



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF PESTICIDES AND TOXIC SUBSTANCES

SEP 19 1980

MEMORANDUM

SUBJECT: Pilot Study of Spermatogenic Abnormalities
(Grant Number CR806850-01)

FROM: Anne Barton, Science Policy Advisor
Hazard Evaluation Division (TS-769)

Anne Barton

TO: Van Kozak, Acting Branch Chief
Health Effects Branch (TS-769)

Stuart Cohen and Daniel Byrd of my staff have reviewed the second draft of this study. A major problem remains that necessitates further revision: the problem of marihuana use among some control group members and possibly in the study population. No rationale is provided for the two or more joints per day cut off. Does one exist? How do the infrequent (5/14) marihuana users compare? What is known of marihuana use in the study population? The abstract suggests that the study data are explicable on this basis.

Because this major problem merits revision of the text, we also suggest that several minor points be addressed to improve the manuscript:

- o The detection limits for DBCP in water should be at least 10-fold lower than quoted.
- o Contact either John Mink, P.O. Box 4452, Honolulu, Hawaii 96813 or Stuart Cohen (HED, Washington, D.C.) regarding additional water monitoring information for Molokai.
- o Some of the study language seems confusing. For example, the rationale states that the four allegedly infertile residents had no occupational exposure to toxic agents known to affect spermatogenesis. Elsewhere the study implies that these same persons were exposed to DBCP and EDB, which do affect spermatogenesis.
- o Did some reason exist not to obtain duplicate sperm samples from the study subjects?
- o How can readers reconcile the statement on p. 7 that "estimation of individual worker's exposure to this chemical (DBCP) was not possible" with the statement on p. 8 that "average exposure to DBCP was 1.5 years with a mean frequency of 6 days per year"?
- o Was the exposure of the study subjects monitored?
- o How is a three - way P value derived (p. 10)?

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- o The effects of DBCP on sperm morphology in the study seem paradoxcal.
How do these findings compare to DBCP effects described in the literature?
- o How was marihuana use documented?

cc: Peter McGrath
John Melone