The Graniteville train disaster }

PRELUDE TO TRAGEDY

people and changed a community forever.

WEDNESDAY, JAN. 5, 2005

A railroad worker fails to return

a switch that guides trains onto

a side track, investigators

believe.

Human error might have caused the crash that took the lives of nine

THURSDAY, JAN. 6, 2005

veers onto the side track.

A northbound Norfolk Southern

train consisting of three engines

and 42 cars, traveling at 45 mph,

The train collides with a parked

Norfolk Southern train on the

property of Avondale Mills at

2:39 a.m. More than a dozen cars on the moving train are derailed, including three tanker cars carrying chlorine.

PHOTOGRAPH BY GERRY MELENDEZ THE STATE

CANALST. TO

BY JEFF WILKINSON/STAFF WRITER

At 2:39 a.m. on Jan. 6, two trains collide near the Avondale Mills in downtown Graniteville. The crash results in a chlorine leak that kills nine people and injures 550. Here is what happened:

A CLOUD OF DEVASTATION

The tiny community of Graniteville was unprepared for what happened that night.

A The crash ruptures a tanker car carrying 90 tons of deadly chlorine gas. The crash also topples a tree onto a car stopped at the railroad crossing, trapping a man inside.

Two-and-a-half times heavier than air, a yellow-green chlorine gas cloud spreads downhill toward Horse Creek. The creek's water turns into hydrochloric acid. Workers at the Avondale Mills buildings nearest the crash smell the chlorine and feel their eyes and lungs burn. Some are vomiting. Most of the 200 workers scatter. Some flee in cars, helping others as they go.

Volunteer firefighters try to get to the fire station. Their eyes and lungs sting. They quickly retreat. Phones go dead in low-lying areas. Firetrucks and some rescue vehicles won't run. Mill machines shut down.

Many residents living on the ridge to the east flee their homes uphill to safety. Others stay inside, most safe from higher concentrations of the gas.

School Graniteville CHURCH Two hours after the spill, firefighters from the Savannah River site E **()** Mill **Gregg Division** arrive wearing protective gear and rescue TAYLORST. (dyeing/finishing) 240' POSNERS 193' the man trapped in the car. They study the leaking cars, then scour the area for more 56 victims. There is no traffic, no barking dogs, Stevens MONTGOMERY ST. only the sound of the railroad crossing bells. steam plant Hickman Shopping center (213' MARSHALL ST. Division COTTAGE ST. (mill) $(\mathbf{7})$ (190' B Woodhead A Episcopal Division church (230' (000) (coating) Elevation 8 D POSSIBLE RI (220) GREGGST POSSIBLE B (8) Area of CAISE detail IN EN RD. 0 above 2 **Rock Town** (180' TOWNE Graniteville Avondale Mills Fire Dept. 9 GENTRY ST.

Vaucluse Academy Rd. Belter Ascauga Lake Rd. Aiken Graniteville Warrenville 118

GRAPHICS BY ROB BARGE

THE STATE

McCampbell

Elementary

GRANITEVILLE

THE VICTIMS

Eight of the nine people who died from exposure to the gas were in areas geographically lower than the crash site.

Willie C. Shealey, 43, of Graniteville, and John Henry Laird, 24, of North Augusta, ran out the back door of the Woodhead Division plant. They died arm in arm on the banks of Horse Creek, which the chlorine had turned to hydrochloric acid.

5 Steven Bagby, 38 of Augusta, and Allen 6 Frazier, 58, of Aiken, died in the break room of the Gregg Division plant near Horse Creek. Two other workers in the same room survived.

Rusty Rushton, 41, of Warrenville, died on the loading dock of Stevens Steam plant. He had bad knees and was unable to climb to the roof with co-workers to escape the gas.



Joseph L. Stone, 22, of Montreal, Canada, B died while sleeping in his tractor-trailer truck parked on the side of the street outside the front door of the Woodhead Division plant.



The engineer of the moving train, **Christopher** Seeling, 28, of West Columbia, was helped to the corner of Canal and Church streets, uphill from the crash. He then was taken to the Aiken Regional Medical Center by Graniteville resident Brenda Montgomery, who had driven to the wreck to help. He died the next day in the hospital. The train's conductor survived.

8 Willie L. Tyler, 57, of Aiken, died just inside the front door of the Woodhead Division plant.

PHOTOGRAPHS BY JEFF WILKINSON THE STATE





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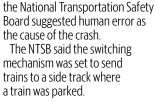
9 Tony DeLoach, 56, of

Graniteville, was confined to a wheelchair and died in his home. He had gone outside briefly to check on the wreck. He died in the kitchen while reaching in his refrigerator for asthma inhalers.





White indicates Within days of the crash, that the switch is set to the main line and it is safe to pass



Red signals that the side track is set.

THE AFTERMATH

A by-the-numbers look at the effects of the crash

Number of people killed in the first hour after the crash as the thick chlorine gas cloud settles near the site.

Number of people exposed to chlorine gas seeking medical assistance at makeshift triage facilities and local hospitals

Number of patients admitted to Aiken- and Augusta-area hospitals as a result of exposure to chlorine gas



Number of people evacuated for a week or longer from a one-mile radius around the crash site

AVOIDING DISASTER

Experts say these steps could better safeguard people against similar disasters

- Better emergency response training for professionals
- Better hazardous materials training for volunteer firefighters
- Slower train speeds through towns
- Letting communities, not railroads, set train speeds
- Automatic, computerized switches

■ Informing local emergency responders in advance about what trains carry

