MEMORANDUM

DATE: November 10, 1980

SUBJECT: Completed Contractor Studies - Mutagenicity

FROM: Irving Mauer, Ph.D., Geneticist
       Toxicology Branch/HED (TS-769)

TO: Toxicology Staff

Additional reports of studies performed by Stanford Research
Institute International (SRI) under contract to EPA (HERL/RTP) have
been received in the TOX Branch. They are available from
Irving Mauer.

I. "An Evaluation of the Effect of TRICHLORPHON on Sister
   Chromatid Exchange Frequencies in Cultured Chinese Hamster
   Ovary Cells." (July, 1980)

II. A number of compounds have been retested and the contractor is
    in the process of preparing a summary final report which will
    include the appropriate corrections. (The list of substances
    under retest is available from me).

III. A revised report dated May, 1980 on the mouse heritable
     translocation assay in CAPTAN originally reported out in March,
     1977 is also available (along with the original). "Mutagenesis
     Studies of Pesticide Compounds--Mouse Heritable Translocation

IV. Finally, there are a number of summaries of the schedule of
    testing for mutagenic effects of pesticides under this
    contract. An overview of qualitative information is presented
    in the pre-publication copy of the manuscript, "An Overview of
    Short-Term Tests for the Mutagenic and Carcinogenic Potential
    of Pesticides", that describes the short-term battery which can
    be used in a phased approach to evaluation of mutagenic and
    carcinogenic potential of pesticides. Qualitative results for
    38 pesticide chemicals in this approach are discussed in
    detail. Correlations are made for these 38 compounds between
    results of short-term tests for mutagenicity and findings from
    long-term in vivo studies for carcinogenicity. (See Table 6
    and associated discussion in text).
Previously reported quantitative data contributing to this overview are found in the following reports (all available):

Phase I - EPA 600/1-77-028, May, 1977 "Evaluation of Selected Pesticides as Chemical Mutagens: In Vitro and In Vivo Studies."

Phase II - EPA 600/1-79-041, October, 1979, "In Vitro Microbiological Mutagenicity and Unscheduled DNA Synthesis Studies of Eighteen Pesticides."