



STATE OF NEW YORK DEPARTMENT OF HEALTH

Coming Tower

The Governor Nelson A. Rockefeller Empire State Plaza

Albany, New York 12237

[Redacted]
Executive Deputy Commissioner

June 3, 1999

Mr. [Redacted]
Environmental Radiation Specialist
Bureau of Radiation & Hazardous Site Management
New York State Department
of Environmental Conservation
50 Wolf Road
Albany, NY 12233

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DEPT. OF RADIATION &
HAZARDOUS SITE MANAGEMENT
DIVISION OF SOLID &
HAZARDOUS MATERIALS

Dear [Redacted]:

This is in response to your request to review the "Technical Memorandum, Radiological Human Health Assessment for the Town of Tonawanda Landfill," prepared by the U.S. Army Core of Engineers (ACE). I have reviewed it and have the following comments:

1. A statement from section 2.1 "Data Evaluation" indicates that the Thorium results reported by ORNL are not reliable since they only analyzed the samples using gamma spectroscopy (as compared to those obtained by BNI using alpha spectroscopy). Is there information whether samples were analyzed using alpha spectroscopy to quantify the levels of Radium and Uranium? Are the reported levels for Radium and Uranium correct? The statement that the reported values are not a true representation of the onsite conditions is not supported by data. It would be useful to see a comparison for some samples, particularly those showing high concentrations of the isotopes of concern.
2. The data for Borehole 7 is discussed, however, no explanation is given about why there is a drop in concentration of U-238, followed by a sudden increase (from 290 pCi/g at 2 ft to 1,800 pCi/g at 2.5 ft). How far does the Uranium-238 contamination go at that location? Do other boreholes near B7 show the same trend? How was the averaging done there?
3. I reviewed the proposed scenarios, and the assumptions seem adequate. I verified a few of the RESRAD runs and obtained the same results. It would be useful if the tables show the isotopic concentration used in the various calculations as part of the data tables presented in the appendix.
4. The risk for the nearest resident should be evaluated to support the statement that it is negligible.

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5. A statement is made in the description of the Construction Worker Scenario that this scenario may be a remedial option if risks and the associated doses to the workers are not excessive. There is a prior commitment from the Department of Energy to remove the MED material prior to landfill closure and if a change is proposed by the ACE it would have to be discussed with DOH, DEC and appropriate local authorities.
6. Regarding the statement on future land use, "if the use of the land change to where an individual is in contact with the residual radiological materials for extended periods, the risk to the individual could be unacceptable. Therefore, land use restrictions should be maintained for the longest possible period." How long is the longest possible period? Who will maintain the land restrictions? Shouldn't the MED waste be better characterized to assess the risk to possible future intruders? If ACE removes the MED material, this will not be an issue.
7. In the conclusions it is stated that "recovering the material from the landfill will impose additional hazards on the remediation workers beyond what is normally encountered during the remediation of radioactive materials." If the MED material buried at the Tonawanda landfill is suspected to have come from the Linde site, wouldn't it be appropriate to combine the removal of materials from both the Linde and Tonawanda Landfill sites? Isn't the ACE going to remove similar materials from the Linde/Ashland sites?
8. If the current use of the site remains the same (i.e., landfill with only potential recreational use) where the calculated dose to the MEI is less than 10 mrem/year, we see no immediate threat to public health and safety.

We would be glad to review additional calculations based on more reliable data, and will defer to DEC as to any recommendations on future use. If you have any questions please do not hesitate to contact me at 518-458-6451.

Sincerely,


Assistant Director
Bureau of Environmental Radiation Protection

cc: 