



December 18, 2007

Centers for Disease Control
and Prevention (CDC)
Atlanta GA 30333EIS Office
U.S. Department of Energy
Office of Civilian Radioactive Waste Management
1551 Hillshire Dr.
Las Vegas, NV 89134

RRR000452

Dear Mr. Edward F. Sproat, III:

This is in response to *DRAFT Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geologic Repository at Yucca Mountain, Nye County, Nevada* [DOE/EIS-0369D]. We are responding on behalf of the Department of Health and Human Services (DHHS), U.S. Public Health Service.

This document was reviewed by the Centers of Disease Control and Prevention's Radiation Studies Branch. Following is a summary of important information regarding the radiological impacts to public health and safety which can be found in the subject document (hereafter referred to as the Rail Alignment EIS):

- 1 [
- DOE estimated that the public health impact due to incident-free transport of spent nuclear fuel and high-level radioactive waste via the Caliente corridor would be 1.4×10^{-4} latent cancer fatalities. For the Mina corridor, DOE estimated 8.5×10^{-4} latent cancer fatalities.
 - For transportation accidents, DOE estimated a risk of 1.3×10^{-6} latent cancer fatalities in the Caliente corridor and a risk of 7.7×10^{-6} latent cancer fatalities in the Mina corridor.
 - The worst case transportation accident scenario would involve a high-temperature, long-duration fire that engulfs a cask.
 - For a suburban area in the Caliente corridor this type accident would result in an estimated population dose of 770 person-rem with a 0.46 probability of latent cancer fatality. In a rural area, the population dose would be 2 person-rem and the estimated probability of latent cancer fatality would be 1.2×10^{-3} .
 - In the Mina corridor, the estimated population dose in a suburban area would be 2000 person-rem with 1.2 latent cancer fatalities. For a rural area the estimated population dose is 15 person-rem and 0.0089 latent cancer fatalities.
 - The maximally exposed member of the public (suburban or rural, Caliente or Mina) would receive an estimated dose of 34 rem with a 0.02 probability of latent cancer fatality.
 - DOE analyzed hypothetical sabotage events and determined the scenario resulting in the greatest public health impact involved a high energy density device penetrating a rail or truck cask.
 - In the Caliente corridor, there would be 0.0028 latent cancer fatalities in rural areas and 1.1 latent cancer fatalities in suburban areas.
 - In the Mina corridor, this scenario results in an estimated 0.021 latent cancer fatalities in rural areas and 2.8 latent cancer fatalities in suburban areas.

- The maximally exposed member of the public (suburban or rural, Caliente or Mina) would receive an estimated dose of 27 rem with a 0.016 probability of latent cancer fatality.

Conclusion: The public health impacts estimated by the Rail Alignment EIS are minimal and based on conservative assumptions. The methods used to calculate these results are widely accepted by advisory groups and federal regulatory agencies.]

Sincerely yours,



Andrew L. Dannenberg, MD, MPH
Associate Director for Science
Division of Emergency and Environmental Health Services
National Center for Environmental Health
Centers for Disease Control and Prevention
4770 Buford Highway, MS F-30
Atlanta, GA 30341