

Proponent Testimony
For
House Bill 393
From
William Rish, Ph.D.
Before the
House Energy & Natural Resources Committee
On
Tuesday, January 23, 2018

Chairman Landis, Vice Chair Hagan, Ranking Minority Member O'Brien and members of the House Energy & Natural Resources Committee thank you for the opportunity to provide proponent testimony today on HB 393.

My qualifications

My name is Dr. Bill Rish and I am a Principal Engineer at ToxStrategies, an advanced toxicology and risk assessment consulting firm, with an office in Dublin, Ohio. I previously directed the Risk Analysis Center at Hull & Associates, also located in Dublin, Ohio. I have 40 years of experience in environmental risk assessment, with 30 years of practice in Ohio. As Certified Professional under the Ohio EPA Voluntary Action Program, I was co-coordinator of the Voluntary Action Program generic cleanup standards and the risk assessment procedures rule. As a Certified Professional, I prepared 14 No Further Action Letters and obtained Covenants Not to Sue for Ohio EPA for all 14 sites. I also prepared and obtained 10 Urban Setting Designations for groundwater at cities throughout the state of Ohio. All of these No Further Actions and Urban Setting Designations required evaluating ecological and human health risks and potential exposure pathways.

What I was asked to do

Nature's Own and Duck Creek Energy asked me to consider whether the use of AquaSalina for deicing roadways presents a significant risk to ecological resources or human health.

How I evaluated risks

I began by reviewing published studies of third party and independent certification agencies and academic institutions where they evaluated the use of AquaSalina for road deicing based on several parameters, including risks to the natural environment. These studies also compared the environmental impacts and ecological risks across alternative deicing materials.

I also reviewed recent investigations by the Conference of Radiation Control Program Directors and the Bureau of Radiation Protection of the Pennsylvania Department of Environmental Protection, where a multi-media pathway analysis has been completed of the potential radiological doses to the public associated with the use of brine from horizontally-fractured shale gas wells as a deicing agent. This type of brine has much higher radiological levels than AquaSalina.

I used a study of drinking water risks from a large spill of gas well brine, which I recently published in the peer-reviewed scientific journal Risk Analysis, to compare to potential risks to groundwater from runoff and infiltration of AquaSalina. Again, the concentration of chemicals in this type of shale gas brine are much higher than those in AquaSalina.

Finally, I used laboratory analysis data for the chemical and radiological content of AquaSalina to evaluate risks based on comparing these concentrations to the content of brine made from rock salt, Ohio surface water quality criteria, and the findings of the radiation study and my produced water spill study.

Findings

I found that the independent studies used good protocols to compare different products used for deicing, and I agree with their conclusions that environmental impacts and ecological risks associated with AquaSalina are low and significantly less than alternatives, such as using rock salt.

I found that laboratory data demonstrate that the use of AquaSalina will not result in exceeding Ohio surface water criteria for protection of aquatic species or protection for agricultural use of surface water for any of the substances present in the product.

I also found that laboratory data for the content of AquaSalina, when compared to my published study, show that AquaSalina will not result in risk to drinking water, even if an adult or child drinks from a shallow well near the location that AquaSalina is applied. In fact, I expect that this drinking water pathway is unlikely to exist.

Based on comparison of laboratory data to the recent extensive investigations by the Conference of Radiation Control Program Directors and Pennsylvania Bureau of Radiation Protection, I found that use of AquaSalina for deicing will not result in significant radiological risk from any worker or public exposure pathway.

Conclusion

The use of AquaSalina for deicing paved surfaces:

1. Will not result in unacceptable ecological or human health risks
2. Has associated impacts that are much lower than those of rock salt

Thank you for your time and attention. I would be happy to answer any questions.