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**From:** Richard Hornung [mailto:Richard.Hornung@cchmc.org]

**Sent:** Tuesday, November 29, 2005 5:30 PM

**To:** Kubale, Travis L.

**Subject:** Re: Comments on OERP program

Travis

The following are my comments made during the meeting in Washington on Oct 26(?). Please forward

this to Doug and Mary--I still don't have my old e-mail contact list.

1) The OERP program in NIOSH is to be congratulated on their recent accomplishments in completion of studies and publication of results. Their record clearly establishes that they have made great progress in addressing the research agenda recommended by the former Advisory Committee on Energy-related Epidemiologic Research.

2) Although ionizing radiation and its health effects have been extensively studied in the past 50 years, most of the radiation exposure standards have been based on the experience of the Atomic Bomb Survivors cohort in Japan. While the quality of the scientific research using data from this cohort is unquestioned, this is a study of short-term, high-level exposure to a population in a traumatized state with a compromised health care system. The genetic and dietary characteristics of this cohort are both very different from Western populations. The occupational studies being conducted by OERP are more relevant to the current interest in the health effects of low-level protracted exposures.

3) In addition to the more relevant exposure scenarios in the DOE worker populations, these cohorts, in aggregate, are larger than those studied by the RERF. Members of these DOE cohorts are just now entering the age intervals that are associated with peak cancer incidence. Since the most difficult jobs of identifying rosters and estimating exposures have already been completed for most cohorts, the future follow-up of these workers will yield many more cancer cases and therefore more precise estimates for relatively lesser amount of effort.

4) The current studies being conducted by OERP will also address several research interests beyond revising occupational exposure standards. Two of the most highly valued research topics in recent years are gene-environment interaction studies and studies of the health effects of terrorist attacks. Both of these areas can be studied very effectively using the DOE rad workers cohorts. For example, a large number of former and current workers either have been, or could easily be genotyped using biologic samples collected from workers. Similarly, one of the primary concerns of those addressing the effects of terrorist attacks are the scenarios surrounding use of a nuclear device or a "dirty bomb". Many of these issues call into question the degree of clean-up required before workers or the general population are permitted to re-enter a radiation contaminated site. This research question could be addressed by studying DOE clean-up and remediation workers.

You may also send these comments to the NAS committee as Mary suggested.

call if you have any questions.

Rick