000 ppb). Serum PFOA levels did not affect HDL cholesterol or C-reactive protein (CRP) levels. As expected, age, body mass index (obesity), and alcohol consumption were also contributors to increases in cholesterol fractions and triglycerides. Other factors, such as genetics and lifestyle, also play a role, but have not been taken into account. There were statistically significant but slight increases in serum uric acid and iron with the highest concentrations of serum PFOA. These and other sporadic changes in clinical laboratory parameters may be spurious and unrelated to serum PFOA. The study, based on about 60 blood and urine tests, found no correlation between liver function and exposure to PFOA, no correlation between blood counts and exposure to PFOA, and no correlation between any cancer markers measured and exposure to PFOA with respect to prostate cancer, leukemia, or multiple myeloma.

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In a study that examines as many data points as this one, it is not unusual to find statistically significant associations given the normal variations observed in the general population. Because the data are a one time "snapshot" of both the clinical laboratory and the exposure level data, it is unclear what factor(s) may account for the observed statistical associations. Therefore, both the cause and biological significance of these observed changes are unclear and require further analysis.

A copy of the final report of the larger ongoing study referred to above will be submitted to the Agency when available.

Sincerely,

A handwritten signature in cursive script that reads "A. Michael Kaplan". The signature is written in dark ink and has a fluid, connected style.

A. Michael Kaplan, Ph.D.
Director - Regulatory Affairs and Occupational Health

AMK/RWR/RCL:clp
(302) 366-5260