

**Opposition Testimony of SB 171**  
**June 22, 2021**

Chairman Schaffer and members of the Agriculture and Natural Resources Committee, I am angry and disgusted that a bill regarding brine as a commodity has returned once again to the statehouse! I am speaking as a citizen of Ohio and as president of the Ohio Community Rights Network, which is a network of groups of concerned citizens in more than 10 counties throughout Ohio working to advance community rights and rights of nature. The Ohio Community Rights Network believes that all Ohioans have the inalienable rights to clean water and a clean environment, and the local self-governing right to protect their community from harms that would jeopardize those rights. SB 171 would clearly violate these common-sense rights, and I am confident that the tens of thousands of people who have signed our groups' various initiative petitions throughout the state would agree.

Let's face it, Ohio is a toxic state. From the toxic algal blooms of Lake Erie and other water bodies, to the billions of gallons of hazardous, radioactive waste from the fracking industry disposed of in injection wells, to the PFAS "forever chemicals" in the Ohio River and in more than 100 Ohio public water systems, to the radiation from the former uranium plant in Piketon, I could go on and on. According to the American Lung Association's 2019 "State of the Air Report", Ohio has the second worst air quality in the USA. So, why would anyone want to make it easier to further contaminate our environment with more toxic chemicals and radioactive radium, which are present in oil and gas waste brine? And why, for the profit of one person and one business?

The owner of the business, David Mansberry, claims it processes raw saltwater brine from conventional oil and gas wells into a product called *Aqua Salina* by removing oil and gas constituents. The problem is that it does not remove the most dangerous constituents of oil and gas waste brine, such as Arsenic, Lead, Mercury, Benzene, and especially radioactive Radium 226 and 228. The fact that the brine comes from conventional oil and gas wells is immaterial and does not make it safer. In fact, ODNR sampled the brine from 151 wells in 2018 and found that the Radium content of conventional wells was just as high as unconventional horizontal fracked wells.

Radium 226 is especially concerning as it is water-soluble and bone-seeking. Our bodies absorb at least 20% of the Radium particles that we ingest, through mouth and, especially, breathing dust particles. Once in our bones, alpha particles are emitted at a constant emission rate for the rest of our lives, as Radium 226 has a half-life of 1600 years. It affects surrounding cells, resulting in mutations, and is known to cause several types of cancers and other health problems. When some of the Radium 226 does decay, it decays into radon which is the second leading cause of lung cancer behind only tobacco.

What about the levels of Radium? The US EPA has set a drinking water limit of 5 pCi/L (picocuries per liter) for Radium 226 and 228 combined. The Ohio Administrative Code (OAC) has set the environmental discharge limit for Radium 226 and 228 at 60 pCi/L each. The limit for Radon in our homes is set at 4 pCi/L. This bill would set the limit for this brine product at an astronomical 20,000 pCi/L for Radium 226 and 2,500 pCi/L for Radium 228! There is no basis for this.

If the product had 20,000 pCi/L of Radium 226 – as allowed in this bill - it would decay to 10,000 pCi/L in 1600 years, 5,000 pCi/L in 3200 years, and so on. Therefore, it would take 14,400

years to decay to the OAC allowed limit for environmental discharge of 60 pCi/L! This would jeopardize many generations to come.

At the beginning of this bill, it states, "Sec. 1509.228 (A) As used in this section, "commodity " means brine that is not from a horizontal well that is processed or recycled to remove free oil, dissolved volatile organic compounds, and other **contaminants** in accordance with an order, permit, or approval issued under section 1509.22 or 1509.227 of the Revised Code." Well, in the Revised Code, Sec. 6109.01 Safe drinking water definitions, part (B), it states a "**Contaminant**" means any physical, chemical, biological, or **radiological substance** or matter in water." Since radium is a radiological substance, it is a contaminant in water (common sense tells us this), and this bill allows this contaminant at dangerously high levels. Therefore, this bill makes no sense because it states that the product to be commodified is processed to remove contaminants and then allows them!

If this definition is ignored or manipulated (as they often are), this bill would give a privilege to one business and one person to profit, without liability and accountability, from the poisoning of all life in Ohio for many generations! If this product becomes a commodity, people and businesses, unknowingly, will purchase this highly radioactive product with no warning. There will be no recording of where it is used and how much is used, but one thing is certain. Once the general population finds out about this, they will be as angry and outraged as are those in our network because, we believe – as do most citizens – that it should be we the people deciding in our communities what are the harmful things we do not want to permit. SB 171 would remove the current right of local governments to ban brine spreading from a product such as this. It's interesting that even the state agency which was granted sole authority to regulate oil and gas activities in 2004, the Ohio Division of Natural Resources (ODNR), has criticized this bill which seems designed to bypass most of their input, supervision, and controls.

Mr. Mansberry and his consultant, Bill Rish, who has been working with Mr. Mansberry since 2004, claim *Aqua Salina* is safe based on a computer model run by Mr. Rish. Would you base a decision of this magnitude on a computer model that you know next to nothing about, know little about the assumptions and inputs made? Can you trust these results knowing your decision on this bill will have consequences for all life in Ohio for thousands of years? I strongly believe that if this bill becomes law, Ohio will be a toxic minefield. More people will be mysteriously developing cancer but will not know what caused it because this bill will eliminate any reporting of where it is used.

In the five versions of this bill introduced in the House or Senate since 2017, the only proponents - other than Mr. Mansberry, his consultant, Bill Rish, and legislators – have been his lawyer/lobbyist and one business that used his product. Meanwhile, the opponent testimonies for each version that received hearings have grown considerably in number from 4 to 18 to 27 already for companion HB 282, with only one opponent hearing of HB 282 thus far. Mr. Mansberry has been trying to bully his way for the past 4 years to get this bill passed for his sole benefit and looks for a legislator who will introduce it with each new general assembly. This makes a mockery of the process that bills should actually be created for the health, safety, and welfare of the general public and not a single business and owner.

Perhaps part of the reason this bill has resurfaced is the influence of the oil and gas industry that would love to find more ways of disposing its billions of gallons of toxic, radioactive waste and externalizing the costs onto the general public by making it a commodity, thereby accelerating its unaccounted use by vulnerable and unaware citizens.

There have been many examples in history where someone or some business claimed that a product is safe and then later on has been proven otherwise. Remember cigarettes. They used to be advertised as physician tested and doctor recommended. Radium used to be marketed as good for health. There was a product called Radithor in the 1920s that was sold as a patented medicine with radium dissolved in water. There is a famous case of a wealthy industrialist, athlete, and socialite, Eben Byers, who consumed a lot of this product in the late 1920s to improve his well-being when a doctor recommended it. When Mr. Byers died of multiple radiation-induced cancers, the Wall Street Journal published an article about it called, "The Radium Water Worked Fine Until His Jaw Came Off". There is also the case of the "Radium Girls" who painted watch dials with self-luminous paint laced with Radium. Many of them died horrific deaths even though most of them were very young.

Mr Rish's testimony says some things that were disingenuous. He mentioned that rock salt has some heavy metals and many things in our environment have some radioactivity. True, but rock salt and other things in our environment have much, much less than the dangerous content allowed in this bill. Also, when he spoke about the results of his model, he only looked at the millirems of radiation the computer model predicted. He did not mention that all radiation is not the same. There are three main types of radiation - alpha particles, beta particles, and gamma rays. Radium 226 emits primarily alpha particles. Radioactive material that emits alpha particles can be very harmful when inhaled, swallowed, or absorbed into the blood stream through wounds.

Imagine a mother going to a store to buy a deicer for the winter. She sees different products on the shelf and spots a liquid with a beautiful blue color and enticing name - *Aqua Salina*. Even better, she notices it is from a company called "Nature's Own Source" and reads that one of the listed ingredients is ancient sea water. She buys it with no knowledge of the high radioactive radium content in the product. She returns home and opens the bottle. Instantly, unknowingly, she is exposed to a dose of radon gas (which has been measured by Dr. John Stolz at Duquene University). She then pours it on her family's driveway. Some of it spills on her shoes and she tracks it into her home. Later on, when taking the dog outside for a walk, it also tracks the liquid from the driveway into the house and licks its paws. In the evening, when going on a shopping trip, her young daughter slips and falls on a twig in the driveway before getting into the car. She cries and her mother notices she has a cut on her hand with some of the blue liquid surrounding the cut.

According to "The Environmental Behaviour of Radium: Revised Edition" by the International Atomic Energy Agency 2014 Technical Report Series No. 476, "Radium is readily adsorbed to clays and mineral oxides present in soils ..." Imagine a small business that purchases a brine commodity, such as *Aqua Salina*, as a dust suppressant for its parking lot during the summer. Its workers, as well as the surrounding community, day after day during the summer months, and for many seasons, breathe the dust once the product has worn off before another application is applied. They will not know that the clay particles they inhale have now become a vector for radium to enter their lungs.

What about the morality of this issue? Most people of good conscience agree that we should care for our home, the Earth, and nourish it because it sustains us, and we are part of it. And we should also care for all living things on this planet. In Genesis 2:15 of the Bible, it says, "The Lord God then took the man and settled him in the garden of Eden to cultivate and care for it.". To cultivate the Earth, in this sense, is not to extract and abuse it for financial gain, but to

improve it through labor, care, and study. We are called upon to be good stewards of the Earth for all people, for all life, and future generations.

Mr. Mansberry feels that he has been wronged by the fact that businesses who wish to use his product will have to follow some procedures and pay a small fine as a brine hauler. What about the wrong that will be imposed, unknowingly, on millions of people, on nature and our environment - on those yet to be born! I think he is lucky that he can sell this product at all because I feel wronged that oil and gas waste brine of any kind is allowed to be used on our roads, driveways, and porta potties, period.

So, the real question is, are you willing to take the chance of endangering all life in Ohio and future generation, for the profit of one business and one man, based on the results of a computer model, with all the real science about the hazards of radium? I certainly hope NOT!

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