



079651

**Department of Energy**

Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-

91-524

July 24, 1991

Mr. Thomas W. Manning  
Director of Public Works  
6140 North Hanley Road  
Berkeley, Missouri 63134-2098

**DOSE ESTIMATE FOR WORKER AT KHOURY LEAGUE PARK**

Dear Mr. Manning:

The purpose of this letter is to respond to your request concerning the estimated dose an individual would receive while mowing the grass at the Khoury League Park in Berkeley, Missouri (north of the St. Louis Airport Site). The calculation provides an estimate of exposure from both external gamma radiation and inhalation of contaminated dust.

The estimated dose assumes an individual mowed the grass three days a month, each month, for a period of three years. The average radionuclide concentrations detected in the ball field area were used in the calculation. The calculated external dose is 0.65 millirem per year (mrem/yr), less than one percent of the Department of Energy (DOE) radiation protection standard of 100 mrem/yr above background levels for a member of the general public. The estimated inhalation dose is 1.9 mrem/yr; therefore, the total exposure for this individual mowing the grass is estimated at 2.6 mrem/yr. It is important to note that conservative assumptions were applied in this calculation, such as assuming the individual was immersed in a cloud of dust while mowing the grass and that the individual mowed the grass year round; therefore, the calculation provides a conservative over-estimate of the dose that an individual would be expected to receive.

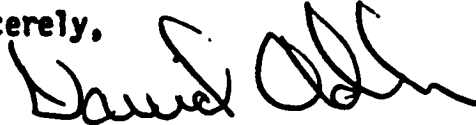
The DOE limit of 100 mrem/yr above background is a value that shall not be exceeded as a result of exposure received during direct access to a DOE facility from internal irradiation or external irradiation or both. Natural background radiation levels in the United States average approximately 300 mrem/yr. The amount of background radiation one receives varies from this average depending on factors such as house construction material, number and kind of medical X-rays, number of television viewing hours, distance from sea level, and number of airplane flights, to name a few.

Mr. Manning

2

If you have any questions or comments, please contact me at (615) 576-9634.

Sincerely,



David G. Adler, Site Manager  
Former Sites Restoration Division

cc: S. Liedle, BNI  
D. Bedan, MDNR  
G. McCabe, EPA, Region VII

079651  
SL-069

00-1133

---

Formerly Utilized Sites Remedial Action Program (FUSRAP)

---

# ADMINISTRATIVE RECORD

for the St. Louis Airport and  
Latty Avenue Sites, Missouri

---



U.S. Department of Energy