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Rep. Ryan Smith, Chair
Ohio House Finance Committee
Via email to taylor.stepp@ohiohouse.gov

Re: Inserting OECAF Emergency Chemical Disclosure Amendments to the HB 49

Dear Chairman Smith and Members of the Ohio House Finance Committee;

My name is Dr. Julie Weatherington-Rice. I am a Certified Professional Geologist, a Certified Professional Soil Scientist and am current in my Occupational Safety and Health Act (OSHA) Certification training. I work primarily in the field of protecting public water supplies. I am the Sr. Scientist for the firm of Bennett & Williams Environmental Consultants Inc. in Westerville, Ohio; a former Adjunct Professor at The Ohio State University in the Department of Food, Agricultural and Biological Engineering; a scientific advisor to the Ohio Environmental Council and I provide technical training for continuing education credits to Public Water Supply Treatment Plant Operators. To that end I have been researching the nature of oil and gas drilling operations, production, transport and waste streams as they potentially can impact public water supplies. I have shared this research for a number of years now through The Ohio Chapter of the American Water Works Association, the Operator Training Committee of Ohio and the Ohio Rural Water Association. With most of the public water supplies in eastern Ohio surrounded by oil and gas drilling, production, transport and storage of produced and waste materials and the final disposal of those waste materials, it has become obvious that there is a potential for the accidental contamination of a public water supply. Since currently, the oil and gas industry is not required to reveal the chemicals contained in any of those sources to Ohio EPA, first responders or public water suppliers, it becomes almost impossible to plan for emergencies and/or to respond appropriately when accidental releases occur.

Public water suppliers are required by Federal Law under the Safe Drinking Water Act, to create a Source Water Protection Area Management Plan. This plan identifies all potential sources of chemical contamination that exist in the community's Source Water Protection Area (a specifically mandated geographical location that has been designated or certified by Ohio EPA for each public water supply in Ohio). Communities plan for emergencies and determine alternative sources of potable drinking water in case of an accident. For every other chemical manufacturer, user or disposal facility, the public water supply has access to the types and amounts of chemicals on site. This is a Federal requirement that documents cradle to grave tracking of chemicals. Two Federal Acts from the 1980s, SARA Title 2 and Emergency Planning Community Right-to-Know (EPCRA) created the tracking system. In Ohio, the oil and

gas industry is exempt from having to report the chemicals involved in the production, shipment and waste streams of oil and gas to Ohio EPA, to first responders and to public water suppliers. If public water supplies are impacted, this situation makes it almost impossible to quickly treat an emergency release of part of the production or waste stream.

This is no longer a hypothetical discussion. On March 9, 2016 at 3:00 AM, a tanker truck overturned at the upper end of the Village of Barnesville's main reservoir, dumping approximately 4,300 gallons of "brine" into the reservoir. Barnesville is in Belmont County and it supplies all the public water to an 80 square mile area in parts of four counties. Barnesville has three reservoirs that are connected by pipeline to the surface water treatment plant located at the downstream dam end of the reservoir that was contaminated. There is no other treated water tie-in or pipeline to an additional raw water source to augment the Barnesville system. To create such a connection would cost many millions of dollars and take years to plan and build. So on the morning of March 9, 2016, on orders from Ohio EPA, Barnesville switched to their alternative reservoir sources which, fortunately, were also full, and began working with Ohio EPA to try to figure out what was dumped into their water supply and how long it would take, if ever, before their main reservoir would be safe to use again.

The affected reservoir, at spring stage, holds approximately 140 million gallons of water. The tanker truck was carrying 4,300 gallons of "brine" for an approximately 34,000:1 dilution factor, or for each gallon spilled into the reservoir; there was approximately 34,000 gallons of uncontaminated fresh water to dilute it. With that high level of dilution, it would take a concentrated chemical mixture with very low levels of a contamination threshold to even be measured in the reservoir's waters. Ohio EPA learned that the "brine" being hauled for disposal at a Class II Injection Well near I-70 came from a Gulfport well in Monroe County. The truck was taking a shortcut through the Village's Source Water Protection Area, at 3:00 AM, which the driver can do because the waste is exempt from Federal Toxic and Hazardous reporting requirements and so not subject to rerouting around the Source Water Protection Area which could have been required if it had been carrying any other chemical. When Ohio EPA requested information as to what had been in the truck and was now in the reservoir, Gulfport responded with a safety data sheet from an Oklahoma well from the year before for "Produced water – sweet" reported to be 80-90 % water, less than 16% sodium chloride, less than 16% calcium chloride, less than 1% oil, less than 1% benzene. Gulfport did not report the presence of heavy metals, radioactive metals, or contamination from drilling mud chemicals, contamination from hydraulic fracturing chemicals or even (correctly) where the "brine" was from. Under current Ohio law, Gulfport was allowed to provide false or incomplete chemical information to Ohio EPA who then had to tell Barnesville that "salt water" had been dumped into their reservoir. Fortunately, Ohio EPA has some experience with the chemical makeup of produced water out of the Utica formation so they tested for a much larger list of chemicals.

Ohio EPA tested for Radium 226 and 228, Gross Alpha, Gross Beta and combined Radium; Volatile Organic Compounds and Semi-Volatile Organic Compounds (which would include the oil and benzene), Total Dissolved Solids (which would include the salts); metals and phthalates (plastic softeners). At noon on March 9th, Ohio EPA got a reading of 3.2 pCi/L of Radium in the reservoir. While this number is lower than the Safe Drinking Water Act Maximum Contaminant Level of 5 pCi/L in the reservoir, (given the huge dilution factor of 34,000:1) the Radium levels

in the “brine” would have been far higher than exposures considered safe by the US EPA. Therefore, first responders and clean-up crews were potentially exposed to significantly unsafe levels of radium without their knowledge, without proper notification so that safety precautions could be taken to minimize their exposure impacts. Other chemicals were also elevated above background. Clearly, there was far more in that brine spill than what Gulfport reported on their Oklahoma well safety data sheet.

Because of the unknown chemistry of the spill, the concentrations of chemicals that were identified in samples from the overturned truck, the reservoir water and sediment, Ohio EPA was very rigorous in their reservoir cleanup, requiring repeated testing of the reservoir while spring rains continued to flush out the contaminants. They finally finished and released their report on May 20, 2012⁶ and the reservoir was brought back on line, more than two months after the accident. Had this accident not happened in March but in August or September when levels are significantly reduced in all of Barnesville’s reservoirs and there were no spring rains to flush the contamination, the region could have experienced a very different outcome. Water rationing might have been required. Outlying communities might have had to be supplied by Ohio National Guard Water Buffalo tanks.

Better required cooperation from Gulfport in reporting the chemical makeup of the produced water would have speeded up the evaluation of the contaminant impacts to the reservoir. Giving the public water supplier the right to reroute oil and gas waste streams out of their Source Water Protection Areas would have prevented the whole experience but that redress is beyond the scope of this amendment. This type of contamination is going to happen again. Passage of this amendment would begin to normalize the risky situation that eastern Ohio public water suppliers find themselves in. With all the oil and gas activity in eastern Ohio overlaying all the Source Water Protection Areas of all the public water supplies in the region, on any given day, any public water supply is at risk. All it takes is one accidental release. Cleanups are extremely expensive and, if the damage is so severe that the water supply cannot be cleaned up, replacing that supply runs into the tens to hundreds of millions of dollars and can take years. There are no State or Federal funds available to the damaged community to make them whole. Since the oil and gas industry typically incorporates each well separately, there are no industrial deep pockets to make the community whole. The community shoulders all of the risk and they don’t even have an accurate list of what they have to combat to make certain that the water they provide is safe and meets all the requirements of the Federal Safe Drinking Water Act. The industry claims trade secrets, that they must be able to protect their secret chemical mixes from others who would steal them and thereby profit. I would argue that this claim is a “Red Herring”. No one operating a public water supply system is planning to mix up a special batch of hydraulic fracturing fluids or drilling muds, they don’t need exact formulations, but they need to know the chemicals in the releases and their relative volumes. With that information, Ohio EPA, first responders and the public water supplier can make informed, complete decisions instead of just guessing in the dark. Why should the oil and gas industry be exempt from the same set of rules and laws that every other chemical industry in Ohio has to abide by? They are putting us all at risk with their cowboy cavalier behavior. This is not the wild west of the 1880s; this is 2017 in a heavily populated state that believes in keeping its population safe and its drinking water pure and usable. Please consider inserting the OECAF Emergency Chemical Disclosure Amendments

into HB 49 and then vote to support it. The people in Ohio who drink water, which is everyone, are counting on you to help protect them.

Thank you for allowing me to submit these comments. If you have any questions and/or need further information, please feel free to contact me by phone or e-mail. I work from my home where we care for my husband who is in Hospice, around the clock so my out of the house availability is limited. With advanced notification, planning and coverage here, I can arrange some meetings at the Statehouse.

Respectfully submitted,

A handwritten signature in blue ink that reads "Julie Weatherington-Rice, PhD". The signature is written in a cursive style.

Julie P. Weatherington-Rice, PhD, CPS, CPSS, OSHA Certified
For identification purposes
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