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New York State Department of Environmental Conservation
Division of Environmental Enforcement - Compliance Practice Group
50 Wolf Road, Room 627, Albany, New York 12233-5500
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Michael D. Zagata
Commissioner

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Bernard B. Freedman, Esq.
Norton/Radin/Hoover/Freedman
2858 Delaware Avenue
Kenmore, New York 14217-2789

Dear Mr. Freedman:

This is in response to your September 18, 1996 letter to Paul J. Merges, Ph.D., Chief of this Department's Bureau of Pesticides & Radiation, regarding the Niagara Landfill on River Road in Tonawanda. Your letter was prompted by the concerns of the City of Tonawanda's Board of Education for the safety of school children and requested that a new radon sample be taken of the landfill.

As you may know, in February 1996 the Department sampled six gas extraction wells in the landfill and analyzed the samples for radon-222. This sampling and analysis was conducted in full accordance with generally accepted scientific principles and practices. The results provided a reasonable estimate of the radon that was leaving the six wells while they were venting under natural pressure. The Department determined that the emissions do not pose a threat to public health or the environment and that operation of the flare will not present a danger.

A member of the school board, Mr. William Watson, has expressed concern that the sampling and analysis methods employed by the Department are unacceptable. It is his belief that the Department has significantly underestimated the radon concentration in the landfill. His opinion may have been formed when the Department released the data from the February 1996 sampling. In the Department's March 1996 *Radon Interim Report on the Investigation at the Niagara Landfill*, a comparison was made between the radon concentration in the landfill gas and the radon concentration in Erie County soils that was measured by the New York State Department of Health (DOH) as part of a 1989 study on indoor radon in homes. This may have led Mr. Watson to believe that the Department should have followed the same sampling procedures at the Niagara Landfill as the DOH did in its study.

These two studies had different objectives and were performed using different, although equally valid, methodologies. The purpose of the Department's study was to measure the concentration of radon being released from the landfill. The purpose of DOH's study was to determine the concentration of radon in air spaces in the soil. Different instruments were used in the two studies. The Department used lucas cells which are designed to measure the

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concentration of radon in a sample of gas. DOH used alpha track detectors which are designed to measure the radioactivity of radon in an enclosed air space over a long period of time. Both instruments are generally accepted in the scientific community as being reliable and producing accurate results, but the procedures involved are quite different. The Department did not cap the wells for ninety days and take the sample from a closed system because this would not have met our objective of measuring the concentration of radon that is being emitted to the air; it would have instead measured the concentration of radon that could be trapped within the landfill itself. The wells were covered the day before the samples were taken only to prevent outside air from entering the sampling device and diluting the sample.

The Department shares the Board of Education's desire to obtain an accurate measure of radon released through the flare. Turning off the flare and sampling the individual wells will not provide that measure. The operation of the blowers (which are part of the flare system) could have an effect on the concentration of radon in the extracted gas. The only way to determine that effect is to measure the radon in the gas that is supplied to the flare. The Department will do this quarterly, beginning in October or November (the exact date has not yet been determined), for at least the first year of operation. Future sampling events will be based on the results of the first four samples.

The Department will provide you with a copy of all analytical results and an assessment of the impacts of the radon emissions. If the Department finds at any time that the emissions may have an adverse impact upon those in the vicinity of the landfill, we will take immediate action, consistent with our legal authority, to insure that any potential threat is eliminated.

If you would like to discuss this further please feel free to call Barbara Youngberg at 518-457-2225. Ms. Youngberg supervises the Radiation Section and is familiar with all aspects of the radon sampling at the Niagara Landfill.

Sincerely,



Deborah W. Christian
Associate Attorney

cc: Karim Rimawi, New York State Department of Health
Craig Gordon, US Nuclear Regulatory Commission, Region 1
Dennis Sollenberger, US Nuclear Regulatory Commission, Office of State Programs
Gerald Mikol, Regional Director, NYSDEC Region 9
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Norton/Radin/Hoover/Freedman

September 18, 1996

Mr. Paul Merges, Chief
Bureau of Radiation
NYS Department of Environmental Conservation
50 Wolf Road
Albany, New York 12223

RE: Niagara Landfill Samples

Dear Mr. Merges:

Recently the City of Tonawanda School District was informed of an environmental situation that may have an adverse impact on the students of our district. As the attorney for the City of Tonawanda School District, it is my duty and obligation to protect the interests of the school board.

The School Board has authorized me to request that a new radon sample be taken of the Niagara Landfill and naturally occurring soils using similar methods and acceptable scientific practices in order to accurately determine the real radon emissions coming from the landfill, one which meets the criteria necessary for an accurate radon emission reading.

According to Mr. William Watson, a member of the City of Tonawanda Board of Education, the extraction of gases from the Niagara landfill is dangerous and unacceptable as high levels of radon gas will be emitted into the air of the City of Tonawanda.

Mr. Watson, who holds his Master's degree in geology, states that in order to determine if radon emissions are acceptable one must perform a sample in a closed system (in situ) usually for 90 days. The Board has been told that the Department of Environmental Conservation, in its study of radon emissions of the Niagara Landfill, capped the wells for only one day and found the radon emissions to be acceptable. It has been indicated to the Board that the test does not meet acceptable scientific practices and therefore the results are unreliable. These results, if true, may be determined to have been obtained in a negligent manner.

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HAZARDOUS MATERIALS

Mr. Paul Merges
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It has been indicated to us that in a valid scientific experiment, landfill wells and soil wells must be capped for the same period of time under similar conditions, and radon measured with similar instruments in the same way. The Board of Education insists that a proper sampling be taken of the area to accurately determine the real radon emissions due to the extraction of gases.

The Board has authorized me to take any necessary legal steps to compel an accurate finding of the real radon emissions at the Niagara Landfill. With your cooperation, I believe this problem can be solved without judicial intervention. It is suggested that the DEC immediately direct BFI to turn off the blowers until such time as it is ascertained that there is no adverse effect on the environment from the emission of radon from the landfill.

Please inform this office of the new dates for radon testing of the Niagara Landfill.

Thank you.

Very truly yours,

NORTON/RADIN/HOOVER/FREEDMAN



Bernard E. Freedman, Esq.

BBF/mn

CC: Mr. James Holler
Superintendent
Tonawanda City School District