

2 December 2004

Secretary Tom Ridge  
Department of Homeland Security  
Washington, D.C. 20528

Dear Secretary Ridge:

We write to urge you to not issue lax cleanup standards for dirty bombs. The New York Times, National Public Radio, and other media outlets report that the Department of Homeland Security (DHS) may soon issue guidance for responding to and cleaning up after the detonation of a radiological weapon (“dirty bomb”) or improvised nuclear device, should such an event ever occur in the United States. The news reports suggest that the guidance would relax cleanup standards compared to existing requirements for contaminated sites. What has not been formally disclosed to date is the degree of relaxation contemplated, and how many extra cancers could result from these radiation doses.

Two drafts of the guidance, however, have been obtained by the trade publication Inside EPA and posted on its website. These drafts suggest permitting very high radiation levels to remain after final cleanup, resulting in a significant number of cancers in the exposed population.

For example, the upper long-term cleanup standard recommended by the Department of Energy in the July 2003 draft was 2,000 millirem/year, including background. That is the equivalent, subtracting out average background values, of more than 8000 chest X-rays over the assumed 30 year exposure period. Such doses are estimated to produce one cancer in every twenty-five people exposed, according to the official radiation risk estimates used by the U.S. Government (see, e.g., Federal Guidance Report 13, Cancer Risk Coefficients for Environmental Exposure to Radionuclides). In the same draft, the Nuclear Regulatory Commission proposed a standard of 500 millirem/year, the equivalent of approximately 2,500 chest X-rays over thirty years, which would result in approximately one cancer in every eighty people exposed.

In the original draft, EPA objected to such lax long-term cleanup standards, arguing that they were far outside acceptable risk ranges, which generally will not permit exposures sufficient to produce more than one cancer per ten thousand people exposed. EPA recommended use of its existing standards for cleanups of contaminated sites under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund). EPA, reportedly under pressure from the other agencies, subsequently withdrew its insistence that cleanup standards not exceed existing acceptable risk ranges. [“EPA Drops Backing for Superfund Levels in ‘Dirty Bomb’ Cleanups,” Inside EPA, 21 November 2003].

The more recent “interim final” draft made public by Inside EPA attempts to finesse the differences between the agencies by removing any specific numerical values for long-term cleanup standards. Instead, the guidance merely refers to using “benchmark” values from national and international advisory bodies and federal and state agencies, which would presumably include the DOE and NRC proposals from the previous draft, as well as recommendations from outside organizations. Unfortunately, those cleanup “benchmarks” –

ranging from 100 millirem/year over thirty years to one hundred times that dose – and associated cancer risks fall far outside generally accepted risk ranges.

The 100 millirem/year benchmark over thirty years of exposure is officially predicted to result in one person developing cancer from that radiation for every few hundred people exposed. The 10,000 millirem/year upper “benchmark”—the equivalent of 50,000 chest X-rays over the assumed exposure period—is estimated to *result in radiation-induced cancer in approximately one quarter of the population exposed*. These benchmarks are 25 to 2,500 times greater than the maximum risk values considered acceptable by EPA for Superfund site cleanups.

These are not our risk estimates for such doses but those of the federal government. (All federal agencies use similar figures for estimating the number of cancers generated by radiation, derived primarily from studies by the National Academy of Sciences).

We recognize that early- and intermediate-phase response actions to a terrorist use of a radiological or nuclear device may require extraordinary measures, with initial doses outside of those allowed in normal circumstances. *However, we oppose final cleanup goals that allow long-term radiation exposures to the public and resulting cancer risks that are orders of magnitude greater than currently accepted for remediation of the nation’s most contaminated sites* (i.e., those on the Superfund National Priority List).

An attack by a terrorist group using a “dirty bomb” or improvised nuclear device would be a terrible tragedy. Significantly enhanced measures should be taken to control the radioactive and fissile materials that can be used for such weapons, to prevent their falling into terrorist hands. But should such a radiological weapon go off in the U.S., our government should not compound the situation by employment of standards for cleaning up the radioactive contamination that are inadequately protective of the public.

(There is an apparent contradiction between claims by some that “dirty bombs” would cause little harm aside from public fear and the argument by agencies on the DHS taskforce establishing these guidelines that radioactive contamination could be so high that radiation doses to the public far beyond those normally permitted should be allowed for decades thereafter.)

We are concerned that such lax cleanup standards, with associated high radiation and cancer risk levels, would be considered. We urge you to assure that no cleanup guidance is adopted that—implicitly or explicitly—would permit radiation doses to the public of the magnitudes considered in earlier drafts.

We have enclosed correspondence with EPA Administrator Mike Leavitt and supporting material that provides more detail on these concerns.

Sincerely,

cc: EPA Administrator Michael Leavitt

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