

Appendix N
Hazardous Materials Group Factual
Timeline

Graniteville HM Time Line

January 6, 2005

- 0240 Derailment. Puncture of UTLX 900270 and release of liquefied chlorine.
- 0245 Aiken County sheriffs dept first identifies unknown chemical spill
- 0515 Reports of green cloud and “chlorox” smell in area of derailment
- 0900 First entry team identifies 9th car as leaking. That car (UTLX 900270) contained chlorine.
- 1015 Air and meteorological sites established around the derailment site.
- 1530 NS contractor (Hulcher) recon team identifies about 1/3 of product still in tank. They estimated that about 50% of the tank was released in the immediate time period after the puncture.
- 1600 EPA SITREP #2: Several entries made by SC DEHC and NS clean up contractors. One chlorine tank car was breached and immediately released 70 % of its contents. Chlorine emergency response team is being brought in.

EPA conducting air monitoring in affected areas prior to a door-to-door assessment of area residents by police and local officials. EPA is setting up an around-the-clock air monitoring program along a 200-yard perimeter around the derailment site.

- 2300 Hulcher moves coil car (CSTX 496430), UTLX 900270 jacket around puncture stripped with backhoe and temporary poly patch inserted in opening

January 7, 2005

- 0130 NS contractors begin wreck clearing operations.
- 1100 Wreck clearing operations suspended to allow local officials to conduct search and recovery operations in the area surrounding the derailment and within the adjacent textile mill. Wreck clearing was sporadic until January 8, at 1900 as search and rescue efforts continued.

January 8, 2005

1900 Begin unloading sodium hydroxide from GATX 58326 – Product first transferred to highway cargo tank and then into a frac tank¹ to be used with the chlorine to be removed from UTLX 900240.

2050 The first poly patch on UTLX 900270 failed releasing chlorine vapors. Unloading of GATX 58326 is discontinued.

January 9, 2005

0837 Second temporary poly patch applied to UTLX 900270 and vacuum established on the tank by pumping off chlorine vapors to prevent an uncontrolled release of vapors. The vapors pumped from the tank are bubbled through the sodium hydroxide in the frac tank generating a bleach-like liquid. This process is referred to as “sparging.” Unloading resumes on GATX 58326.

1530 Sodium hydroxide offloaded from GATX 58326 – no loss of product discovered. NS is forming a permanent lead patch for UTLX 900270.

January 10, 2005

0930 UTLX 900270 is rotated to place the fracture on the top of the tank. Some chlorine vapor is released through the patch.

Plans to hook up to SBLX 14146 for unloading its chlorine delayed.

EPA reading 1.4 ppm near wreck

0700-1900 EPA sitrep #7 Sodium hydroxide was also moved during this time period away from the derailment scene.

Several hundred dead fish found in pond

1210 Began offloading chlorine from SBLX 14146 (phase 1 of 2).

January 11, 2005

0700-1900 EPA sitrep #8 – Completed the liquid transfer from the full (North) chlorine car. [probably SBLX 14146 based on other info & notes]. Sparging of chlorine from the breached tank car continued. NS contractors continued fabrication and modification of the steel patch.

Early a.m. Rejected plan for lead patch – plan for steel patch for UTLX 900270.

¹ A frac tank is a portable storage tank typically used to identify what percent or fraction of materials recovered from a spill or tank is hazardous, and what is water and or other materials. The tank is most useful with materials that are not soluble in water and separate into their components within the tank. In this case a 21,000 gal. frac tank was used to hold a solution of sodium hydroxide while chlorine vapors pumped from the tank were bubbled through it to neutralize the vapors.

1130 Began second phase of offloading chlorine from SBLX 14146.

1400 Offloading of SBLX 14146 completed.

1500 Began installing steel patch on UTLX 900270

January 12, 2005

0110 Offloading of chlorine from GATX 17105 began BT notes

0930 Steel patch installed on UTLX 900270

1410 GATX 17105 is unloaded BT notes

January 13, 2005

0130 GATX 17105 (Chlorine 2) loaded onto flat car OTTX 92677 BT notes

0300 SBLX 14146 (Chlorine 1) loaded onto flat car OTTX 91769 BT notes

0415 GATX 58326 (NaOH) loaded onto flat car OTTX 97273 BT notes

am Three tank cars transferred [to] Warrentville [siding] BT notes
(All tank cars externally decontaminated before leaving accident site)

1430 Pressure spike during sparging of UTLX 900270. Patch disturbed

2200 Loaded flat cars with 3 damaged tank cars departed Warrentville BT notes

January 14, 2005

0300 CSXT 496430 (steel coil car) loaded on HTTX 94040 BT notes

1300-1500 BT conducted walk-around inspection of UTLX 900270 BT notes
and CSXT 496430 at accident scene

1700-1830 BT conducted walk-around inspection of tank cars BT notes
GATX 17105, GATX 58326, and SBLX 14146 at
NS Bulk Terminal Facility, Augusta, GA

January 15, 2005

am Damaged tank cars GATX 17105, GATX 58326, and BT notes
SBLX 14146 delivered to Olin Augusta Plant for internal cleaning
decontamination.

January 16, 2005

~1200 Offloading of UTLX 900270 continues. Sections of the jacket and the insulation covering the tank heads had been removed so heat could readily be applied to the tank car shell to facilitate conversion of the liquid chlorine to gas. 5 tons of chlorine reportedly removed in the previous 24 hours. Estimated 15 tons remain in the tank car. 2 NaOH tank cars brought in to speed up the process.

January 17, 2005

0900 Chlorine liquid level in UTLX 900270 was 16 $\frac{3}{4}$ inches – down from 22 inches in the previous 24 hours BT notes

January 18, 2005

0900 Chlorine liquid level in UTLX 900270 was 9 inches

January 19, 2005

0000 No liquid chlorine remained in UTLX 900270

~0900 Blow down of UTLX 900270 in process. Pressure plate (manway) to be removed to expedite airing of tank. BT notes

~2000 Power washing of UTLX 900270 in process. Pressure plate removed. Tank car to be loaded onto flat car JTTX 853924 and moved to NS Augusta Yard by morning of 1/20/05. BT notes