Testimony of Andrew J. Whelton to the Senate of the Commonwealth of Pennsylvania

Veterans Affairs and Emergency Preparedness Committee
Chair: Senator Doug Mastriano
Minority (Ranking member) Chairwoman: Senator Katie Muth
Commonwealth Ave, Harrisburg, Pennsylvania 17120

March 20, 2023

Dear Chairman Mastriano, Ranking Member Murth, and Honorable Senators and Members of the Committee: Committee Members:

This testimony pertains to the Norfolk Southern February 3, 2023 chemical spill and chemical fires, and is submitted in my individual capacity. I am expressing my personal views based on 20 years of experience as a civil and environmental engineer. I am not representing the views of Purdue University, my College or my Department. Thank you for the opportunity to provide this to you.

I am often called into nationally significant disasters to provide community, local, state, and executive level support. Some disasters have included the 2014 Freedom Industries Chemical Spill, 2018 Camp Fire, 2021 Marshall Fire, and 2021 jet fuel contamination in Hawaii, among others. In 2022, my insights were sought by President Biden's Administration and previously by Canadian communities and the Ministry of Health in response to wildfires. Last month I briefed the Norwegian Institute for Public Health and leading researchers in the United Kingdom.

The disaster in East Palestine prompted significant impacts to the people and economies of Ohio and Pennsylvania. While only 4,500 people live in East Palestine, contamination impacted a total of five states who represent 37 million people. There are many lessons that must be addressed.

Since February 2023, I have provided technical advice to East Palestine residents, and to nearby communities in Ohio and Pennsylvania, including farmers, about air, soil, and water safety.

Due to the lack of available information, a volunteer Purdue University team responded to the area February 25 to 27. The initial goal was to help residents understand drinking water safety risks. This goal changed when it was discovered that extensive chemical contamination remained in the nearby waterways posing an acute health risk to the public and cleanup workers.

- On March 1st I asked the U.S. Occupational Safety and Health Administration (OSHA) Director Douglas Parker to take action and protect workers from harm.

- On March 7th, I submitted a letter to the U.S. Senate Environment and Public Works Committee as well as to Ohio Governor DeWine, Ohio's U.S. Senators, and the U.S. Environmental Protection Agency notifying them that Purdue University teams had identified chemicals related to the spill in creek water that officials were not testing for.

- On March 12th, I shared additional new Purdue University study results at a United for East Palestine community meeting. The figure below showed that federal, state, and county government agencies were inconsistently testing air and water samples. For example, the private well water in Ohio was not tested for 2-butoxyethanol, but this chemical exceeded 10,000 parts per billion or ppb in the creeks according to Ohio EPA's own data. 2-

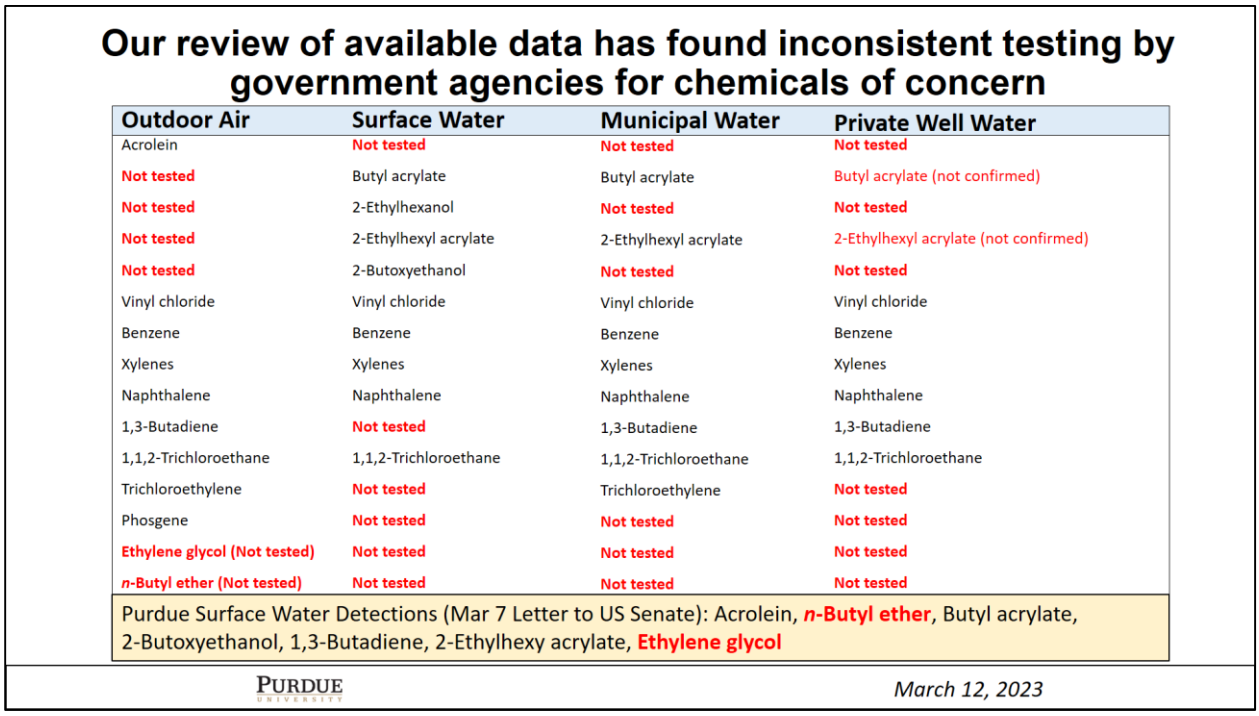
Ethylhexanol was also detected in the creeks, but also was not tested for in the wells. For another example, acrolein was detected by the U.S. EPA in the air, but was not tested for in water samples by either Ohio EPA or the health department. While 100+ wells had been tested in Ohio, officials now need to go back and properly test for the chemicals associated with the spill. According to the Pennsylvania Department of Environmental Protection website, private wells were only screened for three chemicals of concern (vinyl chloride, ethylene glycol, ethanol). Numerous other chemicals linked to the disaster were not.

It is unclear who is advising these agencies about what chemicals to test for, how to sample, and where. I have seen this before. Agencies cannot protect the public they are not testing for all the chemicals of concern. The inconsistent testing should be urgently addressed.

This past weekend, March 17-18, I returned to Ohio and sampled air inside homes, soils, creek water, and well water with the community group. These samples are now being processed at Purdue University. Since the team began, it has been an entirely volunteer group, with no funding.

I encourage Pennsylvania leaders to support their citizens and businesses with rapid and thorough environmental sampling and analysis. I also encourage leaders to prioritize answering the specific questions asked by the people and businesses impacted.

Thank you for the opportunity to share this information with you today.



Our review of available data has found inconsistent testing by government agencies for chemicals of concern

Outdoor Air	Surface Water	Municipal Water	Private Well Water
Acrolein	Not tested	Not tested	Not tested
Not tested	Butyl acrylate	Butyl acrylate	Butyl acrylate (not confirmed)
Not tested	2-Ethylhexanol	Not tested	Not tested
Not tested	2-Ethylhexyl acrylate	2-Ethylhexyl acrylate	2-Ethylhexyl acrylate (not confirmed)
Not tested	2-Butoxyethanol	Not tested	Not tested
Vinyl chloride	Vinyl chloride	Vinyl chloride	Vinyl chloride
Benzene	Benzene	Benzene	Benzene
Xylenes	Xylenes	Xylenes	Xylenes
Naphthalene	Naphthalene	Naphthalene	Naphthalene
1,3-Butadiene	Not tested	1,3-Butadiene	1,3-Butadiene
1,1,2-Trichloroethane	1,1,2-Trichloroethane	1,1,2-Trichloroethane	1,1,2-Trichloroethane
Trichloroethylene	Not tested	Trichloroethylene	Not tested
Phosgene	Not tested	Not tested	Not tested
Ethylene glycol (Not tested)	Not tested	Not tested	Not tested
n-Butyl ether (Not tested)	Not tested	Not tested	Not tested

Purdue Surface Water Detections (Mar 7 Letter to US Senate): Acrolein, ***n*-Butyl ether**, Butyl acrylate, 2-Butoxyethanol, 1,3-Butadiene, 2-Ethylhexy acrylate, **Ethylene glycol**

PURDUE UNIVERSITY

March 12, 2023

***Figure**. **Evidence shows inconsistent testing by federal, state, and county agencies.** Slide from March 12, 2023 community meeting presentation by Andrew Whelton about emerging research discoveries. U.S. EPA has been responsible for air testing, Ohio EPA has been responsible for surface water and municipal water testing, and county health departments have been responsible for private well water testing. File is available at [www.PlumbingSafety.org.](http://www.PlumbingSafety.org) Letters to agencies and presentations can also be found at that website.*