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The Dow Chemical Company

2030 Dow Center
July 24, 1992

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Office of Toxic Substances
Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460

Attn: 8(e) Coordinator

8EHQ-92-7115

Re: VINYL CHLORIDE
CAP Agreement No. CAP-0111
Dow Reference No. CAP00738

88920005761

Dear Sir/Madam:

The Dow Chemical Co. submits the enclosed document titled:

LIFE-SPAN ORAL TOXICITY STUDY OF VINYL CHLORIDE IN RATS

pursuant to TSCA Section 8(e) Compliance Audit Program.

The document contains information which may reasonably support the conclusion that the referenced chemical may present a substantial risk of injury to human health or the environment, as indicated in the Reporting Guide provided by EPA in connection with the CAP. Dow has not, however, determined that any risk actually exists. The information is summarized below:

A LIFE-SPAN ORAL TOXICITY STUDY INCLUDING INTERIM KILLS AFTER 26 AND 52 WEEKS, WAS CARRIED OUT WITH VINYL CHLORIDE MONOMER (VCM) IN WISTAR RATS. VCM WAS ADMINISTERED EITHER BY INCORPORATING PVC-POWDER WITH A HIGH VCM CONTENT INTO THE DIET OR BY GASTRIC INTUBATION OF A 10 PER CENT VCM SOLUTION IN SOYA BEAN OIL.

GROWTH-RETARDATION WAS SEEN ONLY IN ANIMALS OF THE 300 MG/KG GROUP. DEATH-RATE INCREASED WITH INCREASING VCM LEVELS. AT THE LOWEST DOSELEVEL MORTALITY WAS SLIGHTLY INCREASED ONLY IN FEMALES TOWARDS THE END OF THE EXPERIMENTAL PERIOD.

BLOOD-CLOTTING TIME WAS SLIGHTLY SHORTENED IN ANIMALS OF THE 14.1 AND 300 MG/KG GROUPS. THERE WAS ALSO A SLIGHT INCREASE IN ALPHA-FETO-PROTEIN CONTENT OF THE BLOOD SERUM IN THESE GROUPS.

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SLIGHT LIVER-ENLARGEMENT AND AN INCREASED HAEMATOPOIETIC-ACTIVITY IN THE SPLEEN OCCURRED IN MALES AND FEMALES OF THE TWO HIGHEST DOSE GROUPS.

A VARIETY OF NEOPLASTIC AND NON-NEOPLASTIC VCM-RELATED LIVER LESIONS WERE FOUND IN EACH OF THE TEST GROUPS. HEPATIC ANGIOSARCOMAS OCCURRED AT LEVELS OF 5.0 MG/KG AND HIGHER. HEPATOCELLULAR TUMOURS (NEOPLASTIC NODULES AND CARCINOMAS) WERE FOUND IN ALL DOSE-GROUPS. THEIR INCIDENCE WAS HIGH IN BOTH SEXES OF THE 14.1 MG/KG GROUP AND IN FEMALES OF THE 1.7 AND 5.0 MG/KG GROUPS, LOW IN MALES OF THE 5.0 MG/KG GROUP, AND MARGINAL IN MALES OF THE 1.7 MG/KG GROUP.

PULMONARY ANGIOSARCOMAS (MAINLY METASTASES) AND A FEW EXTRAHEPATIC INTRA-ABDOMINAL ANGIOSARCOMAS WERE OBSERVED AT LEVELS OF 5.0 MG/KG AND HIGHER.

A FEW ZYMBAL GLAND TUMOURS OCCURRED AT THE 5.0 AND 300 MG/KG LEVELS.

THERE WAS SOME INDICATION THAT VCM MAY ENHANCE THE DEVELOPMENT OF BOTH INTRA-ABDOMINAL MESOTHELIOMAS AND ADENOCARCINOMAS OF THE MAMMARY GLANDS.

Dow requests guidance from EPA whether the Agency believes the information contained in this document satisfies the criteria in the CAP Reporting Guide. Any correspondence relating to this submission should reference document number CAP00738.

Where appropriate, three types of information have been removed from the document: the term "Dow Confidential", individual employee/researcher names (due to privacy considerations); and Dow internal number systems. This is done with prior agreement from EPA. The original documents containing this information are retained by Dow according to a document retention policy.

Sincerely,

Paul A. Wright

Paul A. Wright
Attorney
517/636-1853

The Dow Chemical Company

2030 Dow Center
March 27, 1992

Document Processing Center
Office of Toxic Substances
Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460

Attn: 8(e) Coordinator

Re: VINYL CHLORIDE
CAP Agreement No. CAP-0111
Dow Reference No. CAP00087

Dear Sir/Madam:

The Dow Chemical Co. submits the enclosed document titled:

LIFESPAN ORAL CARCINOGENICITY STUDY OF VINYL CHLORIDE IN RATS

pursuant to TSCA Section 8(e) Compliance Audit Program.

The document contains information which may reasonably support the conclusion that the referenced chemical may present a substantial risk of injury to human health or the environment, as indicated in the Reporting Guide provided by EPA in connection with the CAP. Dow has not, however, determined that any risk actually exists. The information is summarized below:

THE ORAL CARCINOGENICITY OF VINYL CHLORIDE MONOMER WAS EXAMINED IN A LIFESPAN STUDY WITH WISTAR RATS.

A CLEARLY HIGHER INCIDENCE OF GROSSLY VISIBLE, TUMOUROUS, LIVER NODULES WAS FOUND IN BOTH MALES AND FEMALES OF THE TOP-DOSE THAN IN ANY OF THE OTHER GROUPS. MOREOVER, IN FEMALES OF THE TOP-DOSE GROUP THE INCIDENCE OF HEPATIC CYSTS WAS CONSIDERABLY HIGHER THAN IN CONTROLS.

MICROSCOPIC EXAMINATION OF THE LIVER REVEALED INCREASED INCIDENCES OF LIVER-CELL POLYMORPHISM, HEPATIC CYSTS, FOCI OF CELLULAR ALTERATION, NEOPLASTIC NODULES AND HEPATOCELLULAR CARCINOMAS IN THE TOP-DOSE GROUP. MOREOVER, A HEPATIC ANGIOSARCOMA WAS FOUND IN ONE MALE AND TWO FEMALES OF THE TOP-DOSE GROUP.