



## **EWA POSITION BRIEF: THE NEED FOR VAPOR INTRUSION IN SUPERFUND RANKING CRITERIA**

**By Robert Spiegel, Executive Director, EWA**

I founded the Edison Wetlands Association (EWA) grassroots nonprofit in 1989 to protect human health and the environment in New Jersey. EWA pursues the remediation of 75 hazardous waste sites, including 16 Superfund sites, in New Jersey and beyond by conducting site inspections and sampling at sites, providing federal and state agencies with detailed recommendations, and utilizing the media to make the public aware of local health threats.

EWA's direct experience with the remediation of Superfund sites provides us with unique insight into making the Superfund process more effective—and more protective of public health. Our site-specific approach especially makes clear the need for clear guidelines on vapor intrusion to be established by the United States Environmental Protection Agency (USEPA). Before I start my testimony I would like to ask a question regarding vapor intrusion, which is really a fancy way of describing the poison gases that leak into our homes, businesses, schools and daycare centers. Frankly, it is one of the biggest environmental impacts that have come into the public scientific purview due to its public health implications.

My question is: Is there anyone within the USEPA and the federal government who doesn't think that we should have just added vapor intrusion to the ranking system without the need for a hearing or listening session? The USEPA and federal government should not need prompting to do what they know they should have done a long time ago. Additionally, the USEPA needs to go farther and include any contact with contaminated water as criteria to be used in the ranking system. Vapor intrusion is just one of many exposures to contaminated groundwater going on at toxic waste sites around the country, and these exposure are impacting families and especially children at sites that absolutely should be on the National Priority List.

In our current situation, with no dedicated federal Superfund funding, the risks to public health only increase with each passing year. This lack of funding not only impacts the USEPA's ability to remediate over 1,400 Superfund sites, it puts health at risk for the one-quarter of all Americans who live within four miles of a Superfund site and the millions more potentially impacted by vapor intrusion. Without the necessary funding, the USEPA is failing to address unacceptable health risks at many sites. With the cleanup of at least 1,400 toxic sites in the balance, it is essential that the USEPA addresses public health issues such as those potentially caused by vapor intrusion at NPL and other toxic sites in a timely manner.

I speak to you with direct first-hand knowledge of the on-the-ground impacts seen daily in the Superfund Capitol of the U.S. New Jersey is the national leader in number of toxic sites and we hold more Superfund sites than any other state in the nation. Yet only 29 of the state's 142 hazardous-waste sites have been cleaned up. We'd prefer to lag far beyond in not only that category, but other possibly related

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rankings. New Jersey is the nation's cancer capital. New Jersey is the most densely populated state, by far. And we have vapor intrusion sites where contaminated air seeps into buildings from underground sources. Vapor intrusion issues must be considered for Superfund priority, as Americans' health and very lives could be at stake.

As background, one major contributor to vapor intrusion is trichloroethylene or TCE, a colorless liquid which is used as a solvent for cleaning metal parts. Breathing high levels of TCE may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and possibly death. According to the Agency for Toxic Substance and Disease Registry, TCE has been found in at least 852 of the 1,430 USEPA National Priorities List sites.

TCE dissolves a little in water, but it can remain in groundwater for a very long time. TCE quickly evaporates from surface water, so it is commonly found as a vapor in the air. According to the National Toxicology Program, trichloroethylene is "reasonably anticipated to be a human carcinogen." While the International Agency for Research on Cancer determined that trichloroethylene is "probably carcinogenic to humans." What is clear is that breathing trichloroethylene over a period of time can cause impaired heart function, unconsciousness, nerve, kidney, and liver damage, and even death.

TCE also acts a solvent for other chemicals such as polychlorinated biphenyls or PCBs. At the Cornell Dubilier Superfund Site in South Plainfield, New Jersey, TCE dissolved the PCBs, which are usually immobile, and carried them down stream the Bound Brook further contaminating over seven miles of surface water and sediment, part of which runs through New Jersey's newest designated conservation area.

I see first-hand some of these devastating case studies at Superfund and other toxic sites in New Jersey.

At the former Raritan Arsenal in Edison, vapor intrusion caused by TCE and other contaminants potentially threatens a number of daycare centers and other businesses and homes within Raritan Center.

At the Pompton Lakes DuPont Works site in northern New Jersey, hundreds of families are forced to deal with poison gases coming into their homes because USEPA has not designated the site a Superfund Site, and so has limited authority to dictate a protective remedy against a multibillion dollar polluter.

And at the Cornell Dubilier Electronics Site (CDE) in South Plainfield, New Jersey from 1936 to 1962 manufactured electronic parts were and transformer oils were tested on a 25 acre property. CDE also dumped transformer oils containing PCBs and buried transformers behind the facility. Soil at the rear of the property was saturated with PCBs, metals, chlorinated solvents and other chemicals. Numerous streams and ponds in the area have been polluted, leading to environmental and human health concerns.

The New Jersey Department of Environmental Protection found unsafe levels of TCE, metals, volatile organic compounds and PCBs in soil and sediment samples. Significant levels of PCBs were also found in indoor dust in nearby buildings and homes. EWA advocacy on this site directly led to the excavation of leaking, buried PCB capacitors and other chemical waste from the highly contaminated rear portion of the site. Yet most troubling is that after 10 years, the USEPA can not say for sure where the groundwater goes, or who is being exposed to the toxic vapors from the TCE plume. There are an estimated 26 chemicals in the groundwater, including significant levels of PCBs and likely dioxins because TCE acts to mobilize other chemicals like PCBs in the groundwater at the site.

In the 2006 National Academy of Sciences report on TCE, "The evidence on cancer and other health risks from TCE exposure has strengthened since 2001." The agency also stated that "enough information exists for the U.S. Environmental Protection Agency to complete a credible human health risk assessment now."

With each year that passes, thousands of families and possibly far more are being unknowingly impacted by TCE and other contaminants through vapor intrusion and direct exposure to contaminated water through consumption, dermal contact and inhalation. USEPA's request for additional research on the health effects of TCE exposure should not in any way result in further delays by USEPA to protect the health of countless American families. In fact, the Government Accountability Office has noted that further delays "can result in substantial harm to human health, safety, and the environment." With each day that passes without action by USEPA, many Americans may be getting unnecessarily impacted by dangerous TCE and hazardous chemicals. I ask that USEPA act now, and prevent further tragedies and devastation for all of the families counting on you.

Any detractors who don't think we have the funds to clean up industry's toxic legacy and also address the poison gases now entering our homes, school and daycare centers across the country. I have this response: When it comes time to build bombs and invade other countries, we can borrow \$500,000,000 a day from the Chinese Government to fund endless and useless wars. But when it comes to funding common-sense programs that protect American families, like Superfund or addressing vapor intrusion, detractors say we don't have a dime to put towards it. We need to reprioritize what is important in this country - and I have a hard time believing the health of America's families should not be a top priority. I ask that we put American families first and deal with this toxic poison gas intrusion immediately. We are already past the point we can wait another day. We should not have to beg the USEPA and federal government to do something they should have done 15 years ago.

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*EWA Executive Director Robert Spiegel has testified three times before the U.S. Senate on the Superfund issue, and EWA was awarded the 1997 Environmental Quality Award, the USEPA's highest honor. His longtime leadership in the cleanup of the "Green Rabbits" CIC Superfund Site in Edison, was profiled in a national bestseller, and his work has been featured in New York Times, Nightline, the Center for Public Integrity, and CNN. EWA's environmental leadership is being prominently featured in a number of high-profile films and books.*