Formerly Utilized Sites Remedial
Action Program (FUSRAP)

Maywood Chemical Company Superfund Site

ADMINISTRATIVE RECORD

Document Number

MISS- 046.

US Army Corps
of Engineers®

102900

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 028
Trenton, NJ 08625-0028

1993 APR 12 PM 2:10

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

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

APR 08 1993

Dear Ms. Cange:

Re: Maywood and Wayne Sites - Identification of New Jersey ARARs

Please be advised that the New Jersey Department of Environmental Protection and Energy (NJDEPE) is in receipt of your March 5, 1993 correspondence with regard to the referenced subject.

A State of New Jersey proposed goal for excess cancer risk of 1×10^{-6} lies within the variability of natural background radiation. This in turn requires that "practical" remedial levels be set at natural background levels so that exposures approach those received from natural sources. As a general point, naturally occurring background radiation levels are approximately 97 mrem/yr for cosmic, terrestrial and internal exposures, excluding radon.

Exposure to surface external gamma radiation from radium - 226, thorium - 232, thorium - 228, and its decay products in contaminated surficial soils, may pose a significant cancer risk. In order to achieve near background levels as noted above and in accordance with NJDEPE requirements, soil radium - 226 and thorium - 232 concentrations should not exceed 5 pCi/g with a minimum of one foot of clean/firm fill cover material. Estimates indicate that "untreated" surface soils containing 5 pCi/g of radium - 226 will result in a dose of 60 mrem/yr, equivalent to a lifetime cancer risk of 1.5×10^{-3}. Contaminated "untreated" surface soils containing 5 pCi/g of thorium - 232 along with decay products may result in a dose of approximately 100 mrem/yr and an attributable cancer risk of 2×10^{-3}. By comparison to natural gamma radiation levels, these exposures may be considered to effectuate a doubling of naturally occurring gamma radiation exposures. As an aside it should be noted that radiation environmental standards near nuclear power plants and for low and high level radioactive waste disposal sites restrict allowable levels of exposure to approximately 25% of background.

In summary, the NJDEPE is not yet in a position to provide specific New Jersey state ARAR's for soil, ground water, surface water and air for radiological contamination. However, such levels will be provided as they become available. Nevertheless, the above discussion shall serve as guidance in the absence of such ARAR's and shall be used in evaluating pertinent USDOE proposals.

If you have any questions concerning the above please feel free to contact me at (609) 633 - 1455.

Sincerely,

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

c: Jonathan Berg, BFCM
Steve Byrnes, BEERA
Greg Rapp, BGWPA
Bob Stern, BER
Jeff Gratz, USEPA

RPCE\PA\DOEARAR.NLM