



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

OCT 02 1984

MEMORANDUM FOR: Ronald L. Ballard, NRR Environmental Coordinator  
and Chief, Environmental and Hydrologic Engineering  
Branch, DE

FROM: Frank J. Congel, Chief  
Radiological Assessment Branch, DSI

SUBJECT: REVIEW OF ENVIRONMENTAL ASSESSMENT OF RICHTON  
DOME SITE

As requested, we have reviewed the radiological assessment portion of the Department of Energy's environmental assessment for locating a high-level waste repository at Richton Dome, Perry County, Mississippi. Our comments on DOE's environmental assessment are enclosed.

This review was performed by E. Branagan.

*Frank J. Congel*  
Frank J. Congel, Chief  
Radiological Assessment Branch  
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COMMENTS ON RADIOLOGICAL ASSESSMENT  
PORTIONS OF 4th DRAFT "STATUTORY  
ENVIRONMENTAL ASSESSMENT FOR  
RICHTON DOME SITE, PERRY COUNTY,  
MISSISSIPPI" (JUNE 6, 1984)

The radiological assessment portions of the draft Environmental Assessment are contained in the following sections: 3.4.7 Radiological Background; 4.2.1.9 "Effects on Radiological Levels"; 5.1.3.3 Decommissioning and Decontamination; 5.3.1.2 Radiological and Non-Radiological Effects Associated with Nuclear Waste Transport; 6.2.2.1 Preclosure Radiological Safety; 6.4.1 Preclosure Radiological Assessment for Richton.

The EA contains estimates of doses to individuals and the population within the vicinity of the site. Doses are estimated due to exposure to potential releases during the construction phase, the operation phase, and for accidents (see Tables 6.4-4 and 6.4-10). Estimates of the quantities of radionuclides released are given in tables in Chapter 6. The principal pathways of exposure (inhalation, ingestion, and submersion) are evaluated using generally accepted models. Doses to the general public (i.e., individuals and the population) are estimated to be minimal for exposures resulting from construction activities, normal operations and accidents.

In regard to radiological impacts from transportation (5.3.1.2), the EA contains an estimate of 10 latent cancer fatalities from normal transport of waste to the site for the 26-year life cycle (see Table 5-9, p.5-98). The basis for this estimate is only briefly described in the EA, and a reference is provided to Wilmot et al, 1983. Since the impact from transportation is much larger than the impact from construction, normal operations, and accidents at the site, the bases for the impacts from transportation should be described more fully in the EA.