



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

Subject: Situation Report #14
Norfolk Southern Train Derailment
Graniteville, SC

To: Don Rigger, Chief
Emergency Operations Section, ERRB

From: Art Smith, OSC
Incident Commander

Date: January 18, 2005

Operational Period: January 17, 2005 07:00 - January 18, 2005 07:00

The following tasks have been completed during the last operational period:

January 17, 2005 07:00 - 19:00:

- EPA conducted oversight and data review of the eleven station CTEH Area-RAE monitoring network that is in place in and around the 500-yard evacuation zone.
- EPA completed monitoring of the Studio 7 hair salon located in Graniteville Shopping Center. Monitoring consisted of chlorine gas monitoring throughout the salon and pH sampling of surfaces. The entry team reported no elevated detections of chlorine and no unusual pH readings. All EPA monitoring to date has indicated that there are no problems with residual chlorine gas or with residual acidic conditions, including some buildings in close proximity to the accident site.
- The Reentry Committee approved an additional area of Graniteville to be opened for reoccupation on day 13 (today) – Phase VI. This area includes the 2 blocks of Montgomery Street and Cottage Street, east of Trolley Line Road that had not been previously opened. Prior to the reoccupation in the remaining closed areas, the Aiken County Building Inspector will require individual dwelling inspections for homes and businesses. The 3 areas designated for mandatory inspection are as follows: Seastrunk Street to Gentry Street; Gentry Street to Aiken Street; and Cottage Street to Aiken Street. Inspections are to begin Wednesday 19 January 2005.
- Residential reoccupation continued in approved zones:

Phase I: neighborhoods around Laurel and Trolley Line Roads (north of Gregg Plant); Wareville area, south of Highway 1; subdivisions west of Ergle Street

Phase II: Quimby Town – Granite Drive to Fourth Street, including Marshall Street to Canal Street; Taylor Street and Kalmia Apartment Drive to Gregg Highway

Phase III: areas south and west of Mount Arthur Drive; Bethlehem Circle; Elbert Street; Elbert Street; Hewitt Street; Mack Lane east of Aiken Road Cherry Lane; Davis Road; Laurel Avenue; Pine Street; south of Mack Lane between Church Street and Aiken Road; Shazach Lane; Blowing Wind Terrace; south and east of Brooks Street; south of Seastrunk Street to Gregg Street; A.P. Nivens Street; south of Arbute Street; Baker Street; Hope Lane; Polatty Street; Canal Street south of Arbute Street; south of Aiken-Augusta Highway.

Phase IV: areas south of Seastrunk Street; north and south of side of Hester Lane

Phase V: areas east of Gregg Street; north of Seastrunk Street; south of Taylor Street

- SC DHEC and CTEH coordinated with the Aiken County Sheriff's Office to assist residents with reoccupation. Reentry/decontamination information describing the precautions residents should take upon reentering their homes/businesses were again distributed to residents upon reentry and posted in visible areas throughout the community (i.e., gas stations). Index cards were also provided to residents to post on their front doors to request reoccupation sampling. Sampling teams collected air monitor readings for chlorine and hydrochloric acid from the lower level of homes. Wipe samples were also collected from non-porous horizontal areas for pH testing. All sample results were recorded on provided data sheets and returned to CTEH for data management. Each residence that was sampled received a statement from EPA, SC DHEC, CTEH, ATSDR, and Norfolk Southern clearing the building for reoccupation. SC DHC provided 4 representatives to assist residents during reoccupation.
- During reoccupation sampling at the Village Restaurant on Church Street, near Aiken Street (southeast of the wreck site), a sampling team detected a chlorine concentration of 0.1 ppm. The detection was confirmed by a second instrument. The owner informed SC DHEC that Clorox was used to clean the kitchen; therefore teams turned on an oven hood for approximately 10 minutes. Subsequent readings were 0.0 ppm for chlorine. The 0.1 ppm detection was attributed to the cleaning products and not incident related.
- Norfolk Southern contractors continued to remove chlorine from the remaining chlorine tank car. EPA met with Norfolk Southern and their contractor, Hulcher, to discuss the chlorine vapor transfer process (sparging). Hulcher indicated that the sparging operation was running at an optimal rate. To reach the optimal rate, heat is being added to the tank car in 2 ways: heating the sweep gas (air) and heating the outside of the car. The sweep gas is being heated to approximately 90°F, and the skin of the car to approximately 85 °F. When the sweep gas is removed from the rail car it is neutralized utilizing sodium hydroxide. At these temperatures, the estimated removal rate is 2 tons of chlorine every 2-4 hours. The railcar is presently slightly tilted and as of 0700 hours on 18 January 2005, Hulcher estimated 9-inches of chlorine at the low end of the car (measured using

thermal imaging). The sparging operation will be considered complete when there is no more frost on the railcar. At that time, Hulcher will continue sparging the car for another 12-24 hours to ensure all of the chlorine has been removed. At the end of the 12-24 hour period, a hole will be cut in the car, a visual inspection will occur, and the inside of the car will be pressure washed. Upon completion of the pressure washing, the railcar will be loaded on a flat bed car and transported to Altoona, PA per instruction from the NTSB.

EPA raised concerns of chlorine contamination in the soil beneath the rail car. Norfolk Southern pointed out that the present position of the car is not its original location (the car was rolled so the breach was on top), and the soil in area where the car was originally located has already been removed. The area under the car will be surveyed when the car is removed, but the contamination should be minimal.

- Norfolk Southern's contractors began general housekeeping of the area adjacent to the railroad track and placed silt fence and signage around the wreck site.
- Norfolk Southern coordinated with Avondale Mills to begin inspecting employees' personal vehicles that were parked at the plant at the time of the incident. Employees were instructed to call the Avondale Mills security office to set-up an appointment. When employees arrived at the plant, their vehicles were opened and monitored for visual damage and residual chlorine (air monitoring). The vehicles were then taken to the Norfolk Southern car wash and towed to a mechanic (owner's choice) for further inspection.
- Four SC DHEC representatives attended the open houses at Byrd Elementary and Leavell-McCampbell Middle Schools. No problems were reported. A high turnout was reported. Schools are scheduled to reopen today, Tuesday 18 January 2005.
- Representatives from the Unified Command relocated to their normal business and mobile command posts. EPA's incident command is now located at the Aiken County Recreational Center on US Highway 1.

January 17, 2005 19:00 – January 18, 2005 07:00:

- EPA/GST continued oversight of the chlorine removal operations. 100% coverage of the operation was provided.
- EPA ERT data management continued uploading of all monitoring data.

Next Steps

- Continue to provide oversight of Norfolk Southern response activities and continue air monitoring.

- EPA personnel will assist SC DHEC and the Aiken County Building Inspector in the mandatory re-occupancy clearance sampling in homes and businesses beginning on 19 January 2005.
- Continue implementing the demobilization plan.
- Limited night operations, primarily chlorine removal oversight and response readiness.

Resources On-Scene

OSCs	4
EPA Planner	1
ERT	2
START	7
USCG	9