Amish oppose use of drilling 'brine' wastewater on roads

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RUSSELL, Pa. — There are 44 miles of dirt roads in rural Farmington Township, Warren County, hard against the New York state line, and it’s not uncommon to see horse-drawn Amish buggies clip-clopping up and down them. In summer, Amish children walk the roads barefoot.

It’s also not uncommon over the last decade to see tanker trucks spraying and spreading thousands of gallons of salty “brine,” wastewater from gas and oil well drilling, onto those same roads.

Supervisors of the township, located north of the Allegheny National Forest, say their constituents want them to keep road dust down for health and aesthetic reasons, and the tanker truck spraying is an economical way to do that — they don’t pay a dime to the two companies that apply the

but more than 50 Amish who live along and travel those dirt roads, and their “English” neighbors, have signed petitions asking the supervisors to stop what they say is the too frequent and excessive spreading of briny liquids that are sickening residents, polluting nearby streams and farm ponds, making the roads slick and dangerous to drive and quickly rusting out cars, trucks, trailers and buggies.

At an Amish farm and sawmill along Cemetery Road, one of the township’s dirt lanes, Noah Byler took a break from inspecting a compound bow and arrow set in the back of a neighbor’s pickup to say his family is opposed to the brine application.
“It seems every time they put brine down on the road he gets sick,” said Mr. Byler, who is Amish, pointing to his 12-year-old brother, Ammon, who stands along the road when waiting for his school bus. “Last summer he had to go to the hospital once for his breathing problems. He has an inhaler now.”

‘It’s not just brine’

Joe Hinton, Mr. Byler’s “English,” non-Amish, neighbor on Cemetery Road and a former oil and gas industry worker, questioned how the state Department of Environmental Protection can require drillers to report wastewater spills on well pads, but allow what he called drilling wastewater to be spread on dirt roads.

“It’s not just brine. The trucks carry residual waste from drilling, and that needs to be taken care of properly, not dumped on our township roads two or three times a week.”
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"dumped on our township roads two or three times a week," said Mr. Hinton, who attributed his fiancee’s allergies and need for an inhaler to the brine spreading. “She never had a problem before she moved onto this road.”

According to monthly brine-spreading reports provided by the township, 435,690 gallons were spread on township dirt roads during the four months between May 15 and Sept. 15 by Hydro Transport, a Warren-based tanker trucking company, and Ristau Drilling, also of Warren.

Last year, 118,800 gallons were spread on the township’s roads, according to township records. In 2014, no brine was spread, said township officials, due to lack of supply caused by a drilling downturn, but township records show brine application for dust control dating to 2006.

Siri Lawson, another “English” who lives on unpaved Lindell Road and delivered the “no brine” petitions to supervisors in September, said residents of the township are getting sick from what she called “uncontrolled brining,” that she said occurs illegally at night, during rainstorms and too close to streams. The trucks regularly apply more brine to the roads than allowed, she said, causing runoff into roadside ditches, streams and farm ponds.

“The Amish are desperate to get it stopped,” Ms. Lawson said during a recent drive through the area, when she pointed out several hand-lettered “NO BRINE” signs posted on roadsides near their farms. “They’re worried about their wells, about their water, about the industrial smell, about having to drive their buggies through it, and their health. There’s a general feeling of malaise, and many have developed breathing
feeling of malaise, and many have developed breathing problems and cancers, but they don’t put two and two together.”

Supervisors chairman Ed Beardsley said the township follows all of the state regulations, and does its best to meet the needs of all of its 1,300 residents, many of whom want road dust suppressed.

“It’s all certified and documented and tested safe, and the DEP is notified,” Mr. Beardsley said in response to residents’ questions at the October township meeting. “DEP has checked us out more than once and we’re doing nothing incorrectly.”

In addition, he said the township has directed the brine spreading companies to stop wetting down roads in front of dozens of farms and homes where owners have asked it be stopped.

“As elected officials, we do our best to satisfy every individual in the township. If they don’t want brine, we will make sure to tell the trucks to stop spreading at those properties. But if they want the dust controlled we will give them brine,” said Mr. Beardsley. “I have COPD and asthma and I do like to have the dust put down.”

Decades of use

The spreading of what the state terms “brine,” a liquid that can be much saltier than any ocean water, for dust suppression, has been going on for decades, and in Pennsylvania the practice is widespread, especially in rural
areas of the state’s northern tier counties.

According to state DEP records, provided in response to questions, Farmington Township is one of 188 municipalities in 22 of Pennsylvania’s 67 counties, where “brine” is spread on roadways for dust suppression.

Farmington is one of 21 municipalities in Warren County that use drilling brine on their roadways. Other counties with heavy municipal brine use include Tioga (32), Potter (29) and Crawford (20).

The DEP’s regulations, which date to the early 1990s, limit liquids spread on roads for dust suppression to “brine” from “conventional,” vertical, oil and gas wells, excluding fluids from “unconventional,” hydraulically fractured, horizontal shale gas wells. But modern oil and gas drilling practices use chemicals to stimulate production at almost all conventional wells drilled in the state and that adds chemical components similar to those used in fracking to the wastewater, said John Stoltz, director of the Center for Environmental Research and Education at Duquesne University.

“Every well is fracked in one way, shape or form,” Mr. Stoltz said. “The well flowback contains surfactants and bromides and complex hydrocarbons. To say it’s just brine is not right.”

State regulations require companies to test the drilling liquids they’re applying to roadways only once a year, and then only for a limited array of contaminants — chloride, calcium, magnesium, sodium and total dissolved solids — but no drilling fluids or fracking chemicals, which could be part of the flowback liquids.
the flowback liquids.

The DEP considers the road spreading of the drilling wastewater and brine to be a “beneficial use,” and requires townships to submit an annual dust suppression plan that identifies the roads where the liquid will be sprayed, and monthly logs detailing when and how much liquid was spread. The plans limit the amount of liquid spread on the roadways and prohibit spreading on hilly roadways or near streams.

“We don’t have information that indicates the use of brine presents a hazard to the environment or public health,” said Scott Perry, deputy secretary of DEP’s Office of Oil and Gas Management. He said his staff is evaluating the environmental impacts of spreading brine on roads, a field review that began last year and is “ongoing.”

**Regulations inadequate**

But opponents of road brining say the state’s regulations are inadequate and regularly violated, and the DEP does not have the manpower to enforce them. Residents of Farmington have phoned in a handful of complaints to the DEP.

Randy White, a retired machinist who is not Amish and signed the petition, said he doesn’t ride his motorcycle anymore because the brine causes corrosion, a problem also mentioned by Levi Byler, an Amish shed builder.

“The buggy wheels get all gummed up, and the trailers used to transport our sheds are all rusted up,” said Mr. Byler, who has a “NO BRINE” sign in front of his workshop. “When the
muck gets on the vehicles we have to hammer it off. It’s like concrete.”

Barbara Arrindell, director of the Damascus Citizens for Sustainability, a grass-roots environmental organization opposed to shale gas development, said the brine is “neither benign nor beneficial” for township residents.

“Our concern is about the impacts on water, air, land and public health,” Ms. Arrindell said. “Without being aware of what’s in the fluids spread on their roads, people are caught in a terrible bind.”

She said most drilling brine is contaminated with a variety of chemicals used in drilling for oil and gas and should be subjected to rigorous and regular testing before it is applied to roadways.

“Whether it comes from conventional or non-conventional wells is not important,” Ms. Arrindell said. “Calling it brine is a misnomer. It’s drilling waste and using it on roadways is a type of, essentially, dumping.”