

# Lessons Learned: Response to Chlorine Release in Graniteville, South Carolina

Satellite Conference and Live Webcast  
Wednesday, April 19, 2006  
12:00 - 1:30 p.m.

Produced by the Alabama Department of Public Health  
Video Communications and Distance Learning Division

## Faculty

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**Moment of impact**

**At 2:39 a.m. Thursday, Norfolk Southern 192 crashed head on into a locomotive and two cars on a siding in Graniteville. Nine people, including the engineer, have died from exposure to chlorine gas.**

**Stationary train**  
A local crew (engineer, conductor and brakeman) pulled a locomotive and two cars on a siding near the Avondale Mills Steam plant and went off duty at about 7 p.m. Wednesday.

**Impact**  
Routed by the switch to the spur line, Norfolk Southern 192 plowed head on into the stationary train. Just before the crash, officials say, the engineer applied the train's emergency brake. Fourteen cars derailed and a chlorine tanker ruptured, releasing a deadly cloud of gas.

**Switch**  
NTSB officials investigating the crash say the rail switch was locked into the position which directs trains to the siding.

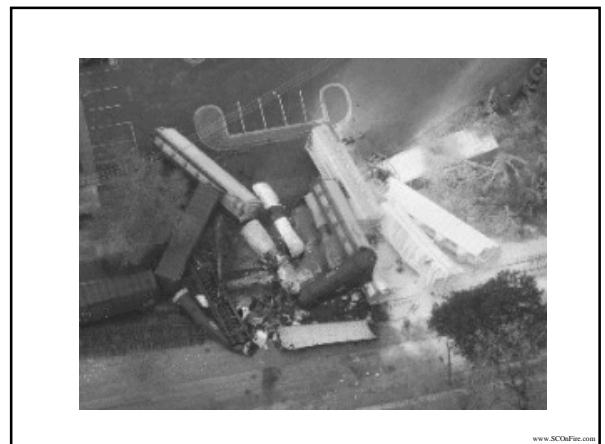
**Trapped**  
Two automobiles were demolished after derailed freight cars brought down trees on top of them. One injured driver crawled from his vehicle to safety; the other driver remained trapped in her car for two hours until authorities rescued her.

**Norfolk Southern 192**  
Early Thursday a train consisting of two locomotives and 42 cars leaves Augusta bound for Columbia. Among the cars are three tankers filled with 270 tons of pressurized liquid chlorine.

**The cargo on Norfolk Southern 192**  
 Locomotives | Boxcars and tankers | Pressurized liquid chlorine | Sodium Hydroxide

Source: The Augusta Chronicle research

MIKE OBERMAYER





### **Initial Incident Timeline**

- January 6, 2005
  - 2:39 AM – Derailment
  - 3:50 AM – Notification to DHEC spill hotline by railroad
  - 4:05 AM – DHEC District ERT notified/dispatched
  - 4:12 AM – National Response Center Report #746298
  - 4:24 AM – DHEC media relations dispatched

### **Initial Incident Timeline**

- January 6, 2005
  - 4:35 AM – USEPA responding
  - 5:30 AM – Aiken County EOC activated
  - 6:42 AM – Reverse 911 call to community
  - 8:00 AM – State EOC activated
  - 11:00 AM – FEMA ROC activated
  - 12:00 PM – Governor's executive order declared an emergency

# DHEC COMMAND UNIT



Photo: Westinghouse Savannah River Company



Photo: Westinghouse Savannah River Company

# PROVEZARG



Photo: SCDBEC



Photo: SCDBEC



Photo: SCDBEC



Photo: SCDHEC



Photo: SCDHEC



Photo: SCDHEC



Photo: SCDHEC



Photo: SCDHEC

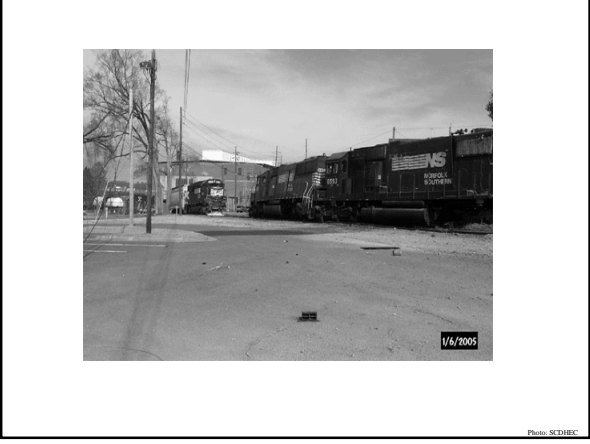


Photo: SCDHEC



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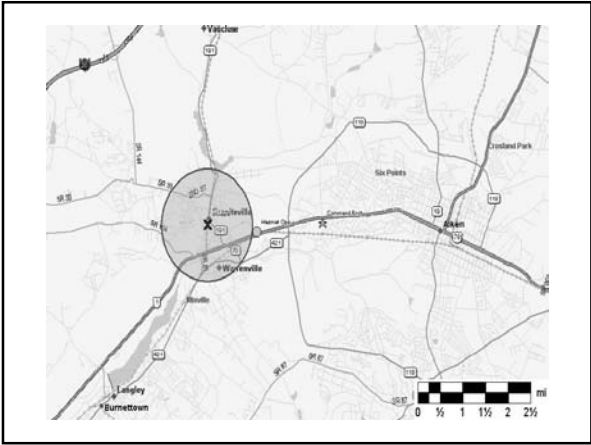


Photo: The Augusta Chronicle



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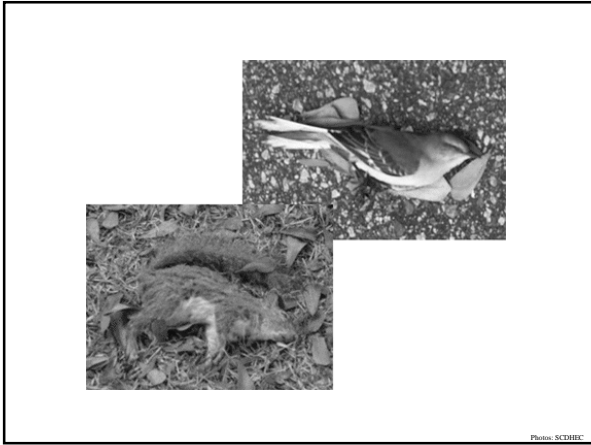
Photo: The Augusta Chronicle

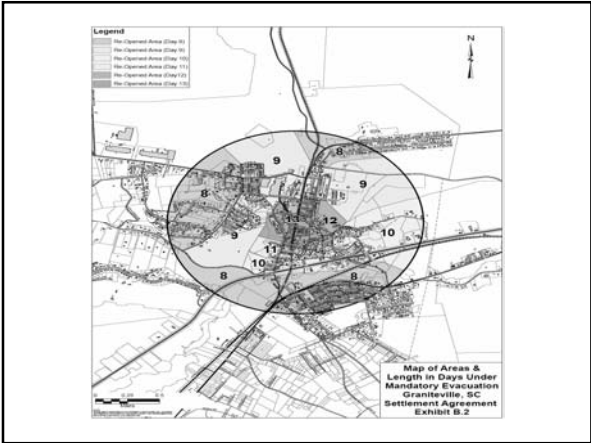
### Outcome Categories

	Category (n=435)	No.	%
S e v e r e	1=Deceased	9	2
	2=Ventilator/ICU/3+nights	15	3
	3=Hospitalized 3+nights	27	6
N o t S e v e r e	4=Hospitalized 1-2 nights	29	7
	5=ED repeat visits	69	16
	6=ED w/ significant Sx	67	15
	7=ED w/ moderate Sx	121	28
	8=ED w/o Sx	61	14
	9=Physician office visit(s)	37	9



Photo by V. Reice





**Upcoming Programs**

**Emergency Support Function 8:  
Mississippi's Response to Katrina  
Tuesday, April 25, 2006  
12:00 - 1:30 p.m. (Central Time)**

**For complete list of upcoming  
programs visit [www.adph.org/alphntn](http://www.adph.org/alphntn)**