Water Front- Peter Mantius

Environmental politics in New York's Finger Lakes

Sierra Club Lawsuit Alleging Dangerously High Levels of Radioactivity at Hakes Landfill Is Dismissed by Steuben Judge

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Drill cuttings being prepared for shipment to a landfill.

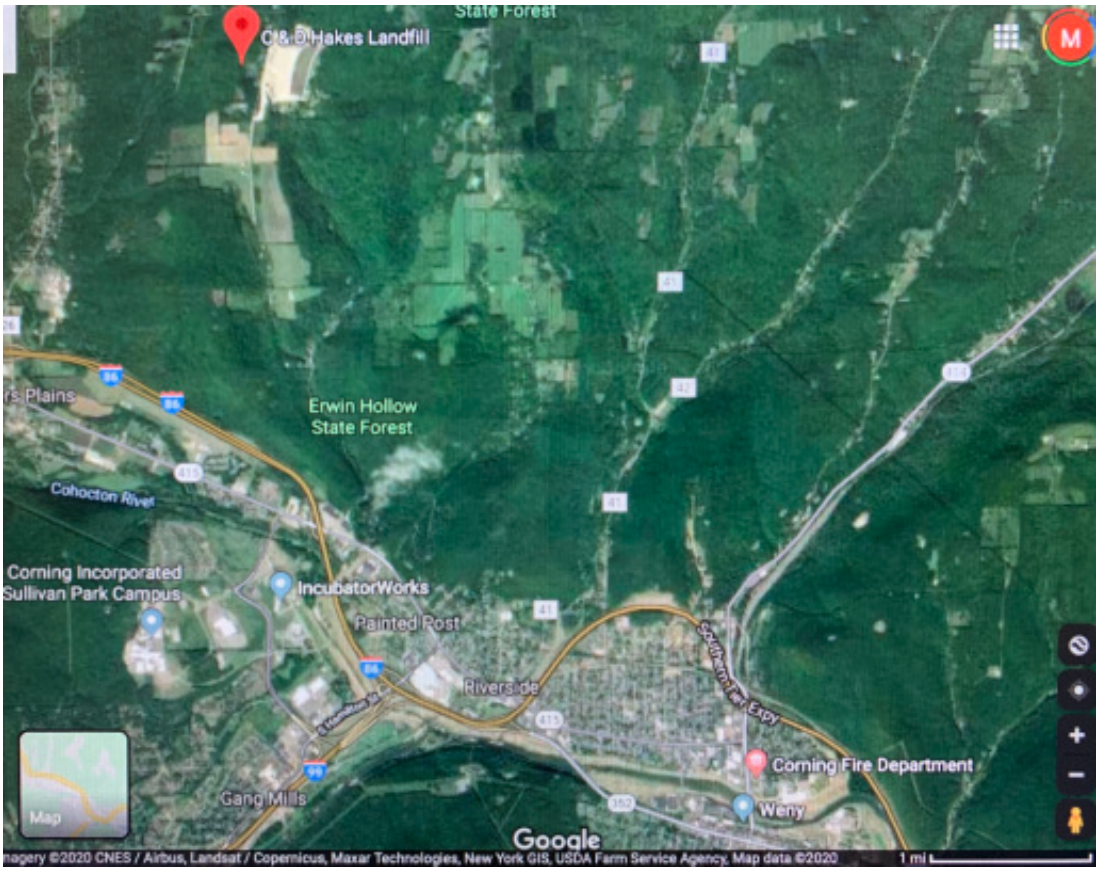
CORNING, Aug. 3, 2020 — A Steuben County judge has dismissed a civil suit alleging that state officials granted Hakes C&D Disposal Landfill a permit to expand without properly considering evidence that the dump contains dangerously high levels of radioactivity.

As petitioners, the Sierra Club and others had claimed that the landfill's own tests showed that its leachate contained radioactive decay isotopes at levels that pointed unmistakably to high levels of radium and radon.

Radon is the nation's second leading cause of lung cancer, after cigarette smoking. Citing a potential major public health hazard only six miles northeast of Corning, petitioners called for new tests for Radon 222 in the landfill's released gas and leachate.

The state Department of Environmental Conservation declined to order the radon tests. Instead it expressed confidence that drive-through monitoring stations at the landfill's entrance have prevented trucks from delivering any highly radioactive material. Only "drill cuttings" — rock chips from the vertical portion of hydrofracked wells — with background-level radiation have been allowed to pass through the detectors, the agency insisted.

Drill cuttings being prepared for shipment to a landfill.



But after analyzing leachate test results obtained through the Freedom of Information Law, the Sierra Club filed suit (https://waterfrontonline.files.wordpress.com/2018/01/hakessierraclubpetition04102019.pdf) in April 2019 against the DEC, the landfill and the town of Campbell. Experts for the group noted exceptionally high levels of the isotopes Bismuth-214 and Lead-214, which they said were red flags for radium and radon.

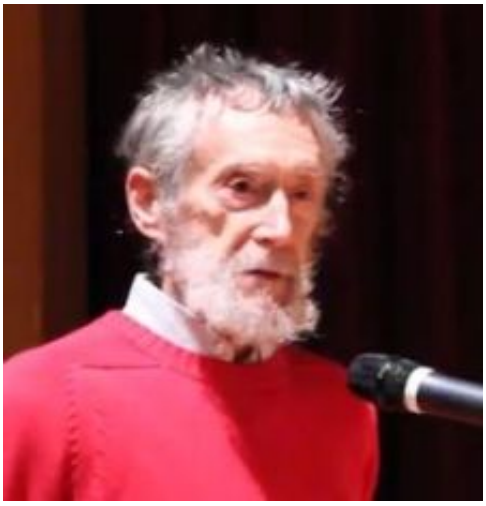
The DEC's experts disagreed and offered alternative reasons for the high isotope readings.

In his dismissal order

(https://waterfrontonline.files.wordpress.com/2018/01/hakesrulingjuly31.pdf) dated July 31, Acting Supreme Court Justice Patrick McAllister (right) concluded that the DEC "took the necessary hard look when reviewing the scientific evidence (and) came to a reasoned decision that had a rational basis."

The judge did not attempt to weigh the merits of the opposing scientific arguments. Rather he held that the DEC's decision to reject the conclusions of geologist Raymond Vaughan for the Sierra Club was not "arbitrary and capricious."

McAllister concluded: "The record shows that all procedural requirements were met. The opinion of Dr. Vaughan may be of relevantly (sic) recent vintage, but the basic issues of what is being accepted at the Hakes landfill, how the loads are monitored, and how the landfill itself is monitored have been around for years."



The conclusions of Vaughan

(https://waterfrontonline.files.wordpress.com/2020/01/rayvaughanfeb212019.pdf) (left) had been endorsed by other Sierra Club experts, including Dr. David Carpenter, director of the Institute of

Health and the Environment at the University of Albany.

"There is reason to believe the DEC is underestimating the amount of radioactivity deposited in and being released from the (Hakes) landfill," Carpenter wrote in an affidavit (https://waterfrontonline.files.wordpress.com/2018/01/carpenteraffidavitjan2018.pdf) dated Jan. 17, 2018.

The simple and relatively cheap way to discover who's right — experts for the Sierra Club or the DEC — is to test for Radon 222, Carpenter said.

"Screening for Radon 222 … is absolutely the simplest, the most direct, the most meaningful (test) because what you're concerned about is the escape of radon and people inhaling it."

— Dr. David Carpenter, director of the Institute for Health and the Environment, the University of Albany

For years, Hakes has accepted wastes from fracking operations in Pennsylvania's Marcellus Shale, one of the nation's most radioactive shale formations.

Public comments on the proposed Hakes' expansion overwhelmingly focused on the likelihood that radioactive wastes were reaching the landfill.

But the DEC squelched debate about radiation issues by explicitly excluding discussion of the topic when it set the ground rules for the landfill expansion's environmental impact statement.

Then, after Vaughan published his conclusions about the implications of the Lead-214 and Bismuth-214 in the leachate, the DEC allowed the landfill to stop testing for the two incriminating isotopes.

Several months later, the agency rejected a formal request for a special adjudicatory hearing on the factual issues related to radioactivity levels at Hakes.

In its court filings, the Sierra Club took issue with the DEC's claim that the landfill's Ludlum 375 detectors (https://waterfrontonline.files.wordpress.com/2018/01/hakesmanualludlum375.pdf) adequately screen any and all radiation seeking entry to the landfill. Company literature calls them gamma detectors (https://waterfrontonline.files.wordpress.com/2018/01/ludlumpromo.pdf).

The relevant radioactive isotopes have very different characteristics, notably in the types of radiation they emit: alpha, beta and gamma.

A Ludlum gamma radiation detector

While gamma rays can penetrate the metal sides of waste delivery trucks, alpha and beta particles cannot. So they may pass undetected. Although alpha particles can't even penetrate skin, when they are ingested or inhaled, they settle in bones, lungs and other internal organs and trigger cancers.

The main health threat from Marcellus gas drilling well wastes are the cancer-causing alpha emissions from Radon 222.

(Radium and radon (https://waterfrontonline.files.wordpress.com/2018/01/whatisradon.pdf) are part of the uranium decay chain. Radium-226 has a half-life of 1,590 years. When it decays, it emits an alpha particle and a gamma ray, leaving behind Radon 222, which has a half-life of only 3.8 days and emits an alpha particle as it decays into polonium-218. Polonium-218 quickly decays into Lead-214, which quickly decays into Bismuth-214 — all three with half-lives of less than an hour.)

In a July 2 court filing (https://waterfrontonline.files.wordpress.com/2018/01/adecmemojuly022020.pdf), the DEC noted that it requires Hakes to test for radium and uranium, but not radon, under a radiation detection protocol that dates back to 2012. The agency argued that the Sierra Club failed to make a timely challenge to that protocol.

Rachel Treichler, an attorney for the Sierra Club, said her clients were considering whether to appeal McAllister's ruling.

Joseph Fusco, vice president of Casella Waste Systems, which owns Hakes, said the company was pleased with the judge's order.

"We believe that this decision reaffirms that our operations, environmental monitoring, and facility management practices provide safe, effective waste disposal services," Fusco said in a emailed statement (https://waterfrontonline.files.wordpress.com/2020/08/fuscopdf.pdf).

The decision in the Hakes case follows follows closely after the state Legislature passed a bill (https://waterfrontonline.files.wordpress.com/2018/01/mayonfrackloophole.pdf) that cancels the oil and gas industry's special exemption from having its waste classified as hazardous.

Gov. Andrew Cuomo signed that bill into law today. That means gas drilling wastes that exhibit any of four dangerous characteristics — ignitability, corrosivity, reactivity and toxicity — will be classified as hazardous, subjecting them to greater tracking and regulation.

Both the McAllister court ruling and the hazardous waste exemption bill come at a time when New York imports of Pennsylvania drill cuttings and other drilling waste have fallen sharply from peaks several years ago.

That's largely because the nation's shale gas industry has contracted dramatically.

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