NORTH SUBURBS
PIONEER PRESS

MnDOT stands by anti-icing systems

Despite uncertain role in 35W collapse, agency says, they make bridges safer

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Pioneer Press

While investigators try to determine whether anti-icing chemicals played a role in the Interstate 35W bridge collapse, transportation officials continue to use them.

Hello, winter: Minnesota braces for season's first snowstorm. **Page 2B**

Three weeks after the Aug. 1 collapse, National Transportation Safety Board investigators said they were looking into the bridge's automated anti-icing system. They were interested in finding out whether chemicals sprayed onto the Minneapolis span during the winter months helped corrode the structural steel.

The NTSB, which is considering a number of possible factors in the bridge's collapse, has yet to conclude its investigation.

Yet as the Twin Cities brace today

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Anti-icing system

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for the first winter storm since the catastrophe killed 13 and injured 100, Minnesota Department of Transportation officials remain confident in the safety of anti-icing systems.

"The whole speculation around the anti-icing system's role in the bridge collapse is still speculation," MnDOT spokesman Kevin Gutknecht said. And that speculation does not override driver safety, he added.

The chemicals prevent ice and snow from bonding, reducing icy conditions and traffic accidents.

"It makes the bridges safer to drive on," Gutknecht said.

But the NTSB's investigation into the systems should be a red flag, said Boris Miksic, CEO and president of White Bear Lake-based Cortec Corp., which produces corrosion-inhibiting materials. He said the state should reconsider using the anti-icing systems until it knows what impact they had on corrosion on the bridge.

"We need to do more research," Miksic said. And if the state is going to continue using the chemicals, it should have a constant surveillance and maintenance program for each bridge, he added.

The anti-icing methods are relatively new and their corrosive effects might not be completely understood, though there are preventive measures like painting and washing, he said.

The collapsed I-35W bridge had a spotty maintenance record, having been completely washed only four times in its 40-year life span, according to MnDOT reports.

Minnesota was the first state to implement an anti-icing system on a bridge. And the I-35W bridge, outfitted in 1999, was the first bridge. Officials say the system decreased winter accidents by 68 percent.

Proponents of the anti-icing systems say they are an improvement over traditional methods, such as salting the roads, which are equally if not more damaging. The I-35W bridge system used a chemical called CF7, a potassium acetate-based liquid deicer.

"It's pretty well-documented that anti-icing systems use less (corrosive) chemicals" than salt, said Keith Johnson, president of Cryotech, an Iowa-based manufacturer of CF7. "You have the option to use less chloride. Chloride is the predominant factor in corrosion. The idea was to reduce that."

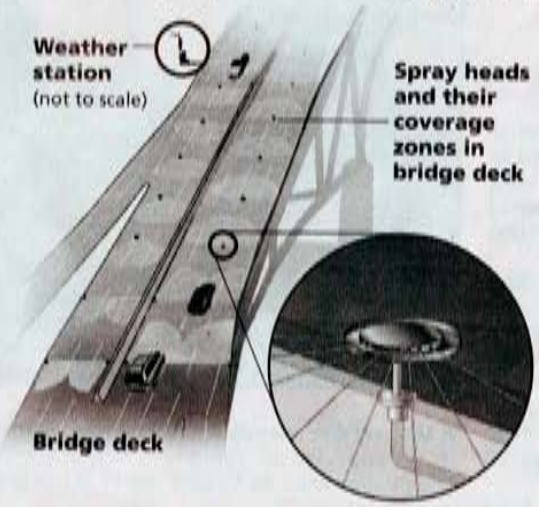
Because of its success, the anti-icing system was installed on several other Minnesota bridges, including the I-35E bridge over the Mississippi River south of St. Paul. In all, there are 11 anti-icing systems on roads and bridges in the state. Seven more are planned, including the new I-35W bridge. The chemicals used on each varies, MnDOT spokesman Kent Barnard said.

If the NTSB investigation shows that the anti-icing chemicals caused corrosion, "we would turn them off," Barnard said.

"(But) we haven't heard anything. And with the investigation still under way, nothing has been determined," he said. "It's still too early to say."

Along with the anti-icing system, the NTSB says it is investigating whether the design of the bridge's gusset plates and the weight of construction equipment on the span at the time of collapse played roles in the disaster.

Anti-icing systems designed to make bridges safer



How they work:

Step 1: Weather stations, equipped with sensors and thermometers, determine when conditions are right for ice to form.

Step 2: Yellow flashing lights let drivers know when they're about to fire.

Step 3: 72 spray heads shoot anti-icing solution onto the road in short bursts.

What is the anti-icing solution?

The system uses CF7, a potassium acetate-based liquid made by Iowa-based Cryotech. Used on airport runways, potassium acetate is different from traditional chloride-based anti-icers because it has a lower freezing point and is friendlier to the environment. According to Cryotech, CF7 contains a mixture designed to reduce corrosion to metal.

Source: Pioneer Press file graphic, interviews, MnDOT, Cryotech.com

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