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Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for Maywood, New Jersey



U.S. Department of Energy



State of New Jersey FEB 1 1 49 PM '95

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

JAN 25 1995

Ms. Susan Cange, Site Manager
Former Sites Restoration Division
Department of Energy
Field Office, Oak Ridge
P.O. Box 2001
Oak Ridge, Tenn. 37831-8723

Dear Ms. Cange:

Re: Remediation Cleanup Levels for Thorium/Radium Contamination at the Wayne and Maywood Interim Storage Sites, No Subsequent Excavation/Construction

The New Jersey Department of Environmental Protection (NJDEP) has completed its evaluation of the federal cleanup proposals for the referenced sites pursuant to the requirements defined in , N.J.S.A. 58:10B-12d(1), (commonly referred to as S-1070), and as they pertain to the remediation of sites contaminated with radioactive wastes. As was discussed during the August 18, 1994 technical meeting between our respective agencies and the United States Environmental Protection Agency (USEPA), S-1070 requires the establishment of a residential and non-residential cleanup level for the remediation of all sites within the state. The establishment of these **site specific** residential and non-residential cleanup criteria are therefore a function of land use, potential exposure and resultant dose/response effects. As required by statute, said effects must be evaluated with regard to a potential 1×10^{-6} risk factor or adhere to natural background levels. Additionally and as we discussed in our August meeting, the NJDEP has developed its remedial cleanup criteria for thorium/radium contamination at the respective sites based upon residential and non-residential use scenarios. The criteria for the first scenario, namely where no new construction and resultant soil excavation of any kind takes place and that existing site use is maintained is as follows:

a) For the residential land use as defined by N.J.S.A. 58:10B-12d(1) the following progression shall be used:

Thorium + Radium Combined in picocuries per gram (pCi/g)
Resulting in Concentrations of Material Remaining On-Site ^{1,2} -

4 pCi/g with one foot of "Clean Cover" over site
5 pCi/g with two feet of "Clean Cover" over site

b) For the non-residential land use as defined by N.J.S.A. 58:10B-12d(1) and statutorily requiring the placement of a "Notice of Environmental Restriction" the following progression shall be used:

Thorium + Radium Combined in picocuries per gram (pCi/g)
Resulting in Concentrations of Material Remaining On-Site^{1,2} -

12 pCi/g with one foot of "Clean Cover" over site

15 pCi/g with two feet of "Clean Cover" over site

1: Assumes a 10 to 1 Thorium to Radium Ratio at the Wayne Site

2: Assumes a 4 to 1 Thorium to Radium Ratio at the Maywood Site

As indicated above, this site specific analysis assumes no new construction in impacted areas. Furthermore, the limit upon new construction in such areas would be designated by the placement of a "Notice of Environmental Restriction" pursuant to N.J.S.A. 58:10B-12d(1) also described above. Additional remedial considerations or caveats will become necessary in the event that a change in land use prompts excavation of soils/residuals with concomitant potential exposures.

If you have any questions concerning the above please call me at
(609) 633 - 1455.

Sincerely,



Nicholas L. Marton, MPH
Research Scientist II/Case Manager
Bureau of Federal Case Management

c: Wayne Howitz, DRE
Bob Stern, BER
Angela Carpenter, USEPA, Region II