Committee to Bridge the Gap
Nuclear Information and Resource Service
Public Citizen

Dr. Jill Lipoti, Chair and Members
Radiation Advisory Committee (RAC)
Science Advisory Board (SAB)
1200 Pennsylvania Avenue, NW
Washington, DC 20460-0001

September 26, 2006

Re: *EPA Office of Radiation and Indoor Air Staff Proposal to Reject the Findings of the National Academy of Sciences on Radiation Risks and Adopt Instead Relaxed Radiation Protection Requirements*

Dear Dr. Lipoti and Members of the SAB-RAC:

As you know, the current Administration has been widely criticized as anti-science, permitting vested political and economic interests to override the conclusions of the scientific community. This pattern of conduct was repeated most recently a few days ago by EPA's refusal – in the face of massive scientific evidence of the number of lives affected– to tighten protections against chronic exposure to particulates in air.

Therefore, it is sadly consistent that some EPA staff from the Office of Radiation and Indoor Air (ORIA) now propose to set the stage to weaken the agency's radiation protection standards. EPA's White Paper rejects the findings of the National Academy of Sciences (NAS) which concluded that radiation causes more cancer than previously believed. This proposal to defy the NAS conclusions is particularly striking in that EPA requested and funded the study. We write to urge the Radiation Advisory Committee to reject the White Paper and recommend that EPA not subordinate science to the interests of the nuclear industry.

Background

Every decade or two the National Academy of Sciences' National Research Council is asked to conduct a definitive examination of the state of scientific knowledge on the effects of so-called low-dose ionizing radiation. These "BEIR" reports – Biological Effects of Ionizing Radiation – become the basis for revised radiation protection standards in this country and abroad.

In recent years, some individuals at the extreme of the radiation protection debate have argued that there is a threshold below which radiation is harmless or if there is no threshold that low dose radiation is much less dangerous than the linear-no-threshold dose-response model predicts. A few have even gone so far as to argue that low doses of radiation are good for you. Such positions obviously could save agencies such as the Department of Energy and private interests associated with the nuclear industry a great deal of money if adopted and used to relax

radiation exposure and cleanup standards. But these were not scientific conclusions of the BEIR VII report.

EPA had requested that NAS assemble the BEIR VII committee to evaluate these claims and update the science on radiation risks. NAS issued the BEIR VII report in 2005. To the disappointment of some at the EPA's Office of Radiation and Indoor Air, DOE, and the nuclear industry, who had hoped that NAS would endorse the idea of a threshold, BEIR VII found that *there is no safe level of radiation, that all doses carry the risk of causing cancer*. Similarly, BEIR VII concluded that *the risk was essentially linear with dose.* And BEIR VII *rejected claims that low doses were beneficial*.

Most critically, the Academy panel found that *low-dose ionizing radiation is about a third more dangerous than assumed by current EPA and other agency standards in causing cancer*. BEIR VII's cancer incidence risk figure is 1.14 cancers per 1000 person-rem. EPA's current figure (from Federal Guidance Report 13) is 0.846 cancers per 1000 person-rem. EPA should be markedly tightening its radiation standards in the wake of the National Academy of Sciences study but unfortunately, the Office of Radiation and Indoor Air White Paper proposes the opposite.

The ORIA White Paper

The same EPA Office of Radiation and Indoor Air which has suggested that radioactive and mixed waste could be deregulated and sent to solid and hazardous waste facilities or to other unlicensed destinations, now proposes that radiation risk coefficients be reduced, misleadingly implying that radiation will cause fewer cancers. These unjustifiably reduced risk coefficients will be used to relax EPA's radiation standards, some of which are the most protective in the country. This weakening flies in the face of the National Academy of Sciences and does so in a particularly disingenuous fashion, titling the White Paper "Modifying EPA Radiation Risk Models Based on BEIR VII." A careful reading of the White Paper reveals that what ORIA proposes is to modify EPA radiation risk models by ignoring and rejecting the NAS's BEIR VII report rather than make changes based on its conclusions.

Recognizing the firestorm of criticism that such an action would produce, ORIA staff hide the significance of their proposed changes in the paper. The only place where they actually compare their proposed new radiation risk figures with those found by the Academy is in Table 6, and even there some of the new figures are not included; indeed, they are not disclosed anywhere in the paper. But some are shown in Table 6.

Table 6 compares EPA proposed radiation risk values for nine cancer sites, for both cancer incidence and mortality, and by gender, with those recommended by the National Academy of Sciences. There are thus a total of 28 comparisons. If EPA were indeed modifying its risk models based on BEIR VII, as the white paper's title implies, all 28 comparisons should be identical, EPA & BEIR VII. If EPA's primary mission were indeed protection of public health and the environment, one might expect changes to BEIR VII values to be weighted more on the side of the scientific evidence that suggests a need to increase public protection.

So, what does EPA radiation staff in fact propose? **For 27 of the 28 comparisons, EPA's proposed risk figures would result in reduced public radiation protections compared to what the National Academy of Sciences, at EPA's request, recommended. Only one of the 28 comparisons is an enhancement of BEIR VII recommendations. Not a single one actually adopts the BEIR VII recommendations.**

The data of bias are incontrovertible. ORIA staff, apparently rebuffed in their effort to have the National Academy of Sciences give its blessing to claims that radiation is less dangerous than previous thought and that therefore industry can be freed up to expose the public to higher levels currently permitted, has simply gone ahead and proposed to ignore the Academy study. This anti-science politicization of public policy on behalf of polluting interests is unacceptable, and will backfire.

Had EPA staff wished to consider additional evidence not considered by NAS, it would have addressed those new developments that demonstrate radiation is more dangerous than assumed by the Academy. For example, the largest study of occupational radiation exposures ever conducted has recently been released by a large international team headed by Elisabeth Cardis – too late for consideration by the BEIR committee. It found, by examining nuclear workers in 15 nations, cancer induction per unit dose that is about 6 times higher than currently assumed by EPA. Similar findings have recently come out from an international team studying villagers downwind of the Mayak nuclear weapons complex in the Urals. **Science Magazine** reports that both studies provide powerful evidence that radiation is considerably more dangerous than currently presumed. Yet EPA staff does not fully consider these important new studies, considering solely suggestions that one should downgrade rather than upgrade radiation risk estimates.

We share the concerns expressed by Lynn Ehrle about the conflicts of interest, biases, and lack of balance among the appointees on this advisory panel. It appears that several are tied closely to nuclear industry and DOE interests that have been pushing for relaxed radiation standards, whose views have been rejected by the National Academy BEIR study. Ehrle raises legitimate questions about the apparent violation of the Federal Advisory Committee Act posed by the composition and actions of this committee.

Nonetheless, we urge this Committee to recommend rejection of the ORIA White Paper (which dismisses the NAS radiation risk estimates), to oppose the weakening of public protection that would result from adoption of the White Paper and to encourage EPA to use the precautionary principle in all future efforts.

Sincerely,

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