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Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for Maywood, New Jersey

U.S. Department of Energy

0489-0613.1

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Department of Energy

Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, Tennessee 37831—8723

January 18, 1996

Angela Carpenter
Federal Facilities Section
U.S. Environmental Protection Agency
Region II
290 Broadway, 18th Floor
New York, New York 10007-1866

Dear Ms. Carpenter:

MAYWOOD SITE - DISPOSAL OF INVESTIGATION DERIVED WASTE FROM GULF STATION PROPERTY, 239 ROUTE 17, MAYWOOD, NJ

As requested in your letter dated November 29, 1995, the Department of Energy (DOE) has evaluated the potential radiological impact to the public and the environment resulting from the disposal of a small quantity of drummed waste at the Pennsauken Landfill from one of the Maywood site vicinity properties.

Based on information provided by the Environmental Protection Agency (EPA), nine drums of waste generated by the Stepan Company during characterization of the subject property were disposed of at the Pennsauken Landfill. In evaluating the potential impact of disposal of this investigation derived waste (IDW), characterization data for the Gulf property, generated by DOE in 1989, and information provided by Stepan's consultant, CH2M Hill was reviewed.

The IDW at the Gulf property was apparently generated during the installation and testing of two groundwater monitoring wells. Based on information provided to us, the two wells were not gamma logged, and the soils generated during installation were not analyzed for radioactive parameters. The wells appear to have been placed in a radioactively contaminated area, based on the Radiological Characterization Report for the Gulf Station Property (September 1989). Please note that during DOE's 1989 characterization, only gamma log readings were collected from boreholes in the general area of the newly installed monitoring wells.

To evaluate a possible radiological impact to human health, a dose estimation was performed for a worker at the Pennsauken Landfill. Because of the uncertainty of the final disposal location of the waste and of the actual waste practices at the landfill, we chose to model what we consider to be a conservative scenario. All nine drums were assumed to be filled with soil contaminated with thorium-232, radium-226, and uranium-238 at concentrations relative to the gamma radiation readings obtained during characterization of the Gulf property. These concentrations were 10 picocuries per gram (pCi/g) thorium-232, 10 pCi/g uranium-238, and
1 pCi/g radium-226. It was further assumed that the drums were covered with six inches of clean soil (the minimum daily cover at a landfill) and that a

worker spent four hours per day standing on the buried drums for one year. Under this conservative scenario, the worker would receive an estimated dose of 0.5 millirem per year from the drums of waste. As you know, this dose is orders of magnitude below guidelines developed by DOE as well as the annual dose limits being proposed by EPA and the Nuclear Regulatory Commission. Therefore, we believe that the drums in the landfill do not pose a radiological health risk to the workers at the site.

Additionally, there is no reason to believe that the buried drums will negatively impact the environment now or in the future due to the limited potential for migration of the waste from the landfill and the fact that the waste comprises an insignificantly small portion of the total volume of waste in the landfill.

I hope this information is helpful to you. If you would like to discuss this further please call me at (423) 576-5724.

Sincerely,

Susan M. Cange, Site Manager
Former Sites Restoration Division

cc: Nick Marton, NJDEP