



Edison
Wetlands
Association

EDISON WETLANDS ASSOCIATION REPORT: MORE FRANKLIN TOXIC EXPOSURES LIKELY GETTING OVERLOOKED

Extensive analysis of hundreds of samples uncovers chemical ‘spikes’ in homes/sewers, impacts to Hurricane Creek as community calls on EPA to close remaining data gaps and expedite cleanup.

FOR IMMEDIATE RELEASE

June 25, 2019

FRANKLIN, Ind. – The non-profit Edison Wetlands Association (EWA) disseminated an extensive 70-page public report produced by its environmental consultants, Mundell & Associates (MUNDELL). The report presents the findings of the most expansive residential investigation in Franklin to date, which included samples taken of Hurricane Creek and 30 homes in the community.

A ‘Surveillance System’ to Catch Chemical Intruders

Conventional testing methods that have previously been used in Franklin, like air canisters (“Summa” canisters), present data as single 24-hour averages. This does not adequately account for vapor intrusion variability over time and space, and can miss or mask key times when concentrations are at their highest.

In February-March 2019, EWA and MUNDELL brought a mobile laboratory to Franklin with a state of the art sampling technology, called VaporSafe™. The team took rapid indoor air readings at 30 individual homes, and selected 5 homes to have longer-term ‘continuous’ monitoring performed over 24-hours. The VaporSafe™ system made it possible for the investigative team to analyze and track concentrations of toxic vapors inside of homes in near real-time. The investigative team also utilized traditional air canisters and passive samplers during the continuous monitoring portion, in order to provide a “check and balance” and draw comparisons between the different technologies.

Among the chemicals of concern associated with the former Amphenol site, trichloroethylene (TCE), a colorless solvent that is considered a known human carcinogen by all routes of exposure, has become a “driver” of vapor intrusion investigations. EPA assumes that a single or short-term exposure to TCE, particularly by pregnant women, can be enough to produce “an adverse developmental effect.”¹ The World Health Organization (WHO) further reasoned that “Because the available evidence indicates that trichloroethylene (TCE) is genotoxic and carcinogenic, no safe level can be recommended.”² This highlights

¹ U.S. Environmental Protection Agency. December 1991. *Guidelines for Developmental Toxicity Risk Assessment*. p. 38, 45.

² World Health Organization (2000). *Air Quality Guidelines – Second Edition*. Chapter 5.15, p. 12.

why the ability to track short-term fluctuations of chemicals like TCE is so important, and why 24-hour time-weighted technologies like air canisters can fall short and underestimate risk.

Vapor Intrusion and Hurricane Creek Findings

Among the findings and recommendations of the report, prepared by professional consulting/engineering company, MUNDELL, were:

- Conventional sampling methods for indoor air in Franklin homes may ‘miss’ key exposures due to vapor intrusion variability, and therefore decision-making may not accurately reflect the real level of risk. An apparent relationship between barometric pressure and tetrachloroethylene (PCE) or TCE was observed in some homes, with decreasing barometric pressure (for instance, during an approaching storm) correlating with slight increases in concentration.
- Locations both within and *outside* of the EPA Study Area may be impacted, and even exceed state screening levels, but are not currently identified. EPA rapidly screening a wide range of homes, such as with the agency’s own established equipment (TAGA buses), can help the agency quickly identify additional human health risks and define its uncertainties.
- Concentrations of TCE and PCE were observed to vary widely over time in the sewer connections to homes, and a single low concentration sewer sample may not provide a full understanding of the potential sewer contamination effects.
- Hurricane Creek may have been impacted by chemical discharges, and the creek and creek bank area, especially in the vicinity of the former Amphenol site should be investigated comprehensively. Risk assessments should be performed to evaluate human exposures through a number of exposure pathways, including dermal contact and ingestion.
- Permanent groundwater monitoring wells need to be installed south of the Amphenol site and on the Needham and Webb Elementary School properties. The current interim groundwater delineation presented at the June 5, 2019 U.S. EPA public meeting is not considered reliable and reproducible by U.S. EPA standards until groundwater samples are collected and tested from a permanent monitoring well network.

According to Shannon Lisa, EWA Program Director: “If our government treated PCE and TCE like any other neighborhood or national intruder, then these fugitive poisons in Franklin would have been addressed long ago. The latest study by Mundell & Associates has major implications on how the investigation and cleanup should move forward; namely, that decision-making and assertions by regulators that there is ‘no widespread contamination’ in Franklin up to this point may not have thoroughly reflected real extent and risk. EPA must get serious about closing all remaining data gaps, issuing a permit modification to change the failed groundwater remedy, and not doing double damage by repeating the same mistakes that resulted in contamination getting ‘missed’ over 20 years ago.”

“XXX,” said Indiana community group If It Was Your Child.

A Fresh Approach to Contamination Cleanup

The current Amphenol groundwater pump-and-treat system has operated for a long time, and has not effectively reduced volatile organic compound (VOC) concentrations. Transitioning to alternative or supplemental remedies should be a priority to protect human health and the environment in Franklin in a

reasonable timeframe. Along with discussing conclusions of the February-March 2019 independent investigation, the MUNDELL report introduced new strategies that can be used to clean up the contaminated groundwater plume that has migrated into residential neighborhoods.

One technology discussed in the report, bioremediation, involves enhancing or augmenting certain microorganisms in the subsurface that are able to naturally breakdown VOCs like PCE and TCE. This process has even been used successfully on EPA's own federal property in Region 2, where groundwater TCE levels were removed 77-100% in less than one year.

"One year ago, in June 2018, our team collected the first-ever indoor air data in Franklin homes. Since this time, the community, If It Was Your Child, and the Edison Wetlands Association have been working diligently in holding those responsible accountable and leading the charge toward a brighter, healthier legacy for Franklin and Johnson County," said Shannon Lisa. "Franklin families should know that there is a light at the end of the tunnel and this contamination can and will be cleaned up if the community continues to come together and demand that EPA fulfill their promise. While the work is not done, this investigation is one step closer to solving this toxic assault once and for all, so that no family has to feel unsafe in their homes in Franklin, Indiana and many other 'Franklins' throughout the country."

###

EWA is a grassroots non-profit organization founded in 1989 and dedicated to protecting human health and the environment through conservation and the cleanup of hazardous waste sites, as well as environmental justice and brownfields-to-greenfields redevelopment. For more information, please visit www.edisonwetlands.org.