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A view of Emerson Power Transmission buildings from the company parking lot. The company's location is the site of pollution from its former tenant, Morse Industrial, that the DEC is attempting to clean up. (Photo by Rachel Philipson)

DEC issues amended document on Morse Industrial pollution

Taryn Thompson
Reporter

Five years ago, Ken Deschere was diagnosed with a very rare disease: stage IV tonsillar cancer.

He underwent three different surgeries in just over two weeks, and over the next two months was subject to 33 doses each of two types of radiation therapy - at 50 minutes a pop.

A South Hill resident since 1981, Deschere and his wife Regina live about one block downhill from Emerson Power Transmission, a polluted compound listed on New York's State Registry of Inactive Hazardous Waste Disposal sites.

While Deschere counts genetics as a major factor, he believes the cancer may well have been caused - at least in part - to the 20 years he spent working in his basement.

"I had my desk, my computer, a TV; it was an ideal space," Deschere said.

Little did he know what had seeped into the very air he was breathing.

When EPT discovered volatile organic compounds like trichloroethene (TCE) in the firewater reservoir in 1987, an environmental assessment was initiated and led to the immediate conclusion that the reservoir had to be cleaned up. It took 7 years to get the paperwork signed.

In 1994, the state Department of Environmental Conservation issued a Record of Decision that oversaw the implementation of a groundwater extraction and treatment system. Many samples of soil, groundwater, soil vapor, and indoor air were collected to characterize the nature and extent of contamination, both on site and off site. Off-site soil vapor testing showed that contaminants historically declined northwest of the plant in the direction of groundwater flow, and prompted the installation of vapor mitigation systems in some nearby homes.

Walter Hang, president and creator of Toxics Targeting, based in Ithaca, discovered that the 1994 ROD had "profound shortcomings" and brought the matter to the attention of the public and the DEC.

The 110 acres was the original site of a steel roller chain factory, constructed in 1906 by Morse Industrial Corporation. From the late '20s to the early '80s, Borg-Warner Corporation owned the property and used TCE as a solvent for cleaning and degreasing metal parts. After years of investigation, it was found that used solvents were discharged into the facility's firewater reservoir and also flushed into the community sanitary sewer system, to which the plant's lines are connected.

Now, after two decades, the DEC is calling for an upgrade to the mitigation. An ROD amendment released Feb. 13 notes that upgrades to the system were completed in fall 2008 and identifies additional remedial actions preferred by the DEC to address contamination still present in soil, groundwater, and soil vapor.

In Hang's opinion, the 1994 ROD was a total failure. The proposal claimed to be fully protective of public health, but "that turned out to be totally untrue," he said.

"The DEC's 1994 ROD declared that TCE contamination would be cleaned up in three years or less," Hang said. "Nevertheless, the revised ROD notes that TCE levels were reported in 2007 at 43,000 ppb, well above TCE's 5 ppb groundwater clean up standard and higher than the 28,000 ppb detected in 2004. Why did TCE levels go up while the remediation system was operating per the DEC's ROD?" he asked.

Deschere has moved his office upstairs and relegated storage and old junk to the basement. His basement has been the site of numerous tests.

"The toxins levels in and under our home have been tested many times - twice by Emerson's consultants and over a dozen times by the DEC, as part of a study of variations in toxins levels over time," Deschere said. "The highest levels are under the basement slab: about 12 to 14 micrograms per cubic liter."

"Owners of over 100 neighborhood properties were notified in writing of their tests, generally two to four months after the tests were performed," he added.

Deschere maintains a site, Ithaca-ship.org, at which he and several of his neighbors have tabulated and mapped the results of the tests.

"TCE and other toxic chemicals have been detected in ambient air more than 1,000 feet from the factory in the vicinity of contaminated utility conduits and other known pollution sources," Hang said, yet ambient air pollution is not identified as a exposure pathway in the ROD.

"Ken and his neighbors never would have discovered that their homes were impacted without my documentation of the DEC's inadequate efforts," Hang said.

According to Gregg Townsend, regional hazardous waste remediation engineer with the DEC, the system installed in 1994 targeted a certain zone of bedrock but failed to compensate for other contaminated zones.

Townsend said that two options are available to remove the volatile organic compounds like TCE: collection and above-ground treatment of water, or in-situ chemical oxidation (ISCO), which involves the injection of chemicals.

"The effectiveness of each depends on the type of geology in the area," Townsend said, "but the geology here is so complex that we propose a combination of the two."

Carl Cuipylo, the DEC's staff geologist, said that potassium permanganate is the combination of chemicals proven to do the trick.

"This is what was used just down the road at the former Axiohm facility a year ago to do the very same thing," Cuipylo said.

"Typically, a company will go through pilot testing using various chemicals to figure out which one works best," Townsend added.

According to Townsend, the EPT site on South Hill is comparable to the Axiohm site where ISCO was successful.

"It depends on the type of contamination you're treating and the geology," he said.

The revised ROD reports that 17 years of DEC-supervised remediation efforts achieved negligible results, but the DEC claims that pollution hazards at the site will be cleaned up in two years.

Highlights of the proposed ROD amendment, in addition to upgrading the existing system and combining it with ISCO, include capping contaminated soils and sealing cracks and penetrations in on-site buildings to address soil vapor intrusion. According to Hang, the only thing this low-permeability asphalt cap would do is allow for pollution attenuation.

Derrik Chase, director of environmental affairs at EPT, declined to comment and forwarded questions to PR spokeswoman Emily Umbright.

"EPT has not used any of these [volatile organic compounds] in its Ithaca operations, and they are continuing to work with the state of New York to clean up the site," Umbright said.

The long-term effects of exposure to soil vapor are not well studied, Deschere said.

"The toughest aspect of the whole business is how little we know. So few meaningful tests have been performed on long-range exposure to low levels of combinations of toxins," he said.

"Many of the conclusions of the National Academy of Science have been ignored," Deschere added, "and the NYS DOH standards of what is considered "acceptable" levels of these toxins in and under a home are relatively high compared to states with more protective standards."

Hang wonders how one can trust that the current ROD will be effective if the 1994 ROD was inadequate and the two offer almost the same assurances. He also wants to know the DEC does not require all identified contamination to be removed in strict compliance with all applicable clean up standards.

"Why doesn't the DEC require the contamination to be completely removed once and for all instead, for example, of being covered with asphalt or left underneath an abandoned building?" Hang posited. "I support removal of the identified contamination on a comprehensive basis. Why do it in some areas and not in others?"

A public meeting will take place at 7 p.m. Thursday, March 5 in the Ithaca Town Hall. The public comment period runs until March 20 to allow for any remaining questions and suggestions.